

Panasonic

Professional Lighting 2020



Please contact

<https://panasonic.net/lifesolutions/lighting/>



Panasonic®

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We have supported people's lives for more than 100 years by bright light.

Quality lighting fixtures improve working environment

For many years, Panasonic has continuously worked to improve lighting quality and also developed original technologies. From those technologies, various products were born to cater to different lighting locations and applications.



A 2-way socket released by Panasonic in 1920.



MORE BEAUTY

Uniformly bright light and distinct shadows provides maximum lighting quality to create living environments with more beauty.



MORE COMFORT

Optimal lighting solutions created with Panasonic Lighting design methods for spaces make everyday living more comfortable.



MORE RELIABILITY

Uncompromised quality following stringent internal safety standards along with international standards to ensure long-term reliability.

New Concept

ACTIVITY BASED LIGHTING

A Suitable light for encouraging
each of your activities

Focus 3 types of activities to watch in our lives

Currently way of Life style is diversified globally, and the border between "Work" and "Private" gradually becomes unclear. Accordingly the requirements for lighting design are also undergoing changes. Instead of "Place based", the concept of "Activity Based" is emerging and becoming more essential. Panasonic especially focus on the following three activities in the our lives.

Focus

**Without being disturbed by others,
Optimal lighting environment to increase concentration on individual tasks.**

Example of Activities

Home : Remote working in home, Reading a book requires you to strengthen concentration

Work : Individual activities requires focusing such as making documents, analysing data etc.

Refresh

Reset your feelings in a comfortable space Light environment that gives vitality.

Low color temperature, low illumination, bright lighting In a calm and comfortable space.

Considering unpleasant glare while taking a sense of brightness with indirect lighting.

Co-Creation

Light environment that promotes active crosscommunication.

Considering the light distribution, color rendering, and the position of the light, you can see each other's expressions. Illumination on the desk top, ideal for action and work.

Light switching to color temperature, control. required.

Industry



Lighter in weight and longer life for lighting equipment. This extensive lineup is well-suited for use, even in challenging environments.

Line up



High Bay



High Bay
Wide Temperature



Baselight
for High Ceiling



Clean Room

We offer a variety of products with special features



Water Resistance

Resistant to water and moisture. Can be used in places that are directly exposed to water or rain.



Oil Mist Proof

Highly resistant to oil mist. Can be used safely in parts and machinery factories.



Dust Proof

Dustproof lighting fixtures can be used in factories that generate a lot of dust.



Salt Resistance

Lighting equipment that has been treated against salt corrosion can be used in environments near the coast.



High Temperature Environment

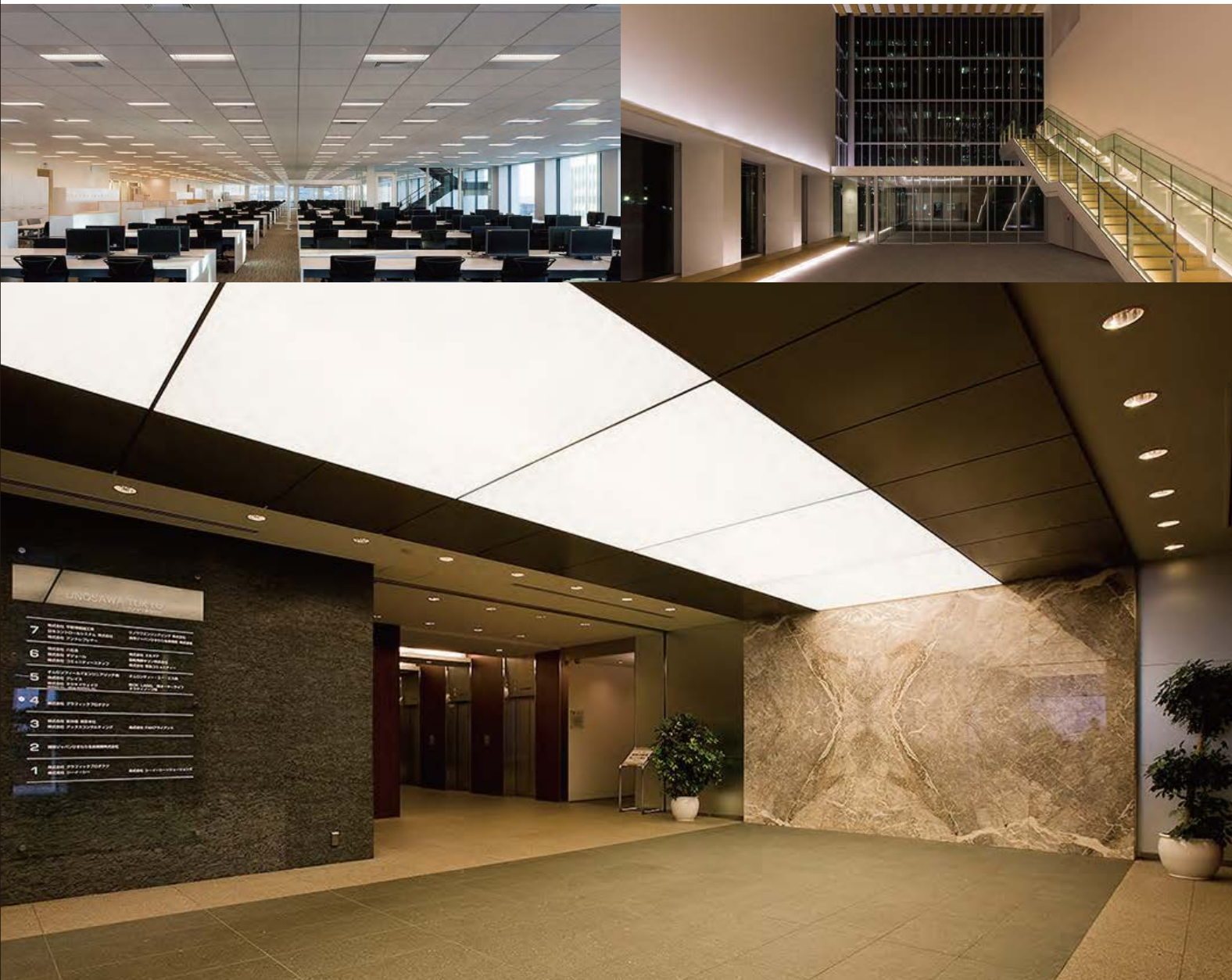
Maintenance-free even in a high-temperature environments. Eliminates the need to replace lights frequently.



Shock Resistance

Highly resistant to seismic forces and impact. Suitable for use in warehouse facilities and factories using hoist cranes.

Lighting Solutions
Office



Brighter than or as bright as conventional equipment while also providing significant energy savings. Whether for offices or meeting rooms, we have a variety of options for you to choose from.

Line up



Big Panel



PRO iD Series



Downlight

Lighting Solutions
Outdoor



Lighting the world day and night while minimizing the amount of light leaking out into the surrounding environment. From street lights and parking lots to lighting for large-scale facilities, we have solutions to fit your various needs.

Line up



Splash Proof



Street Light



Flood Light

Products

High Bay



Ex High Bay



Ex High Bay High Efficacy



Special Environment

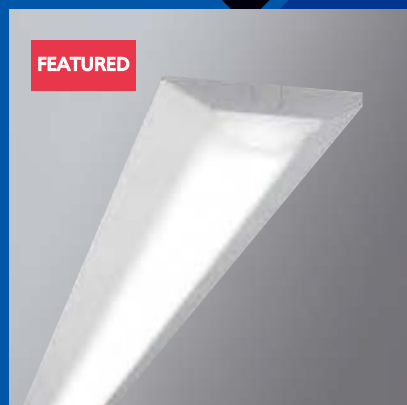


SP High Bay



Pro iD for High Ceiling

Baselight



Pro iD Series



Ex/SP Big Panel



Ex/SP Splash Proof

Downlight / Basic Products



Ex-A Series



Ex-H Series



Ex-F Series



Ex-2G Series



Basic Downlight



Batten

Outdoor



Street Light



Pedestrian



Ex/SP Flood Light

HIGH BAY



Ex High Bay

- Basic
- High Efficacy



SP High Bay



Pro iD Series for High Ceiling



High Bay for Special Environment

- Anti salt
- Wide Temperature
- Oil Mist proof
- Vibration resistance
- Dust proof

Ex High Bay (2G) Basic

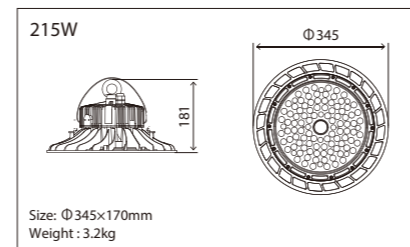
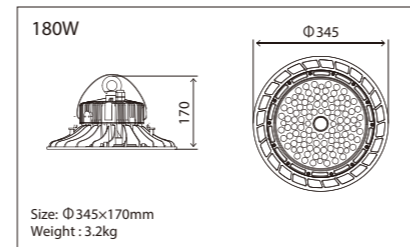
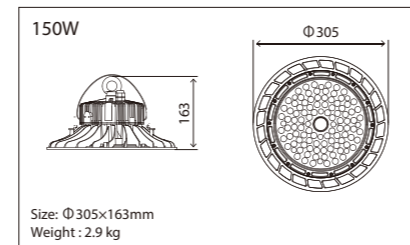
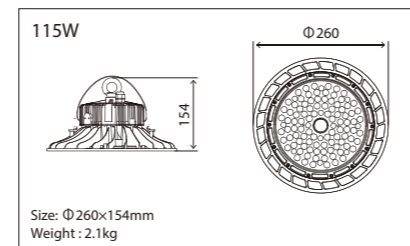
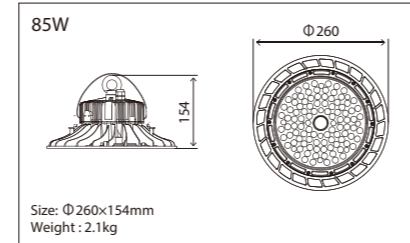


Specification

Voltage	220-240V
Frequency	50/60Hz
Lifetime	50,000 hours
CRI	80
Ambient Temperature	-30°C~50°C
Power Factor	0.9
Materials	Body: ADC(Black) Panel: PC(Transparent)
IP rate	65
Efficacy	140lm/W



Dimension



Light source life of 50,000 hours
The design efficiently releasing the LED heat ensures brightness from installation to the end of product life time

All of Ex HighBay Series use Water proof socket, installed at end of cable (Length of Cable = 1m)

A extremely efficient energy saving LED fixture. (Efficacy: 140lm/W)

Keep same brightness with much higher energy saving compared to conventional fixture.

Water proof Highbay light (IP65) using for factory, warehouse, and other high ceiling places

Using a reliable materials for fixture
Body: Aluminum Diecasting



Dimming type
DALI type to be Launched

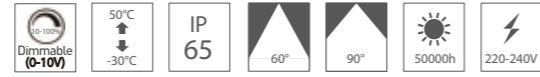


Wider lineup of Wattage
Generation2 increases wattage lineup from Generation1 for various choices
G2: 85W/115W/150W/180W/215W
G1: 50W/100W/150W/200W

Wattage	85W		115W		150W		
	60°	90°	60°	90°	60°	90°	
Non Dimming	4000K	NNFC20530LE88 11900lm,140lm/W	NNFC20535LE88 11900lm,140lm/W	NNFC20531LE88 16100lm,140lm/W	NNFC20536LE88 16100lm,140lm/W	NNFC20532LE88 21000lm,140lm/W	NNFC20537LE88 21000lm,140lm/W
	5000K	NNFC20580LE88 11900lm,140lm/W	NNFC20585LE88 11900lm,140lm/W	NNFC20581LE88 16100lm,140lm/W	NNFC20586LE88 16100lm,140lm/W	NNFC20582LE88 21000lm,140lm/W	NNFC20587LE88 21000lm,140lm/W
	6500K	NNFC20540LE88 11900lm,140lm/W	NNFC20545LE88 11900lm,140lm/W	NNFC20541LE88 16100lm,140lm/W	NNFC20546LE88 16100lm,140lm/W	NNFC20542LE88 21000lm,140lm/W	NNFC20547LE88 21000lm,140lm/W
Dimming (DALI)	4000K	NNFC20530DZ88 11900lm,140lm/W	NNFC20535DZ88 11900lm,140lm/W	NNFC20531DZ88 16100lm,140lm/W	NNFC20536DZ88 16100lm,140lm/W	NNFC20532DZ88 21000lm,140lm/W	NNFC20537DZ88 21000lm,140lm/W
	5000K	NNFC20580DZ88 11900lm,140lm/W	NNFC20585DZ88 11900lm,140lm/W	NNFC20581DZ88 16100lm,140lm/W	NNFC20586DZ88 16100lm,140lm/W	NNFC20582DZ88 21000lm,140lm/W	NNFC20587DZ88 21000lm,140lm/W
	6500K	NNFC20540DZ88 11900lm,140lm/W	NNFC20545DZ88 11900lm,140lm/W	NNFC20541DZ88 16100lm,140lm/W	NNFC20546DZ88 16100lm,140lm/W	NNFC20542DZ88 21000lm,140lm/W	NNFC20547DZ88 21000lm,140lm/W

Wattage	180W		215W		
	60°	90°	60°	90°	
Non Dimming	4000K	NNFC20533LE88 25200lm,140lm/W	NNFC20538LE88 25200lm,140lm/W	NNFC20534LE88 30000lm,140lm/W	NNFC20539LE88 30000lm,140lm/W
	5000K	NNFC20583LE88 25200lm,140lm/W	NNFC20588LE88 25200lm,140lm/W	NNFC20584LE88 30000lm,140lm/W	NNFC20589LE88 30000lm,140lm/W
	6500K	NNFC20543LE88 25200lm,140lm/W	NNFC20547LE88 25200lm,140lm/W	NNFC20544LE88 30000lm,140lm/W	NNFC20549LE88 30000lm,140lm/W
Dimming (DALI)	4000K	NNFC20533DZ88 25200lm,140lm/W	NNFC20538DZ88 25200lm,140lm/W	NNFC20534DZ88 30000lm,140lm/W	NNFC20539DZ88 30000lm,140lm/W
	5000K	NNFC20583DZ88 25200lm,140lm/W	NNFC20588DZ88 25200lm,140lm/W	NNFC20584DZ88 30000lm,140lm/W	NNFC20589DZ88 30000lm,140lm/W
	6500K	NNFC20543DZ88 25200lm,140lm/W	NNFC20548DZ88 25200lm,140lm/W	NNFC20544DZ88 30000lm,140lm/W	NNFC20549DZ88 30000lm,140lm/W

Ex High Bay (1G) Basic

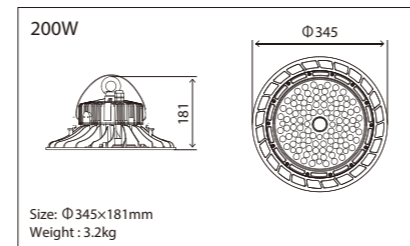
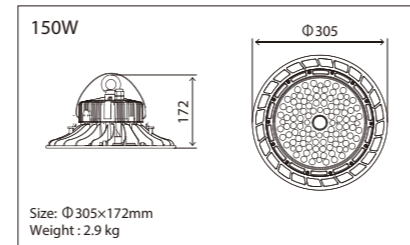
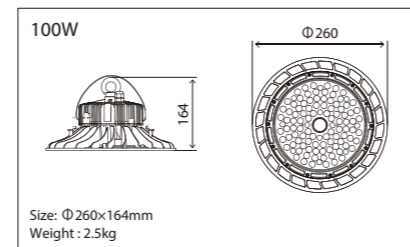
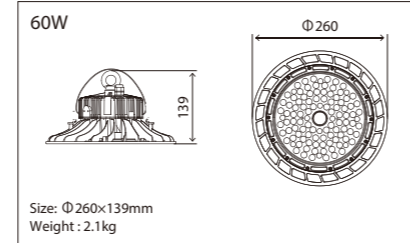


Specification

Voltage	220-240V
Frequency	50/60Hz
Lifetime	50,000 hours
CRI	80
Ambient Temperature	-30°C~50°C
Power Factor	0.9
Materials	Body: ADC(Black) Panel: PC(Transparent)
IP rate	65
Efficacy	140lm/W



Dimension



Light source life of 50,000 hours

The design efficiently releasing the LED heat ensures brightness from installation to the end of product life time

A extremely efficient energy saving LED fixture. (Efficacy: 140lm/W)

Keep same brightness with much higher energy saving compared to conventional fixture.

Dimming type

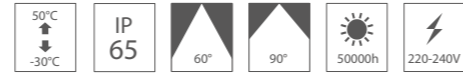
Dimming type is available.(0-10V)
Dimming Range : 10 -100%



Wattage	60W		100W		
	60°	90°	60°	90°	
Non Dimming	4000K ●	NNFC2023088 8400lm,140lm/W	NNFC2023588 8400lm,140lm/W	NNFC2023188 14000lm,140lm/W	NNFC2023688 14000lm,140lm/W
	5000K ○	NNFC2028088 8400lm,140lm/W	NNFC2028588 8400lm,140lm/W	NNFC2028188 14000lm,140lm/W	NNFC2028688 14000lm,140lm/W
	6500K ●	NNFC2024088 8400lm,140lm/W	NNFC2024588 8400lm,140lm/W	NNFC2024188 14000lm,140lm/W	NNFC2024688 14000lm,140lm/W
Dimming (0-10V)	4000K ●	NNFC2033088 8400lm,140lm/W	NNFC2033588 8400lm,140lm/W	NNFC2033188 14000lm,140lm/W	NNFC2033688 14000lm,140lm/W
	5000K ○	NNFC2038088 8400lm,140lm/W	NNFC2038588 8400lm,140lm/W	NNFC2038188 14000lm,140lm/W	NNFC2038688 14000lm,140lm/W
	6500K ●	NNFC2034088 8400lm,140lm/W	NNFC2034588 8400lm,140lm/W	NNFC2034188 14000lm,140lm/W	NNFC2034688 14000lm,140lm/W

Wattage	150W		200W		
	60°	90°	60°	90°	
Non Dimming	4000K ●	NNFC2023288 21000lm,140lm/W	NNFC2023788 21000lm,140lm/W	NNFC2023388 28000lm,140lm/W	NNFC2023888 28000lm,140lm/W
	5000K ○	NNFC2028288 21000lm,140lm/W	NNFC2028788 21000lm,140lm/W	NNFC2028388 28000lm,140lm/W	NNFC2028888 28000lm,140lm/W
	6500K ●	NNFC2024288 21000lm,140lm/W	NNFC2024788 21000lm,140lm/W	NNFC2024388 28000lm,140lm/W	NNFC2024888 28000lm,140lm/W
Dimming (0-10V)	4000K ●	NNFC2033288 21000lm,140lm/W	NNFC2033788 21000lm,140lm/W	NNFC2033388 28000lm,140lm/W	NNFC2033888 28000lm,140lm/W
	5000K ○	NNFC2038288 21000lm,140lm/W	NNFC2038788 21000lm,140lm/W	NNFC2038388 28000lm,140lm/W	NNFC2038888 28000lm,140lm/W
	6500K ●	NNFC2034288 21000lm,140lm/W	NNFC2034788 21000lm,140lm/W	NNFC2034388 28000lm,140lm/W	NNFC2034888 28000lm,140lm/W

Ex High Bay High Efficacy

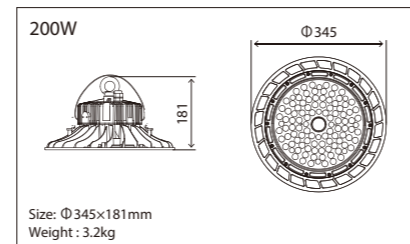
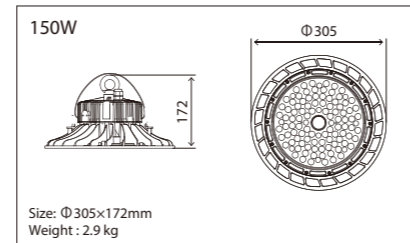
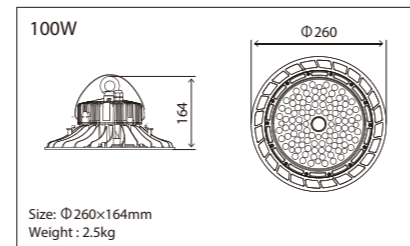
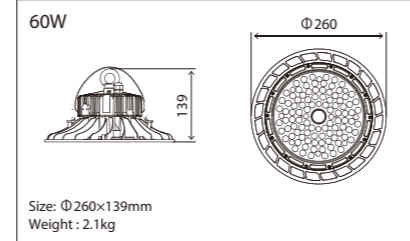


Specification

Voltage	220-240V
Frequency	50/60Hz
Lifetime	50,000 hours
CRI	80
Ambient Temperature	-30°C~50°C
Power Factor	0.9
Materials	Body: ADC(Black) Panel: PC(Transparent)
IP rate	65
Efficacy	160lm/W



Dimension



Light source life of 50,000 hours

The design efficiently releasing the LED heat efficiently ensures brightness from installation to the end of product life time

The Most efficient type of High Bay light (Efficacy: **160lm/W**)

Keep same brightness with much energy saving compared even with other LED fixture, and also enable you to decrease the quantity of fixture.

Wattage	60W		100W		
Beam Angle	60°	90°	60°	90°	
Non Dimming	4000K ●	NNFC2043088 9600lm,160lm/W	NNFC2043588 9600lm,160lm/W	NNFC2043188 16000lm,160lm/W	NNFC2043688 16000lm,160lm/W
	5000K ○	NNFC2048088 9600lm,160lm/W	NNFC2048588 9600lm,160lm/W	NNFC2048188 16000lm,160lm/W	NNFC2048688 16000lm,160lm/W
	6500K ●	NNFC2044088 9600lm,160lm/W	NNFC2044588 9600lm,160lm/W	NNFC2044188 16000lm,160lm/W	NNFC2044688 16000lm,160lm/W

Wattage	150W		200W		
Beam Angle	60°	90°	60°	90°	
Non Dimming	4000K ●	NNFC2043288 24000lm,160lm/W	NNFC2043788 24000lm,160lm/W	NNFC2043388 32000lm,160lm/W	NNFC2043888 32000lm,160lm/W
	5000K ○	NNFC2048288 24000lm,160lm/W	NNFC2048788 24000lm,160lm/W	NNFC2048388 32000lm,160lm/W	NNFC2048888 32000lm,160lm/W
	6500K ●	NNFC2044288 24000lm,160lm/W	NNFC2044788 24000lm,160lm/W	NNFC2044388 32000lm,160lm/W	NNFC2044888 32000lm,160lm/W

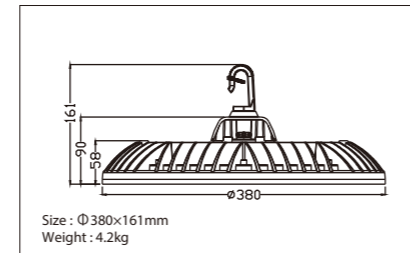
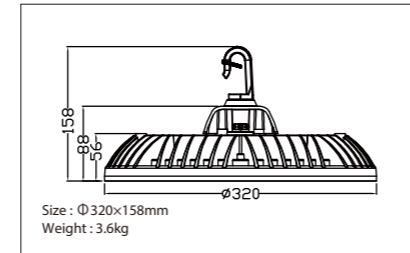
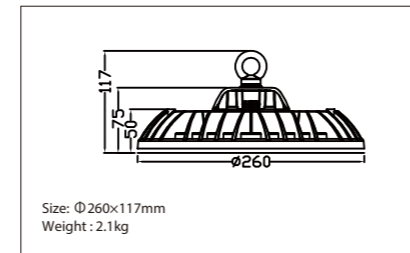
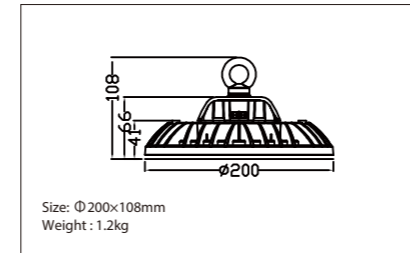
SP High Bay

Specification

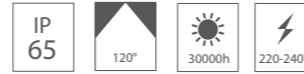
Voltage	220-240V
Frequency	50/60Hz
Lifetime	30,000 hours
CRI	70
Ambient Temperature	5°C~45°C
Power Factor	0.9
Materials	Body: ADC12(Gray) Panel: Glass(Transparent)
IP rate	65



Dimension



Wattage	50W	100W	150W	200W
Dimming	Non Dimming	Non Dimming	Non Dimming	Non Dimming
4000K	NNYC2001688 4500lm,90lm/W	NNYC2001788 9000lm,90lm/W	NNYC2001888 13500lm,90lm/W	NNYC2001988 18000lm,90lm/W
5700K	NNYC2006688 5000lm,100lm/W	NNYC2006788 10000lm,100lm/W	NNYC2006888 15000lm,100lm/W	NNYC2006988 20000lm,100lm/W
Photometric Distribution				



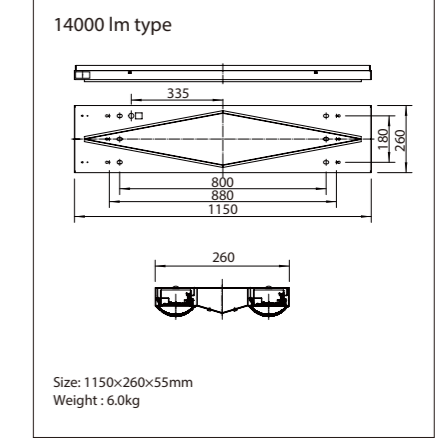
PRO iD Series for High Ceiling

Specification

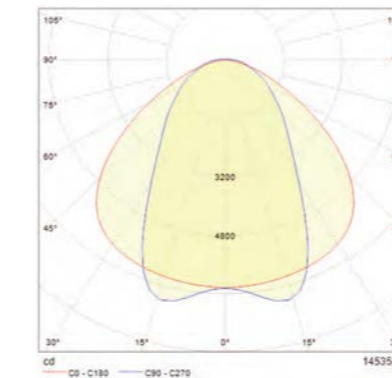
Voltage	220-240V
Frequency	50/60Hz
Lifetime	Standard: 40,000 hours Advanced: 50,000 hours
CRI	80
Ambient Temperature	5°C~35°C
Power Factor	0.9
Materials	Body: Steel (White paint) Panel: PC
IP rate	20



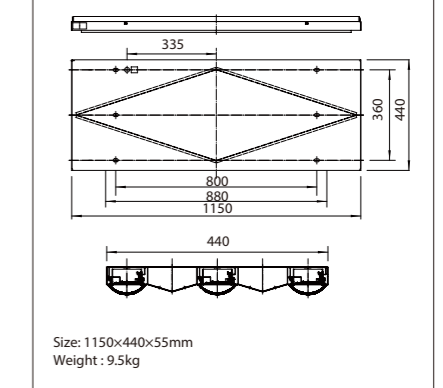
Dimension



Photometric Distribution



21000 lm type



Type	14000 lm type		21000 lm type	
	Standard (Lifetime: 40000 hours)	Advanced (Lifetime: 50000 hours)	Standard (Lifetime: 40000 hours)	Advanced (Lifetime: 50000 hours)
Wattage	108W	88W	162W	132W
Non Dimming	4000K	NNFC70076 13432lm,124lm/W	NNFC70078 20148lm,124lm/W	NNFC70079 19656lm,148lm/W
	5000K	NNFC70126 14600lm,135lm/W	NNFC70128 21900lm,135lm/W	NNFC70129 21600lm,164lm/W
	6500K	NNFC70176 14016lm,130lm/W	NNFC70177 13968lm,159lm/W	NNFC70178 21024lm,130lm/W



High Bay For Special Environment

High Bay Anti Salt

Product chart

		Anti Salt	Wide Temperature	Oil mist proof	Vibration Resistance	Dust proof	
Type							
Driver		Integrated	Integrated	Integrated	Separated	Separated	
Special Function		Anti salt Dust proof Protection against Water jet	High Tem. 60°C Cold Tem. -40°C	Oil mist proof	Vibration/Impact Resistance Dust proof Protection against Water jet	Dust proof Protection against Water jet	
	Installing Height	Im					
	12m	Equivalent to metal halide 1000W type	—	—	—	—	
	10m	Equivalent to mercury lamp 700W type	—	●	●	●	●
		Equivalent to metal halide 400W type	●	●	●	●	●
	8m	Equivalent to mercury lamp 400W type	—	—	—	●	●
		Equivalent to metal halide 250W type	●	●	●	—	—
6m	Equivalent to mercury lamp 300W type	—	●	●	●	—	
Product chart							
IP		65	65	65	65	65	
Ambient Temperature		-20°C~40°C	-40°C~60°C	-30°C~50°C	-20°C~40°C	-20°C~40°C	

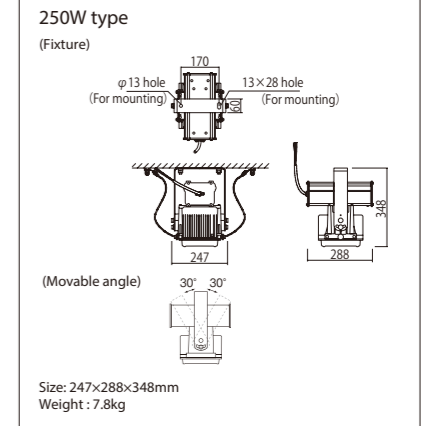


Specification

Voltage	100-242V
Frequency	50/60Hz
Lifetime	60,000 hours
CRI	70
Ambient Temperature	-20°C~40°C
Materials	Body: Aluminum Panel: PC(Transparent)
IP rate	65



Dimension

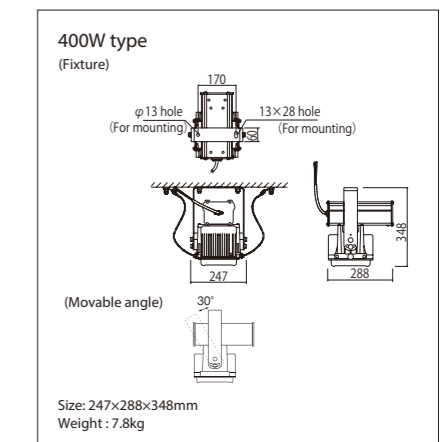


Available for using at coastal area, even short distance from coastline (0-20m)



Light source life of 60000 hours
The design releasing the LED heat efficiently ensures brightness from installation to the end of product life time

A extremely efficient and energy saving LED fixture. (Efficacy: >136lm/W)
Keep same brightness with much energy saving compared with conventional fixture, and enable to decrease quantity of fixture.



Type	250W type		400W type	
Equivalent type	Equivalent to metal halide 250W type		Equivalent to metal halide 400W type	
Angle	Middle	Wide	Middle	wide
Non Dimming	NNY20085LF9 13800 lm, 101W, 137lm/W	NNY20086LF9 13800 lm, 101W, 137lm/W	NNY20090LF9 21000 lm, 154W, 136lm/W	NNY20091LF9 21000 lm, 154W, 136lm/W

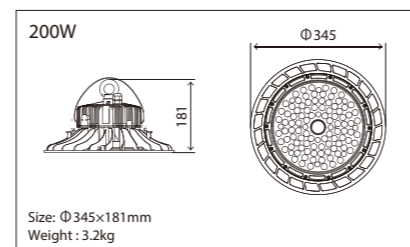
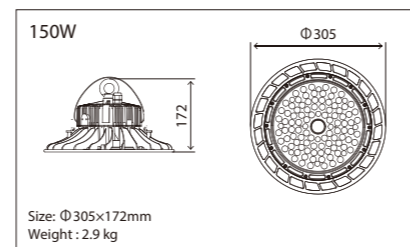
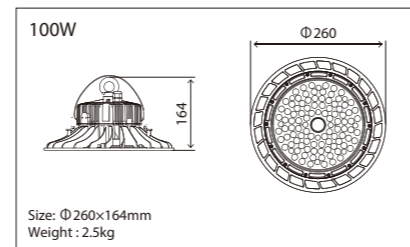
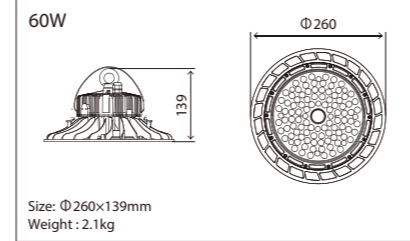
Ex High Bay Wide Temperature

Specification

Voltage	220-240V
Frequency	50/60Hz
Lifetime	50,000 hours
CRI	80
Ambient Temperature	-40°C~60°C
Power Factor	0.9
Materials	Body: ADC12(Black) Panel: Glass(Transparent)
IP rate	65
Efficacy	140lm/W



Dimension



Light source life of 50,000 hours

The design efficiently releasing the LED heat ensures brightness from installation to the end of product life time

Wide temperature range (-40°C~60°C) and Water proof (IP65) fixture is suitable for a refrigerated warehouse and area of high temperature such as a glass manufacturing factory.



Wattage	60W	100W	150W	200W
Beam Angle	110°	110°	110°	110°
Non Dimming	4000K ○	NNFC2004088 8400lm,140lm/W	NNFC2004188 14000lm,140lm/W	NNFC2004288 21000lm,140lm/W
	5000K ○	NNFC2009088 8400lm,140lm/W	NNFC2009188 14000lm,140lm/W	NNFC2009288 21000lm,140lm/W
	6500K ●	NNFC2004588 8400lm,140lm/W	NNFC2004688 14000lm,140lm/W	NNFC2004788 21000lm,140lm/W

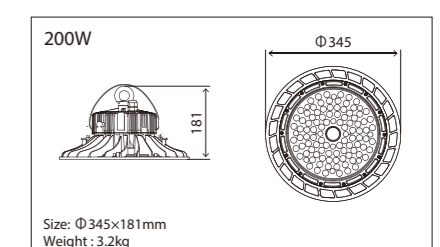
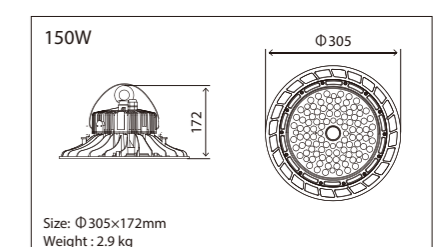
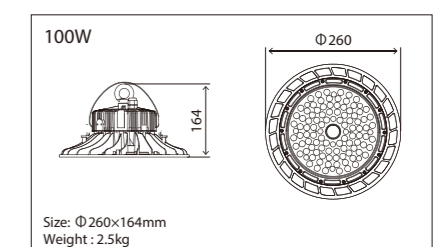
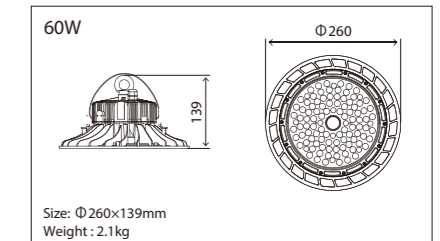
Ex High Bay Oil Mist proof

Specification

Voltage	220-240V
Frequency	50/60Hz
Lifetime	50,000 hours
CRI	80
Ambient Temperature	-30°C~50°C
Power Factor	0.9
Materials	Body: ADC(Black) Panel: Glass(Transparent)
IP rate	65
Efficacy	140lm/W



Dimension



Light source life of 50,000 hours

The design efficiently releasing the LED heat ensures brightness from installation to the end of product life time

Oil mist proof type can be used for special environment, such as factory using chemical material.



Wattage	60W	100W	150W	200W
Beam Angle	110°	110°	110°	110°
Non Dimming	4000K ○	NNFC2014088 8400lm,140lm/W	NNFC2014188 14000lm,140lm/W	NNFC2014288 21000lm,140lm/W
	5000K ○	NNFC2019088 8400lm,140lm/W	NNFC2019188 14000lm,140lm/W	NNFC2019288 21000lm,140lm/W
	6500K ●	NNFC2014588 8400lm,140lm/W	NNFC2014688 14000lm,140lm/W	NNFC2014788 21000lm,140lm/W

High Bay Vibration resistance

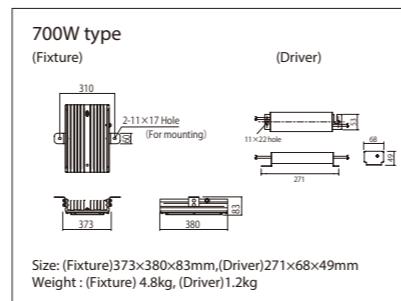
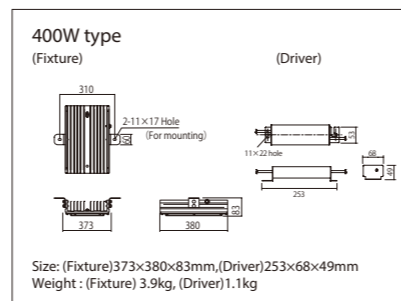
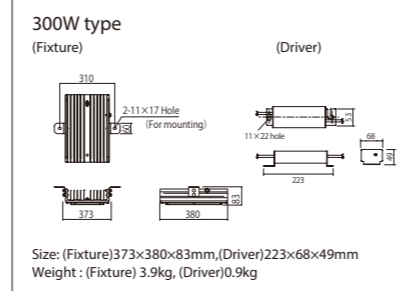


Specification

Voltage	100-242V(LE9) 200-242V(LE2)
Frequency	50/60Hz
Lifetime	60,000 hours
CRI	70
Ambient Temperature	-20°C~40°C
Materials	Body: Aluminum Panel: PC(Transparent)
IP rate	65



Dimension



Vibration resistance type is recommended for vibrating environment such as factory using a hoist crane

It can be installed for guarder of hoist crane



Vibration resistance: 1.5G

Impact resistance: 30G

Light source life of 60000 hours

The design releasing the LED heat efficiently ensures brightness from installation to the end of product life time

A extremely efficient and energy saving LED fixture. (Efficacy: >160lm/W)

Keep same brightness with much energy saving compared with conventional fixture, and enable to decrease quantity of fixture.

Type	300W type	400W type		700W type
Equivalent type	Equivalent to mercury lamp 300W type	Equivalent to mercury lamp 400W type	Equivalent to metal halide 400W type	Equivalent to mercury lamp 700W type
Wattage	71W	100W	130W	199W
Non Dimming	5000K ○	XYM2020LE9 11000 lm, 155lm/W	XYM2021LE9 16000 lm, 160lm/W	XYM2022LE9 21000 lm, 162lm/W
				XYM2023LE2 32000 lm, 161lm/W

High Bay Dust proof

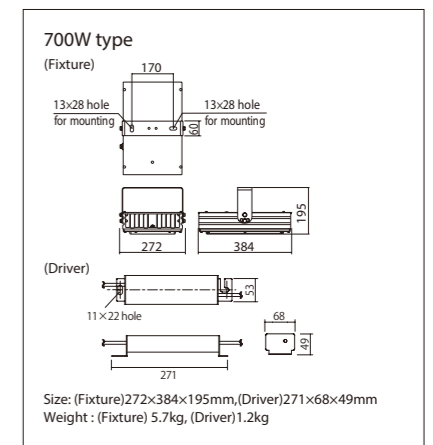
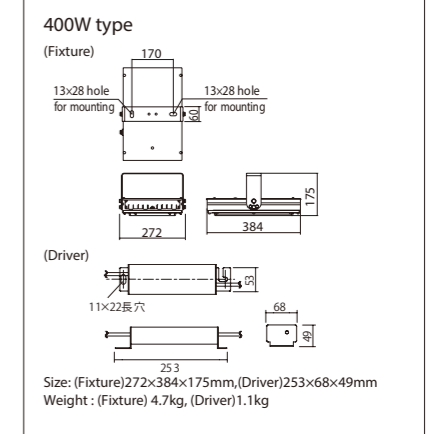


Specification

Voltage	100-242V(LE9) 200-242V(LE2)
Frequency	50/60Hz
Lifetime	60,000 hours
CRI	70
Ambient Temperature	-20°C~40°C
Materials	Body: Aluminum Panel: PC(Transparent)
IP rate	65



Dimension



Moisture, rain and dust proof for various environments such as factories, soffits prone to harsh conditions.

Dustproof and Protection against water jet is available for use under the eaves



Light source life of 60000 hours

The design releasing the LED heat efficiently ensures brightness from installation to the end of product life time

A extremely efficient and energy saving LED fixture. (Efficacy: >160lm/W)

Keep same brightness with much energy saving compared with conventional fixture, and enable to decrease quantity of fixture.

Type	400W type		700W type	
Equivalent type	Equivalent to mercury lamp 400W type	Equivalent to metal halide 400W type	Equivalent to mercury lamp 700W type	
Wattage	100W	130W	199W	
Non Dimming	5000K ○	XYM2001LE9 16000 lm, 160lm/W	XYM2002LE9 21000 lm, 162lm/W	XYM2003LE9 32000 lm, 161 lm/W

BASELIGHT



Pro iD Series

- Batten
- Reflector
- V shape
- Recessed
- Square



Big Panel

- Ex Big Panel (G2)
- SP Big Panel (G2)
- Big Panel (G1)



Baselight for Special Environment

- for HACCP
- Clean room
- High Temperature
- Low Temperature



Water proof type & Others

- Ex Splash Proof
- SP Splash Proof
- Batten(Sensor)



Batten

- SP Batten
- Slim Batten

PRO iD Series

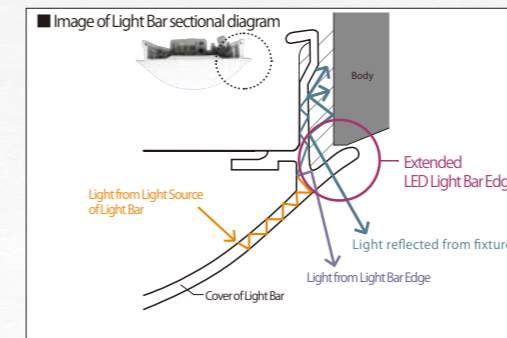
New Generation luminaires with Extremely efficient, Smart and Safety Design emitting a perfect seamless light



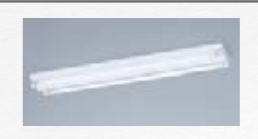

Extremely Efficient & Saving Energy

Unique technology realizes ultra high efficacy

- Design of Light Bar & Coating can reduce the light loss, and maximize amount of light emitting from fixture.



Much energy saving & same lumen output

Conventional fixture & Lamp	Pro iD Advanced 26W
	
85W	26W
85W × 54台 = 4590W	25.0W × 54台 = 1350W
651 lx	642 lx

51% Saving Energy

Various Combination available for requirements

Light Bar type

Advanced Type
160 lm/W
50,000 hours

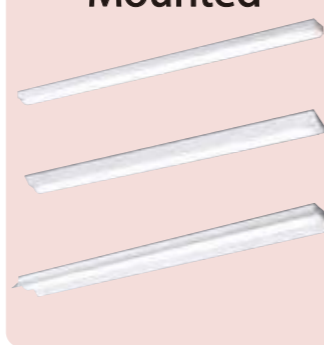
Standard Type
130 lm/W
40,000 hours

Body type

Recessed



Surface Mounted



CCT

4000K

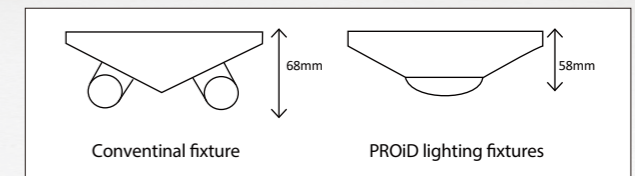
5000K

6000K

Smart & Stylish Design

Simple and Safety design

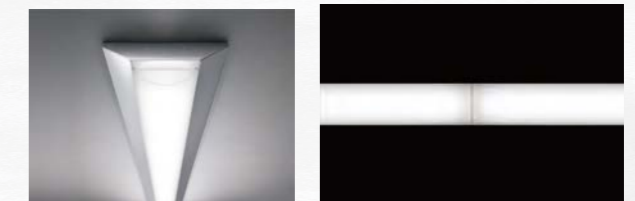
- It realizes uniformity of light distribution to use LED light bar
- Completely prevent tube-drooping
- Brightness equivalent to 2 straight light tubes and more compact than conventional types.



Apx. 20%
Slimer Height for Universal usage

Realize Perfect Seamless and continuous line light by connecting multiple units

- Light emission is uniform until edge of light bar.
- If you line up to use multiple units, joint is not noticeable.



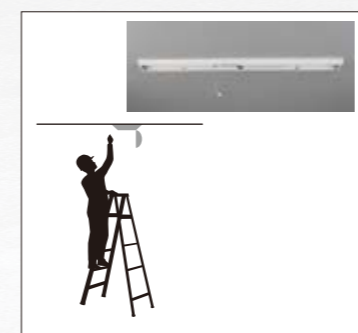
Product Chart

Efficacy	Standard			Advanced	
	100lm/W	110lm/W		130lm/W、160lm/W	
System Flux	2000Type	6000Type	9000Type	4000Type	7000Type
Batten				★	★
V-Shape				★	★
Reflector				★	★
Recessed W150	○	○			
Recessed W300	○	○			
Recessed Square		○	○		

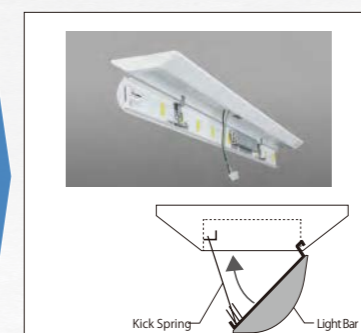
Install & Maintenance Friendly

Simple fixture enable for installer to minimizes steps of installation

① Set up a body of fixture at Ceiling



② Hang a light bar on body using kick spring



③ Cabling, pick up and set on Light Bar



Caution for Risk of overtime use

Panasonic highly recommends to replace not only lamp tube, also lighting fixture in case of using more than 10 years*
*condition: 10 hours/day under 30°C

Lifetime and Deterioration of Lighting fixture

If its appearance looks no errors, each parts inside fixture could be deteriorated

Inside driver
Fever deforms cable, its cover becomes weak that could cause fire or smoke.

Inside Fixture
Fever deforms cable, its cover becomes weak that could cause fire or smoke.

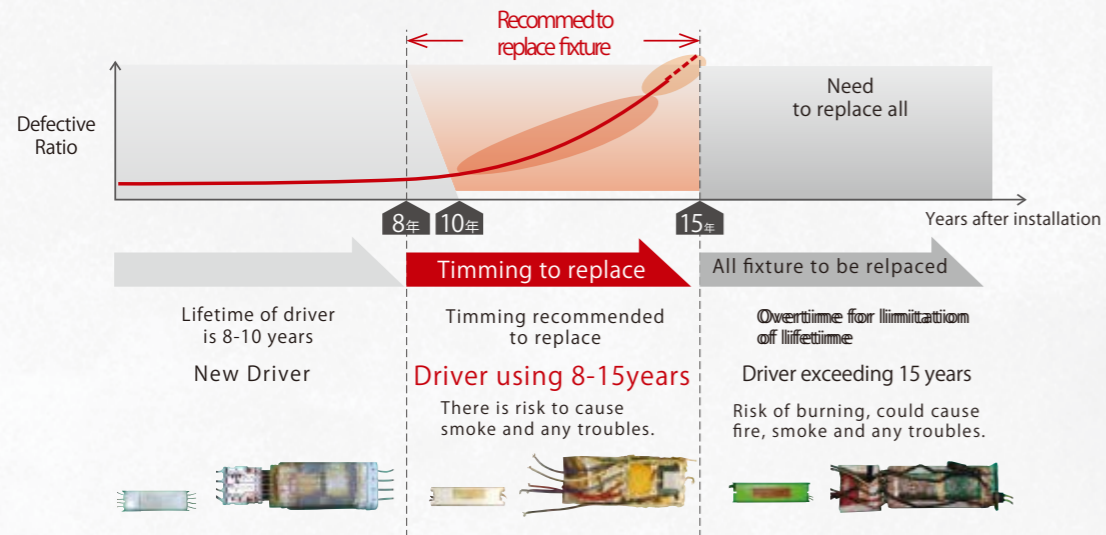
Socket of tube
Material is deformed by fever, cracks appeared that could cause dropping of tube if you keep using this fixture.

Electrical Devices
Each of devices (Capacitor, Condenser or Semiconductor) has each of lifetime. At the end of lifetime, some errors could appear.

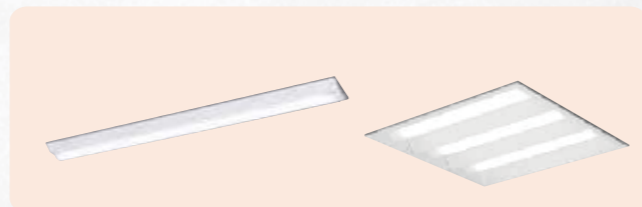
Estimated Timing of Replacement

Periodic maintenance and replacement for Energy saving LED is highly recommended

Image of defective ratio



Panasonic highly recommends to replace a existing fixture with lamp tube for LED fixture, which is Energy saving, long lifetime and safety designed. Especially PRO iD series has various types of shape for your requirements



PRO iD Series

Batten Type

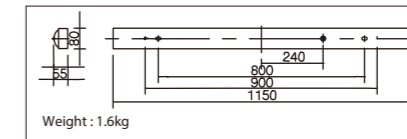


Specification

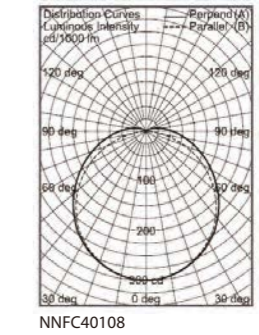
Voltage 220-240V
 Frequency 50/60Hz
 Lifetime Standard: 40,000 hours
 Advanced: 50,000 hours
 CRI 80
 Ambient Temperature 5°C~35°C
 Power Factor 0.9
 Materials Body: Steel (White paint)
 Panel: GPC Opal shade
 IP rate 20



Dimension



Photometric Curve



Type	4000 lm type		7000 lm type	
	Standard (Lifetime: 40000 hours)	Advanced (Lifetime: 50000 hours)	Standard (Lifetime: 40000 hours)	Advanced (Lifetime: 50000 hours)
Efficacy	31W	26W	54W	44W
Non Dimming	4000K ●	NNFC40058 3896lm,126lm/W	NNFC70081 6469lm,120lm/W	NNFC70084 6370lm,144lm/W
	5000K ○	NNFC40108 3896lm,126lm/W	NNFC70131 6469lm,120lm/W	NNFC70134 7000lm,159lm/W
	6500K ●	NNFC40158 3896lm,126lm/W	NNFC70181 6469lm,120lm/W	NNFC70184 6790lm,154lm/W

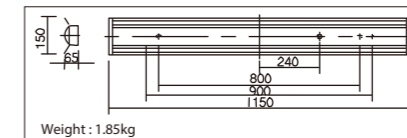
Reflector Type

Specification

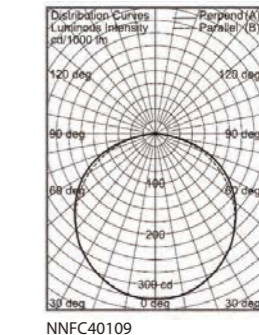
Voltage 220-240V
 Frequency 50/60Hz
 Lifetime Standard: 40,000 hours
 Advanced: 50,000 hours
 CRI 80
 Ambient Temperature 5°C~35°C
 Power Factor 0.9
 Materials Body: Steel (White paint)
 Panel: GPC Opal shade
 IP rate 20



Dimension



Photometric Curve



Type	4000 lm type		7000 lm type	
	Standard (Lifetime: 40000 hours)	Advanced (Lifetime: 50000 hours)	Standard (Lifetime: 40000 hours)	Advanced (Lifetime: 50000 hours)
Efficacy	31W	26W	54W	44W
Non Dimming	4000K ●	NNFC40059 3896lm,126lm/W	NNFC70082 6469lm,120lm/W	NNFC70074 6370lm,144lm/W
	5000K ○	NNFC40109 3896lm,126lm/W	NNFC70132 6469lm,120lm/W	NNFC70124 7000lm,159lm/W
	6500K ●	NNFC40159 3896lm,126lm/W	NNFC70182 6469lm,120lm/W	NNFC70174 6790lm,154lm/W

PRO iD Series

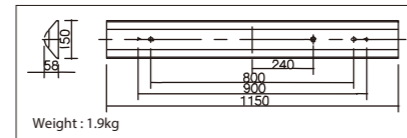
V-Shape Type

Specification

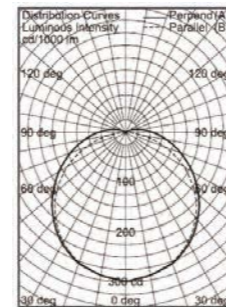
Voltage	220-240V
Frequency	50/60Hz
Lifetime	Standard: 40,000 hours Advanced: 50,000 hours
CRI	80
Ambient Temperature	5°C~35°C
Power Factor	0.9
Materials	Body: Steel (White paint) Panel: GPC Opal shade
IP rate	20



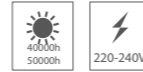
Dimension



Photometric Curve



NNFC40110



Type	4000 lm type		7000 lm type	
Efficacy	Standard (Lifetime: 40000 hours)	Advanced (Lifetime: 50000 hours)	Standard (Lifetime: 40000 hours)	Advanced (Lifetime: 50000 hours)
Wattage	31W	26W	54W	44W
Non Dimming	4000K ○	NNFC40060 3896lm,126lm/W	NNFC70083 6469lm,120lm/W	NNFC70075 6370lm,144lm/W
	5000K ○	NNFC40110 3896lm,126lm/W	NNFC40113 4000lm,153lm/W	NNFC70125 7000lm,159lm/W
	6500K ●	NNFC40160 3896lm,126lm/W	NNFC40163 3880lm,149lm/W	NNFC70175 6790lm,154lm/W

PRO iD Series

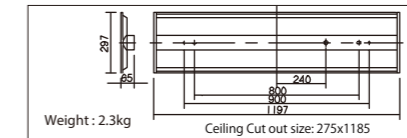
Recessed Type Width 300mm

Specification

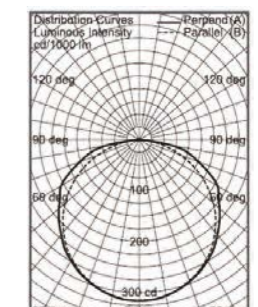
Voltage	220-240V
Frequency	50/60Hz
Lifetime	Standard: 40,000 hours
CRI	80
Ambient Temperature	5°C~35°C
Power Factor	0.9
Materials	Body: Steel (White paint) Panel: GPC Opal shade
IP rate	20



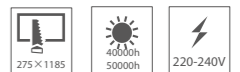
Dimension



Photometric Curve



NNFC20005



Type	2000 lm type	6000 lm type
	Standard (Lifetime: 40000 hours)	Standard (Lifetime: 40000 hours)
Wattage	20W	53W
Non Dimming	4000K ○	NNFC20005 1960lm,98lm/W
	5000K ○	NNFC20055 2000lm,100lm/W
	6500K ●	NNFC20105 1940lm,97lm/W

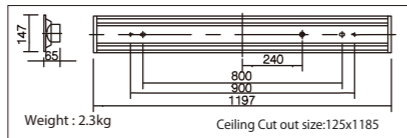
Recessed Type Width 150mm

Specification

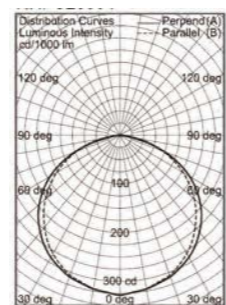
Voltage	220-240V
Frequency	50/60Hz
Lifetime	40,000 hours
CRI	80
Ambient Temperature	5°C~35°C
Power Factor	0.9
Materials	Body: Steel (White paint) Panel: GPC Opal shade
IP rate	20



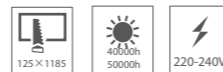
Dimension



Photometric Curve



NNFC20004



Type	2000 lm type	6000 lm type
	Standard (Lifetime: 40000 hours)	Standard (Lifetime: 40000 hours)
Wattage	20W	53W
Non Dimming	4000K ○	NNFC20004 1960lm,98lm/W
	5000K ○	NNFC20054 2000lm,100lm/W
	6500K ●	NNFC20104 1940lm,97lm/W

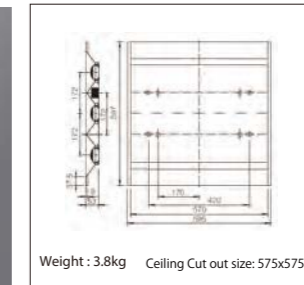
Recessed Type Square

Specification

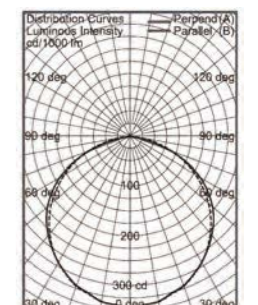
Voltage	220-240V
Frequency	50/60Hz
Lifetime	40,000 hours
CRI	80
Ambient Temperature	5°C~35°C
Power Factor	0.9
Materials	Body: Steel (White paint) Panel: Opal Polycarbonate
IP rate	20



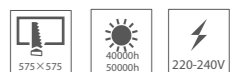
Dimension



Photometric Curve



NNFC70020



Type	6000 lm type	9000 lm type
	Standard (Lifetime: 40000 hours)	Standard (Lifetime: 40000 hours)
Wattage	59W	77W
Non Dimming	4000K ○	NNFC70021 5880lm,100lm/W
	5000K ○	NNFC70071 6000lm,102lm/W
	6500K ●	NNFC70121 5820lm,99lm/W

Ex Big Panel (2G)

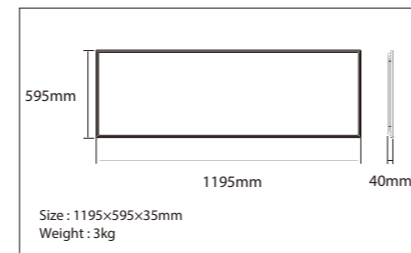
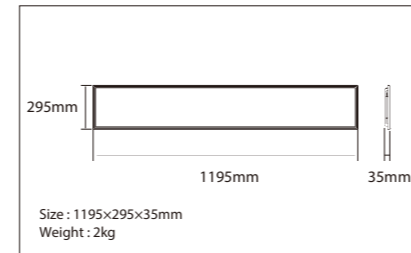
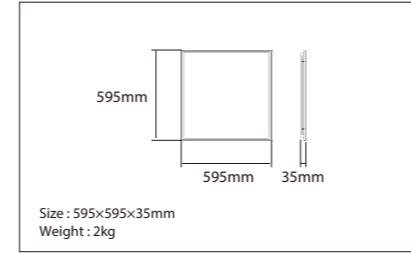


Specification

Voltage	220-240V
Frequency	50/60Hz
Lifetime	50,000 hours
CRI	80
Ambient Temperature	5°C~35°C
Power Factor	0.9
Materials	Body: SPCC+PC(White) Panel: PS
IP rate	20



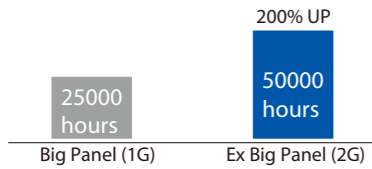
Dimension



3 choices of size, Slim design and wide spreading light can fit to various kinds of office

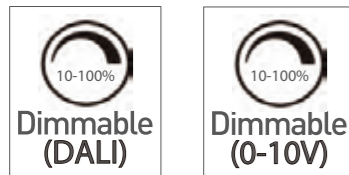


Improve and extend lifetime (50,000 hours) for professional usages



Dimming type
2 types (DALI & 0-10V) types are available

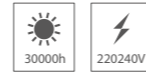
0-10V type
Dimming Range : 10 -100%
(Model no. NNFC*****LZ)



*0~10V To be Launched in 2021

Shape	2x2			1x4			2x4*		
	36W	40W	36W	36W	40W	36W	36W	50W	
Type	Basic	High Power	High Efficacy	Basic	High Power	High Efficacy	High Efficacy	High Efficacy	
Non Dimming	3000K ●	NNFC70600LE88 3900lm,108lm/W	NNFC70602LE88 4000lm,100lm/W	NNFC70601LE88 4400lm,122lm/W	NNFC70620LE88 3900lm,108lm/W	NNFC70622LE88 4000lm,100lm/W	NNFC70621LE88 4400lm,122lm/W	NNFC7064088 4500lm,125lm/W	NNFC7064188 6250lm,125lm/W
	4000K ○	NNFC70650LE88 3900lm,108lm/W	NNFC70652LE88 4000lm,100lm/W	NNFC70651LE88 4400lm,122lm/W	NNFC70670LE88 3900lm,108lm/W	NNFC70672LE88 4000lm,100lm/W	NNFC70671LE88 4400lm,122lm/W	NNFC7069088 4500lm,125lm/W	NNFC7069188 6250lm,125lm/W
	6500K ●	NNFC70660LE88 3900lm,108lm/W	NNFC70662LE88 4000lm,100lm/W	NNFC70661LE88 4400lm,122lm/W	NNFC70680LE88 3900lm,108lm/W	NNFC70682LE88 4000lm,100lm/W	NNFC70681LE88 4400lm,122lm/W	NNFC7069588 4500lm,125lm/W	NNFC7069688 6250lm,125lm/W
Dimming (0-10V)	3000K ●	NNFC70600LZ88 3900lm,108lm/W	NNFC70602LZ88 4000lm,100lm/W	NNFC70601LZ88 4400lm,122lm/W	NNFC70620LZ88 3900lm,108lm/W	NNFC70622LZ88 4000lm,100lm/W	NNFC70621LZ88 4400lm,122lm/W	-	-
	4000K ○	NNFC70650LZ88 3900lm,108lm/W	NNFC70652LZ88 4000lm,100lm/W	NNFC70651LZ88 4400lm,122lm/W	NNFC70670LZ88 3900lm,108lm/W	NNFC70672LZ88 4000lm,100lm/W	NNFC70671LZ88 4400lm,122lm/W	-	-
	6500K ●	NNFC70660LZ88 3900lm,108lm/W	NNFC70662LZ88 4000lm,100lm/W	NNFC70661LZ88 4400lm,122lm/W	NNFC70680LZ88 3900lm,108lm/W	NNFC70682LZ88 4000lm,100lm/W	NNFC70681LZ88 4400lm,122lm/W	-	-
Dimming (DALI)	3000K ●	NNFC70600DZ88 3900lm,108lm/W	NNFC70602DZ88 4000lm,100lm/W	NNFC70601DZ88 4400lm,122lm/W	NNFC70620DZ88 3900lm,108lm/W	NNFC70622DZ88 4000lm,100lm/W	NNFC70621DZ88 4400lm,122lm/W	-	-
	4000K ○	NNFC70650DZ88 3900lm,108lm/W	NNFC70652DZ88 4000lm,100lm/W	NNFC70651DZ88 4400lm,122lm/W	NNFC70670DZ88 3900lm,108lm/W	NNFC70672DZ88 4000lm,100lm/W	NNFC70671DZ88 4400lm,122lm/W	-	-
	6500K ●	NNFC70660DZ88 3900lm,108lm/W	NNFC70662DZ88 4000lm,100lm/W	NNFC70661DZ88 4400lm,122lm/W	NNFC70680DZ88 3900lm,108lm/W	NNFC70682DZ88 4000lm,100lm/W	NNFC70681DZ88 4400lm,122lm/W	-	-
Illuminance Distribution									

SP Big Panel (2G)



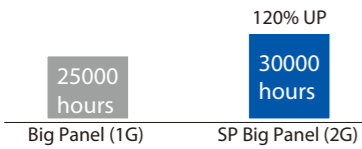
Specification

Voltage	220-240V
Frequency	50/60Hz
Lifetime	(2x2/1x4) 30,000 hours (2x4) 25,000 hours
CRI	80
Ambient Temperature	5°C~35°C
Power Factor	0.9
Materials	Body: SPCC+PC(White) Panel: PS
IP rate	20

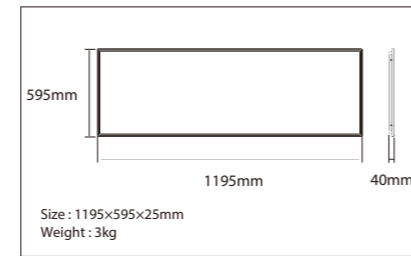
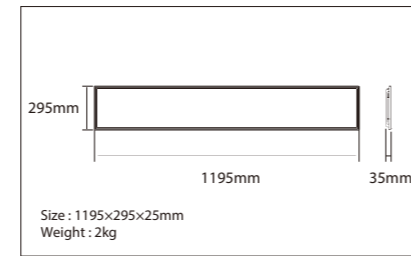
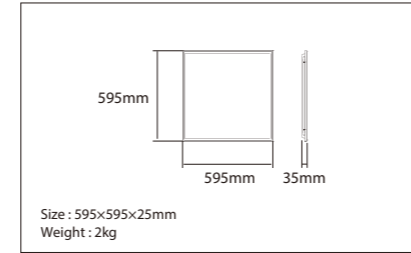
3 choices of size, Slim design and wide spreading light can fit to various kinds of office



Improve and extend lifetime (30,000 hours) for various usages



Dimension



Shape	2x2			1x4			2x4*		
	36W	40W	36W	36W	40W	36W	36W	50W	
Type	Basic	High Power	High Efficacy	Basic	High Power	High Efficacy	High Efficacy	High Efficacy	
Non Dimming	3000K ●	NNFC7050088 3900lm,108lm/W	NNFC7050288 4000lm,100lm/W	NNFC7050188 4400lm,122lm/W	NNFC7052088 3900lm,108lm/W	NNFC7052288 4000lm,100lm/W	NNFC7052188 4400lm,122lm/W	NNFC7030888 4500lm,125lm/W	NNFC7030988 6250lm,125lm/W
	4000K ○	NNFC7055088 3900lm,108lm/W	NNFC7055288 4000lm,100lm/W	NNFC7055188 4400lm,122lm/W	NNFC7057088 3900lm,108lm/W	NNFC7057288 4000lm,100lm/W	NNFC7057188 4400lm,122lm/W	NNFC7035888 4500lm,125lm/W	NNFC7035988 6250lm,125lm/W
	6500K ●	NNFC7056088 3900lm,108lm/W	NNFC7056288 4000lm,100lm/W	NNFC7056188 4400lm,122lm/W	NNFC7058088 3900lm,108lm/W	NNFC7058288 4000lm,100lm/W	NNFC7058188 4400lm,122lm/W	NNFC7036888 4500lm,125lm/W	NNFC7036988 6250lm,125lm/W
Illuminance Distribution									

*2x4 is same as Big Panel (1G)

Big Panel (1G)



Specification

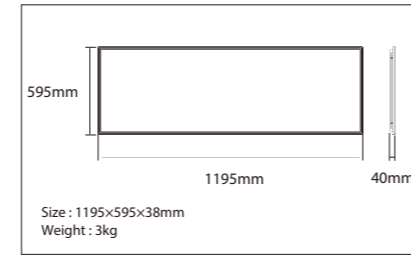
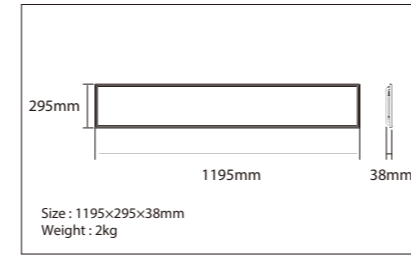
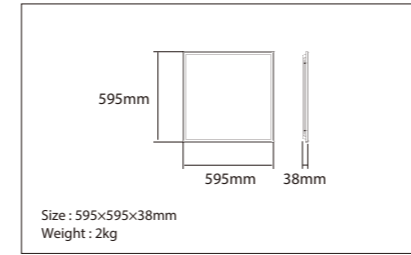
Voltage	220-240V
Frequency	50/60Hz
Lifetime	25,000 hours
CRI	80
Ambient Temperature	5°C~35°C
Power Factor	0.9
Materials	Body: SPCC+PC(White) Panel: PS
IP rate	20

Dimming type

Dimming type is available.(0-10V)
Dimming Range : 10 -100%



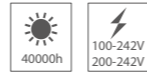
Dimension



Shape	2x2			1x4			2x4*		
	36W	40W	36W	36W	40W	36W	36W	50W	
Type	Basic	High Power	High Efficacy	Basic	High Power	High Efficacy	High Efficacy	High Efficacy	
Non Dimming	3000K ●	NNFC7030088 3900lm,108lm/W	NNFC7030288 4000lm,100lm/W	NNFC7030188 4400lm,122lm/W	NNFC7030588 3900lm,108lm/W	NNFC7030788 4000lm,100lm/W	NNFC7030688 4400lm,122lm/W	NNFC7030888 4500lm,125lm/W	NNFC7030988 6250lm,125lm/W
	4000K ○	NNFC7035088 3900lm,108lm/W	NNFC7035288 4000lm,100lm/W	NNFC7035188 4400lm,122lm/W	NNFC7035588 3900lm,108lm/W	NNFC7035788 4000lm,100lm/W	NNFC7035688 4400lm,122lm/W	NNFC7035888 4500lm,125lm/W	NNFC7035988 6250lm,125lm/W
	6500K ●	NNFC7036088 3900lm,108lm/W	NNFC7036288 4000lm,100lm/W	NNFC7036188 4400lm,122lm/W	NNFC7036588 3900lm,108lm/W	NNFC7036788 4000lm,100lm/W	NNFC7036688 4400lm,122lm/W	NNFC7036888 4500lm,125lm/W	NNFC7036988 6250lm,125lm/W
Dimming (0-10V)	3000K ●	NNFC7032088 3900lm,108lm/W	NNFC7032288 4000lm,100lm/W	NNFC7032188 4400lm,122lm/W	NNFC7032588 3900lm,108lm/W	NNFC7032788 4000lm,100lm/W	NNFC7032688 4400lm,122lm/W	-	-
	4000K ○	NNFC7037088 3900lm,108lm/W	NNFC7037288 4000lm,100lm/W	NNFC7037188 4400lm,122lm/W	NNFC7037588 3900lm,108lm/W	NNFC7037788 4000lm,100lm/W	NNFC7037688 4400lm,122lm/W	-	-
	6500K ●	NNFC7038088 3900lm,108lm/W	NNFC7038288 4000lm,100lm/W	NNFC7038188 4400lm,122lm/W	NNFC7038588 3900lm,108lm/W	NNFC7038788 4000lm,100lm/W	NNFC7038688 4400lm,122lm/W	-	-
Illuminance Distribution									

*2x4 is same as SP Big Panel (G2)

Baselight for HACCP Requirement



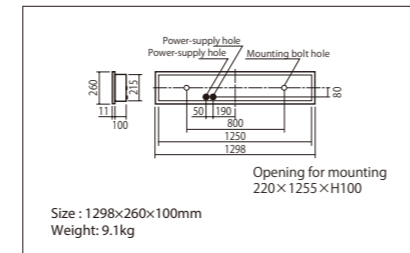
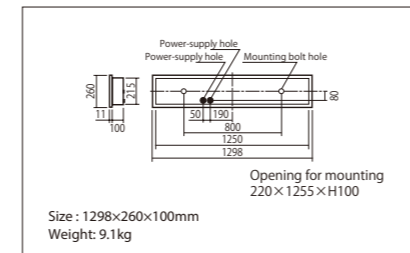
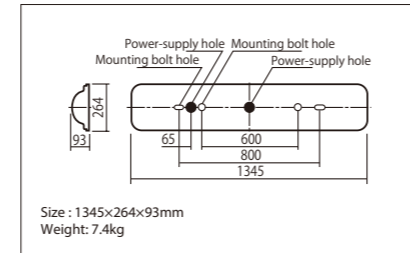
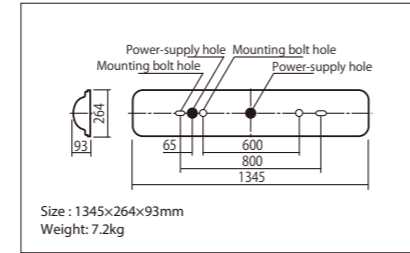
Specification

Voltage	100-242V(LE9) 200-242V(LE2)
Frequency	50/60Hz
Lifetime	40,000 hours
CRI	83
Ambient Temperature	5°C~35°C
Materials	Body: Steel plate(White) Panel: PC(Transparent)
IP rate	23

Suitable for a clean environment required by HACCP such as food factories, schools kitchens.



Dimension



Type	Surface mounted		(Moisture proof)	Recessed		(Moisture proof)
	Standard	Advanced	Standard	Standard	Advanced	Standard
Dimming	Non Dimming	Non Dimming	Non Dimming	Non Dimming	Non Dimming	Non Dimming
10000lm type (5000K)	XLX400ZEN LE2 9170lm, 58W 159lm/W	-	-	XLX406ZEN LE2 8260lm, 58W 143lm/W	-	-
6900lm type (5000K)	XLX460ZEN LE9 6330lm, 43W 147lm/W	XLX460ZHNT LE9 6330lm, 36W 174lm/W	XLX461ZEN LE9 6260lm, 43W 145lm/W	XLX466ZEN LE9 5700lm, 43W 132lm/W	XLX466ZHNT LE9 5700lm, 36W 157lm/W	XLX466ZEN LE9 5720lm, 43W 133lm/W
5200lm type (5000K)	XLX450ZEN LE9 4770lm, 32W 150lm/W	XLX450ZHNP LE9 4770lm, 26W 178lm/W	XLX451ZEN LE9 4710lm, 32W 145lm/W	XLX456ZEN LE9 4290lm, 32W 134lm/W	XLX456ZHNP LE9 4210lm, 26W 160lm/W	XLX456ZEN LE9 4300lm, 32W 132lm/W
3200lm type (5000K)	XLX430ZEN LE9 2930lm, 21W 142lm/W	-	XLX431ZEN LE9 2900lm, 21W 141lm/W	XLX436ZEN LE9 2640lm, 21W 128lm/W	-	XLX436ZEN LE9 2650lm, 21W 129lm/W
2500lm type (5000K)	XLX420ZEN LE9 2290lm, 16W 140lm/W	-	XLX421ZEN LE9 2280lm, 16W 140lm/W	XLX426ZEN LE9 2060lm, 16W 126lm/W	-	XLX426ZEN LE9 2080lm, 16W 128lm/W

1. Clean design that prevents dust from sticking to the fixture, while also making it easier to wipe

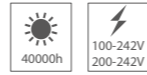
2. Designed to prevent dust from entering fixture



3. Designed with plastic anti-scattering cover



Baselight for Clean room

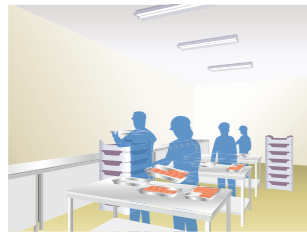
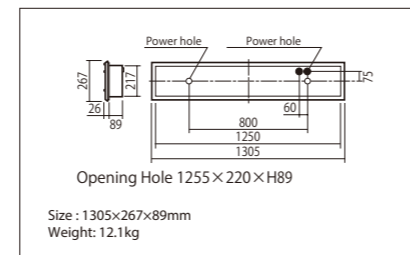
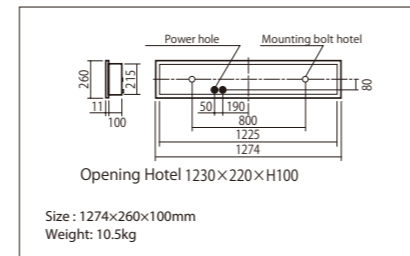
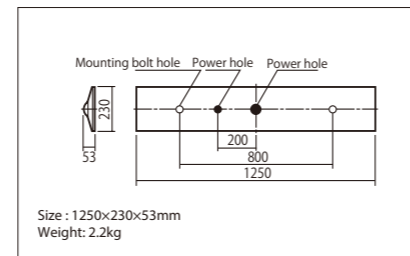
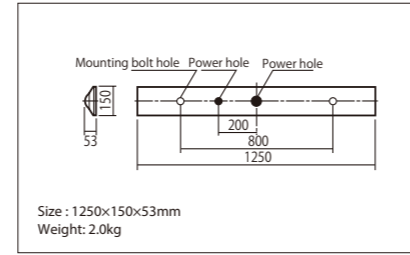


Specification

Voltage	100-242V(LE9) 200-242V(LE2)
Frequency	50/60Hz
Lifetime	40000 hours
CRI	83
Ambient Temperature	5°C~35°C
Materials	Body: Steel plate(White) Panel: PC(Transparent)
IP rate	23



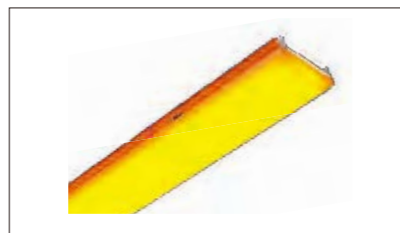
Dimension



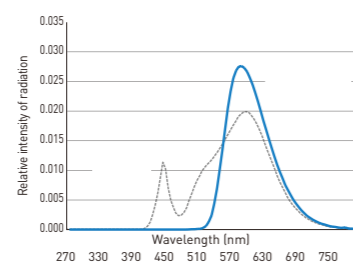
1. Less maintenance

2. Yellow light bar with UV blocker is available

Light bar intercepts small wavelengths of 500nm or lower. Recommended for places where UV rays(short wavelength); such as factories for food, medicine, scientific products and plant products. It can also be used in the clean rooms of semi-conductor factories with photosensitive materials (photo resist process) .



■ A spectral distribution comparison of 'general light bar' and 'UV blocking yellow light bar'



Type of brightness	Color temperature	Light bar model number
4000 lm type	Yellow	NNL4400EYT LE9

3. Cleanroom standards chart

Class of Clean room is measured by particles inside rooms.

ISO	Maximum particles/m ³					FED STD 209D
	0.1μm	0.2μm	0.3μm	0.5μm	1μm	
1	10	2	-	-	-	-
2	100	24	10	4	-	-
3	1,000	237	102	35	8	1
4	10,000	2,370	1,020	352	83	10
5	100,000	23,700	10,200	3,520	832	29
6	1,000,000	237,000	102,000	35,200	832	293
7	-	-	-	352,000	83,200	2,930
8	-	-	-	3,520,000	832,000	29,300
9	-	-	-	35,200,000	8,320,000	293,000

*CCT of Yellow type is not 5000K

Type	Surface mounted (W150)			Surface mounted (W230)		
	ISO Class 6			ISO Class 6		
	Standard	Advanced	Yellow type	Standard	Advanced	Yellow type
10000lm type (5000K)	XLX405AEN LE2 10000lm, 58W 177lm/W	-	-	XLX405DEN LE2 10000lm, 58W 177lm/W	-	-
6900lm type (5000K)	XLX465AENT LE9 6900lm, 43W 160lm/W	XLX465AHNT LE9 6900lm, 36W 190lm/W	-	XLX465DENT LE9 6900lm, 43W 160lm/W	XLX465DHNT LE9 6900lm, 36W 190lm/W	-
5200lm type (5000K)	XLX455AENT LE9 5200lm, 32W 163lm/W	XLX455AHNP LE9 5100lm, 26W 194lm/W	-	XLX455DENT LE9 5200lm, 32W 163lm/W	XLX455DHNP LE9 5100lm, 26W 194lm/W	-
3200lm type (5000K)	XLX435AENT LE9 3230lm, 21W 155lm/W	-	-	XLX435DENT LE9 3230lm, 21W 155lm/W	-	-
2500lm type (5000K)	XLX425AENT LE9 2500lm, 16W 153lm/W	-	(NNL4400EYP LE9) 2200lm, 25W 88lm/W	XLX425DENT LE9 2500lm, 16W 153lm/W	-	(NNL4400EYP LE9) 2200lm, 25W 88lm/W

Type	Surface mounted (W150)			Surface mounted (W230)		
	ISO Class 8			ISO Class 8		
	Basic	Advanced	Yellow type	Basic	Advanced	Yellow type
10000lm type (5000K)	XLX406AEN LE2 10000lm, 58W 177lm/W	-	-	XLX406DEN LE2 10000lm, 58W 177lm/W	-	-
6900lm type (5000K)	XLX466AENT LE9 6900lm, 43W 160lm/W	XLX466AHNT LE9 6900lm, 36W 190lm/W	-	XLX466DENT LE9 6900lm, 43W 160lm/W	XLX466DHNT LE9 6900lm, 36W 190lm/W	-
5200lm type (5000K)	XLX456AENT LE9 5200lm, 32W 163lm/W	XLX456AHNP LE9 5100lm, 26W 194lm/W	-	XLX456DENT LE9 5200lm, 32W 163lm/W	XLX456DHNP LE9 5100lm, 26W 194lm/W	-
3200lm type (5000K)	XLX436AENT LE9 3230lm, 21W 155lm/W	-	-	XLX436DENT LE9 3230lm, 21W 155lm/W	-	-
2500lm type (5000K)	XLX426AENT LE9 2500lm, 16W 153lm/W	-	(NNL4400EYP LE9) 2200lm, 25W 88lm/W	XLX426DENT LE9 2500lm, 16W 153lm/W	-	(NNL4400EYP LE9) 2200lm, 25W 88lm/W

Type	Recessed (W220)			Recessed Stainless type (W220)		
	ISO Class 6			ISO Class 6		
	Basic	Advanced	Yellow type	Basic	Advanced	Yellow type
10000lm type (5000K)	XLX400AEN LE2 10000lm, 58W 177lm/W	-	-	XLX401DEN LE2 10000lm, 58W 177lm/W	-	-
6900lm type (5000K)	XLX460AENT LE9 6900lm, 43W 160lm/W	XLX460AHNT LE9 6900lm, 36W 190lm/W	-	XLX461DENT LE9 6900lm, 43W 160lm/W	XLX461DHNT LE9 6900lm, 36W 190lm/W	-
5200lm type (5000K)	XLX45AENT LE9 5200lm, 32W 163lm/W	XLX450AHNP LE9 5100lm, 26W 194lm/W	-	XLX451DENT LE9 5200lm, 32W 163lm/W	XLX451DHNP LE9 5100lm, 26W 194lm/W	-
3200lm type (5000K)	XLX4350AENT LE9 3230lm, 21W 155lm/W	-	-	XLX431DENT LE9 3230lm, 21W 155lm/W	-	-
2500lm type (5000K)	XLX420AENT LE9 2500lm, 16W 153lm/W	-	(NNL4400EYP LE9) 2200lm, 25W 88lm/W	XLX421DENT LE9 2500lm, 16W 153lm/W	-	(NNL4400EYP LE9) 2200lm, 25W 88lm/W

Type	Recessed Stainless type (W220)	
	ISO Class 5	
	Basic	
6900lm type (5000K)	XLX469JENZ LE2** 5500lm, 43W 128lm/W	

Baselight Low Temperature Environment



Specification

Voltage	100-242V
Frequency	50/60Hz
Lifetime	40,000 hours
CRI	83
Ambient Temperature	-25°C~35°C -40°C~35°C
Power Factor	0.9
Materials	Body: Chromium-free galvanized steel plate(White) Panel: PC(White)
IP rate	23

Suitable for a cold storage environment.

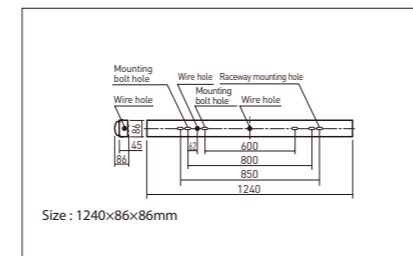
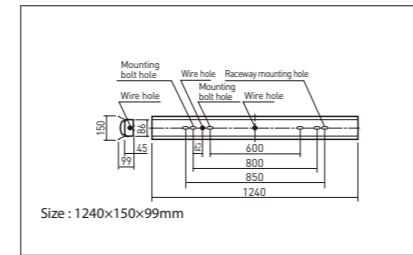
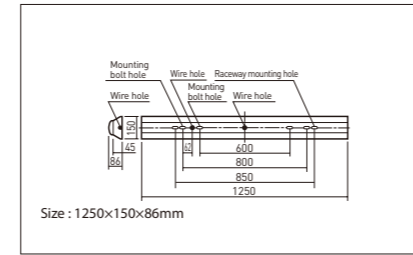
low temperature warehouse
(Ceiling high 4~6m)



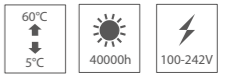
Prefabricated warehouse
(Ceiling high ~4m)



Dimension



Baselight High Temperature Environment



Specification

Voltage	200-242V
Frequency	50/60Hz
Lifetime	40,000 hours
CRI	83
Ambient Temperature	5°C~60°C
Power Factor	0.9
Materials	Body: Stainless steel
IP rate	20

Suitable for hot and humid environment.

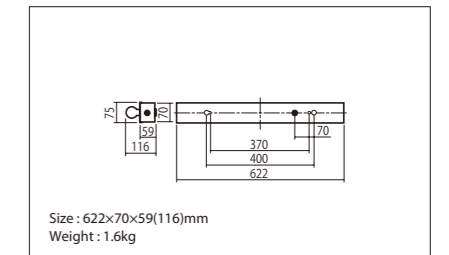
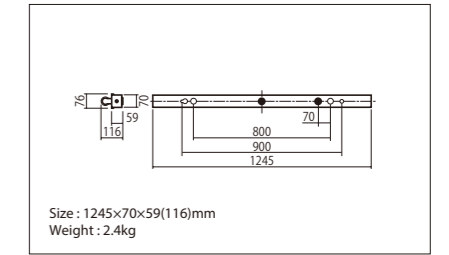
Food factory



Boiler room



Dimension



Adaptable LED tube(Socket type : GX16t-5)

*Other socket type(ex: G13) is not adaptable for this products.

Length	Type	Model no.	CCT	Length	Type	Model no.	CCT
4FT	2600lm type	LDL40SN1426	5000K	2FT	1200lm type	LDL20SD1111K	6500K
		LDL40SW1424	4000K			LDL20SN1112K	5000K
		LDL40SWW1423	3500K			LDL20SW1111K	4000K
	2500lm type	LDL40SD1923K	6500K			LDL20SWW1111K	3500K
		LDL40SN1925K	5000K			LDL20SL1111K	3000K
		LDL40SW1923K	4000K				
		LDL40SWW1922K	3500K				
		LDL40SL1921K27	3000K				

Type	D Style		Reflector		I Style	
	-25°C~35°C	-40°C~35°C	-25°C~35°C	-40°C~35°C	-25°C~35°C	-40°C~35°C
Dimming	Non Dimming	Non Dimming	Non Dimming	Non Dimming	Non Dimming	Non Dimming
46W (5000K)	XLJ460AENK LE9 6560lm,143lm/W	XLJ461AENK LE9 6560lm,143lm/W	XLJ460KENK LE9 6420lm, 140lm/W	XLJ461KENK LE9 6420lm, 140lm/W	XLJ460NENK LE9 6560lm, 143lm/W	XLJ461NENK LE9 6560lm, 143lm/W
36W (5000K)	XLJ450AENK LE9 4940lm,138lm/W	XLJ451AENK LE9 4940lm,138lm/W	XLJ450KENK LE9 4840lm, 135lm/W	XLJ451KENK LE9 4840lm, 135lm/W	XLJ450NENK LE9 4940lm, 138lm/W	XLJ451NENK LE9 4940lm, 138lm/W
27W (5000K)	XLJ440AENK LE9 3830lm,140lm/W	XLJ441AENK LE9 3830lm,140lm/W	XLJ440KENK LE9 3740lm, 137lm/W	XLJ441KENK LE9 3740lm, 137lm/W	XLJ440NENK LE9 3830lm, 140lm/W	XLJ441NENK LE9 3830lm, 140lm/W

Type	4FT type		2FT type	
	Non Dimming	Non Dimming	Non Dimming	Non Dimming
Dimming	Non Dimming	Non Dimming	Non Dimming	Non Dimming
Wattage	20W	23W	12W	
5000K	NNFJ41300 LE9 (LDL40SN1426) 2520lm,126lm/W	NNFJ41300 LE9 (LDL40SN1925K) 2430lm,106lm/W	NNFJ21300J LE9 (LDL20SN1112) 950lm,79lm/W	

Ex Splash proof (2G)

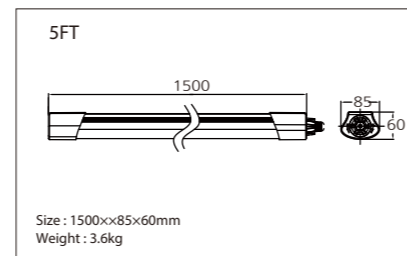
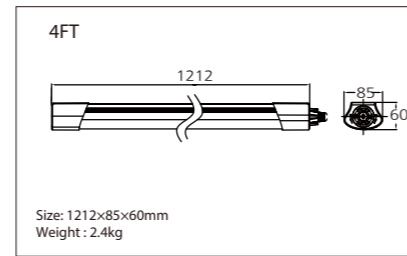
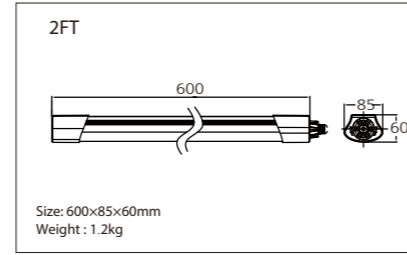


Specification

Voltage	200-240V
Frequency	50/60Hz
Lifetime	50,000 hours
CRI	80
Ambient Temperature	-20°C~40°C
Power Factor	0.9
Materials	Body: PC(White) Reflector: PC
IP rate	65
Surge Protectoin	1KV



Dimension



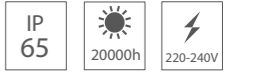
Light source life of 50,000 hours
The design effeciently releasing the LED heat effeciently ensures brightness from installation to the end of product life time

Water proof (IP65) and high efficient fixture is sutable for area, such as parking lot, where use lighting for long period of Time.



Type	2FT (600mm)	4FT (1212mm)	5FT (1500mm)
Dimming Method	Non Dimming	Non Dimming	Non Dimming
Wattage	18W	36W	50W
4000K	NNFC4034088 2300lm,128lm/W	NNFC4034188 4600lm,128lm/W	NNFC4034288 6500lm,130lm/W
6500K	NNFC4039088 2300lm,128lm/W	NNFC4039188 4600lm,128lm/W	NNFC4039288 6500lm,130lm/W
Photometric Distribution			

SP Splash proof (2G)

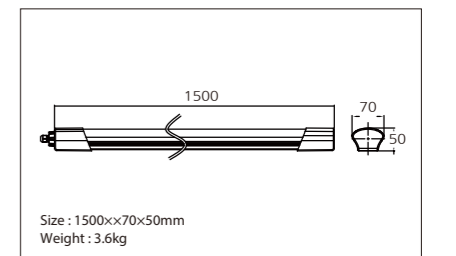
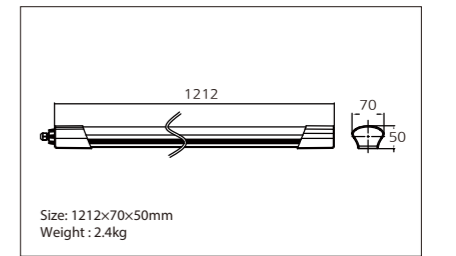
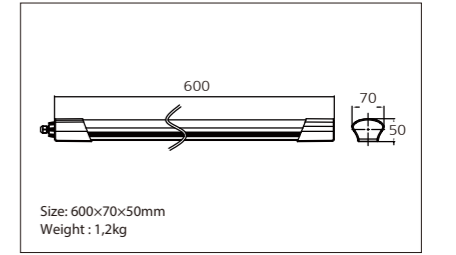


Specification

Voltage	200-240V
Frequency	50/60Hz
Lifetime	25,000 hours
CRI	80
Ambient Temperature	-20°C~40°C
Power Factor	0.9
Materials	Body: PC(White) Reflector: PC
IP rate	65
Surge Protectoin	1KV



Dimension



Water proof (IP65) and high efficient fixture is sutable for area, such as parking lot, where use lighting for long period of Time.



Type	2FT (600mm)	4FT (1212mm)	5FT (1500mm)
Dimming Method	Non Dimming	Non Dimming	Non Dimming
Wattage	18W	36W	50W
4000K	NNFC4033088 1800lm,100lm/W	NNFC4033188 3600lm,100lm/W	NNFC4033288 5000lm,100lm/W
6500K	NNFC4038088 2300lm,100lm/W	NNFC4038188 3600lm,100lm/W	NNFC4033288 5000lm,100lm/W
Photometric Distribution			

Ex Splash proof (1G)

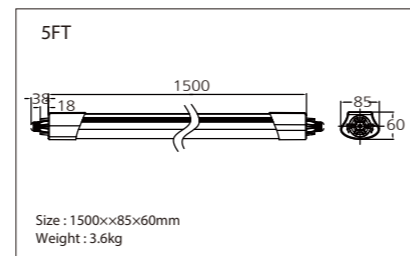
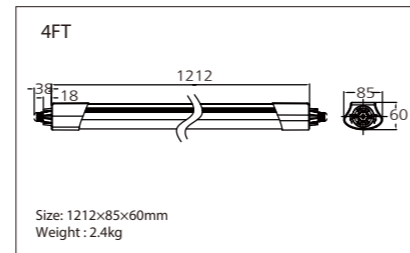
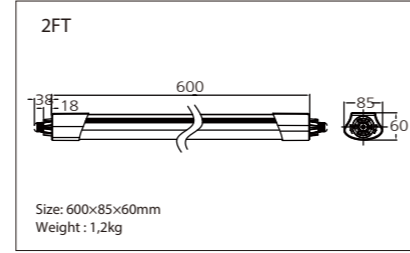


Specification

Voltage	200-240V
Frequency	50/60Hz
Lifetime	50,000 hours
CRI	80
Ambient Temperature	-20°C~40°C
Power Factor	0.9
Materials	Body: PC(White) Reflector: PC
IP rate	65
Surge Protectoin	1KV



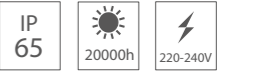
Dimension



Light source life of 50,000 hours
The design effeciently releasing the LED heat effeciently ensures brightness from installation to the end of product life time

Type	2FT (600mm)	4FT (1212mm)	5FT (1500mm)
Dimming Method	Non Dimming	Non Dimming	Non Dimming
Wattage	18W	36W	50W
4000K	NNFC4024088 2300lm,128lm/W	NNFC4024188 4500lm,125lm/W	NNFC4024288 6500lm,130lm/W
6500K	NNFC4029088 2300lm,128lm/W	NNFC4029188 4500lm,125lm/W	NNFC4029288 6500lm,130lm/W
Photometric Distribution			

SP Splash proof (1G)

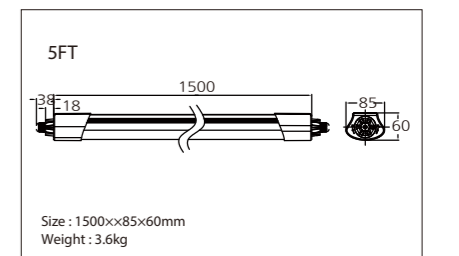
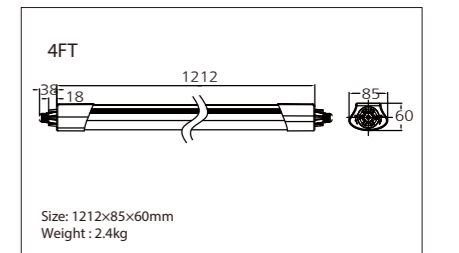
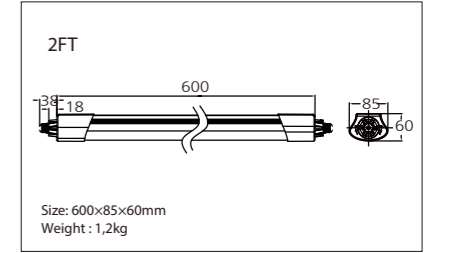


Specification

Voltage	200-240V
Frequency	50/60Hz
Lifetime	20,000 hours
CRI	80
Ambient Temperature	-20°C~40°C
Power Factor	0.9
Materials	Body: PC(White) Reflector: PC
IP rate	65
Surge Protectoin	1KV



Dimension



Type	2FT (600mm)	4FT (1212mm)	5FT (1500mm)
Dimming Method	Non Dimming	Non Dimming	Non Dimming
Wattage	18W	36W	50W
4000K	NNFC4023088 2300lm,128lm/W	NNFC4023188 4500lm,125lm/W	NNFC4023288 6500lm,130lm/W
6500K	NNFC4028088 2300lm,128lm/W	NNFC4028188 4500lm,125lm/W	NNFC4028288 6500lm,130lm/W
Photometric Distribution			

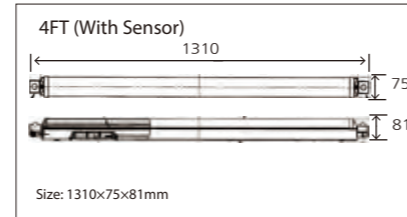
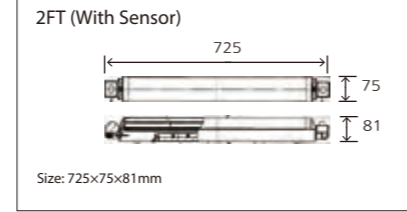
LED Batten (With Sensor)

Specification

Voltage	220-240V
Frequency	50/60Hz
Lifetime	50,000 hours
CRI	80
Ambient Temperature	5°C~35°C
Power Factor	0.9
IP rate	Sensor: 44
	LED light bar & Driver: 54
	Fixture: 20



Dimension

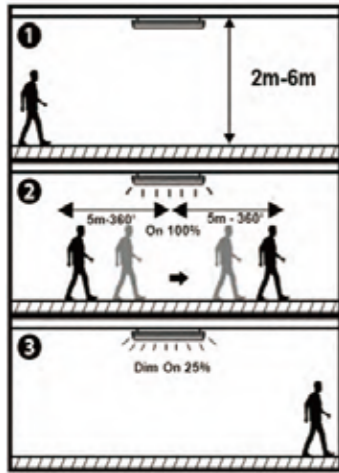


This is a fixture for Semi-outdoor and Indoor installations with integrated LED Light Bar IP44 and separate IP54 drivers for easy installation and maintenance. A tough product with advantages in energy efficient use with minimal maintenance.

Equipped with Motion sensor

In a dark environment, it can automatically light up by sensing human activities.

- ① Installation Height: 2m - 6m
- ② Detection Range: 10m - 360°
- ③ Step-Dimming function
 - Sensor detect a movement : Light on 100%
 - After a certain time of 100% : Down to 25%
 - After a certain time of 25% : Light Off

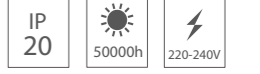


Type	2FT	4FT
Dimming Method	Step Dimming (100% - 30% - 0%)	Step Dimming (100% - 30% - 0%)
Sensor	With sensor	With sensor
Wattage	8W	16W
4000K	NNP8232S 1000lm,125lm/W	NNP8472S 2000lm,125lm/W
6500K	NNP8234S 1000lm,125lm/W	NNP8474S 2000lm,125lm/W

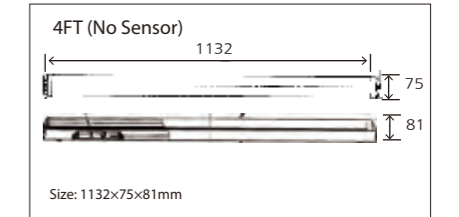
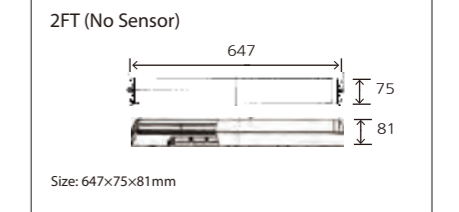
LED Batten (Basic)

Specification

Voltage	220-240V
Frequency	50/60Hz
Lifetime	50,000 hours
CRI	80
Ambient Temperature	5°C~35°C
Power Factor	0.9
IP rate	Sensor: 44
	LED light bar & Driver: 54
	Fixture: 20



Dimension



This is a fixture for Semi-outdoor and Indoor installations with integrated LED Light Bar IP44 and separate IP54 drivers for easy installation and maintenance. A tough product with advantages in energy efficient use with minimal maintenance.

Type	2FT	4FT
Dimming Method	Non Dimming	Non Dimming
Sensor	No sensor	No sensor
Wattage	8W	16W
4000K	NNP8232 1000lm,125lm/W	NNP8472 2000lm,125lm/W
6500K	NNP8234 1000lm,125lm/W	NNP8474 2000lm,125lm/W

SP Batten

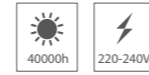
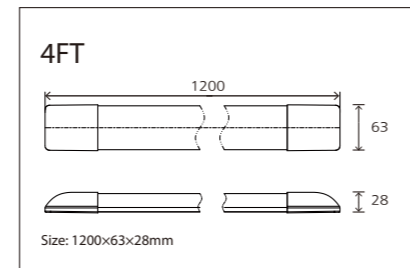
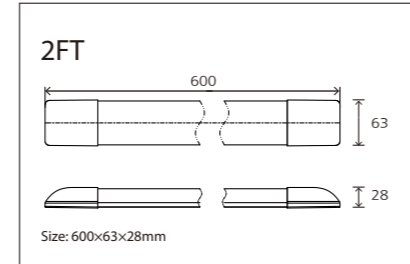
Slim Batten

Specification

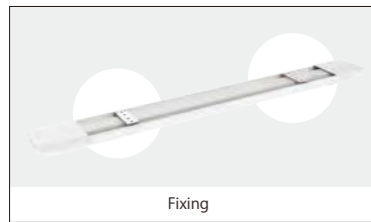
Voltage	220-240V
Frequency	50/60Hz
Lifetime	25,000 hours
CRI	80
Power Factor	0.9
Ambient Temperature	5°C~35°C
Materials	Body :Aluminium Reflector: PC
IP rate	20



Dimension



This fixture can be installed by hanging or fixing.



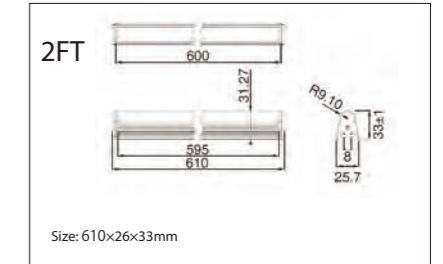
Type	2FT	4FT	
Wattage	18W	36W	
Non Dimming	3000K ●	NNFC5004088 1600lm, 89 lm/W	NNFC5004188 3200lm, 89 lm/W
	3000K ●	NNFC5009088 1600lm, 89 lm/W	NNFC5009188 3200lm, 89 lm/W
	6500K ●	NNFC5009588 1600 lm, 89 lm/W	NNFC5009688 3200 lm, 89 lm/W

Specification

Voltage	220-240V
Frequency	50/60Hz
Lifetime	40,000 hours
CRI	80
Ambient Temperature	5°C~35°C
Materials	Body :Aluminium Reflector: PC
IP rate	20



Dimension



Type	2FT	3FT		4FT		
Wattage	9W	12W	15W	18W	23W	
Non Dimming	3000K ●	NNP82910 810lm, 90.0 lm/W	NNP83910 1080lm, 90.0 lm/W	NNP83911 1530lm, 102.0 lm/W	NNP84910 1620lm, 90.0 lm/W	NNP85911 2340lm, 102.0 lm/W
	6500K ●	NNP82950 900 lm, 100.0 lm/W	NNP83950 1200 lm, 100.0 lm/W	NNP83951 1700 lm, 113.0 lm/W	NNP84950 1800 lm, 100.0 lm/W	NNP85951 2600 lm, 113.0 lm/W

DOWNLIGHT



Ex-A Series

- Glareless Downlight / Adjustable Downlight
- Small Glareless Downlight / Adjustable Downlight
- Pin-hole / Pin-hole Adjustable Downlight
- High Wattage Downlight
- Ceiling Downlight / Adjustable Downlight



Ex-H Series

- Downlight
- Glareless Downlight
- Water proof Downlight
- Glareless Adjustable Downlight



Ex-F Series

- Downlight
- Glareless Downlight
- Adjustable Downlight
- Glareless Adjustable Downlight
- Surface Mouted Downlight



Ex-2G Series



Basic Downlight & Others

- SP Downlight
- DN Downlight
- DB Downlight
- Slim Downlight

New Architectural Lighting Ex-A Series

Panasonic is expanding its lineup of Lighting equipments to meet the needs of various kinds of applications

2020 NEW LIGHTING PRODUCTS



Glareless Downlight/
Glareless Adjustable Downlight



Small Glareless Downlight/
Small Glareless Adjustable Downlight



Pin-hole Downlight



Pin-hole Adjustable Downlight



High Wattage Downlight



Ceiling Downlight



Ceiling Adjustable
Downlight (Round)



Ceiling Adjustable
Downlight (Suqare)

Applicatoin Image

Commercial (Shops)

Retails Shop

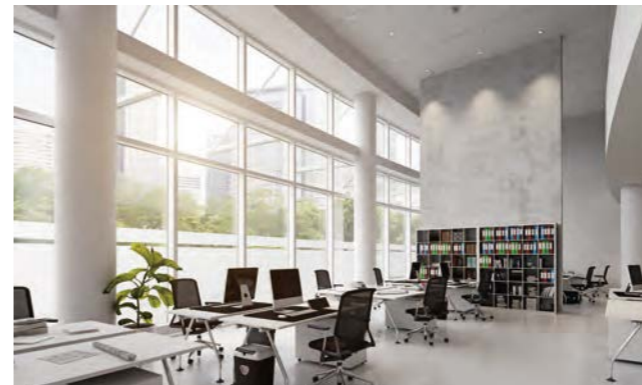


Common Area



Commercial (Office)

Working Space

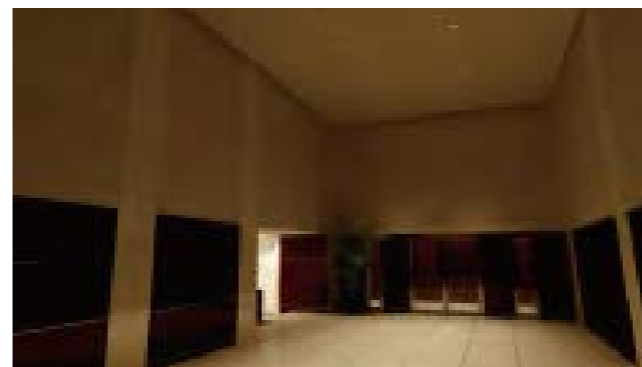


Meeting Room

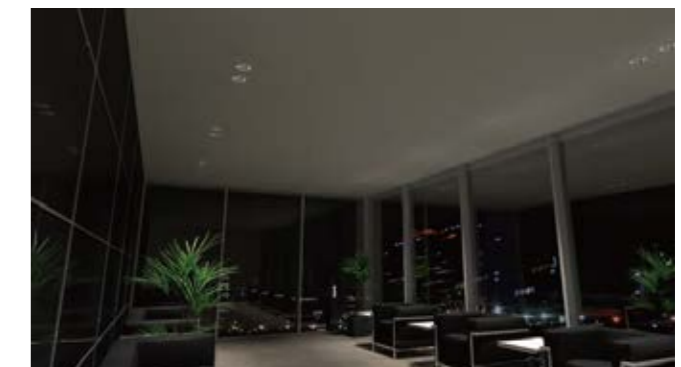


Hotel

EV Hall



Lobby



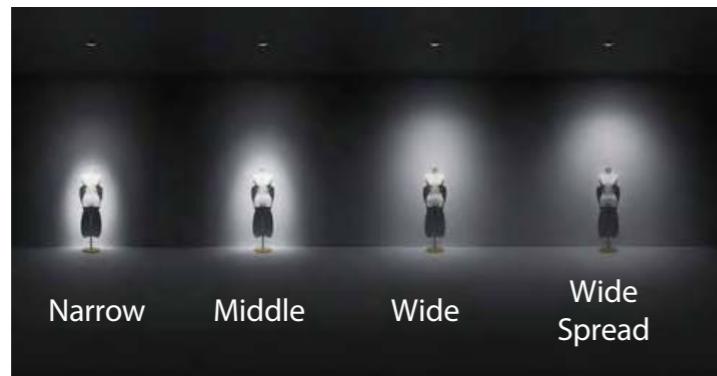
Ex-A Series

Architectural lighting for consistent, integrate planning for enire spaces

Ex-A Series provodes support for unified lighting design for all sorts of architectural spaces, with unified lighting concept, consistent design sense, and outstanding quality across the board

High Quality design and material of Lens, which have a variety of choices.

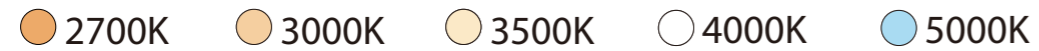
- Depending on the application, there are max 4 types of beam angle options to choose from.



- Prepare 3 color of Cone (White/Chrome/Shining Black)



- Maximum 5 type of Color temperature is available



High CRI (CRI90)

High Color Index types makes the colors of irradiated objects appear in their natural colors
*High CRI tyep is available for Glareless Downlight series.



Ex-A Series Product Line-up



Ex-A Series Line-up Chart

Product	Wattage /Cut-out Size	Body /Frame	Cone	Beam Angle	CCT	CRI	Dimming
Glareless Downlight	10W/12W Cut-out ϕ 75	White Frame	Chrome Shining Black	15° 24° 36°	2700K 3000K 3500K* 4000K 5000K* *Customized	CRI 80 High CRI CRI 90	Non Dimmable Dimmable (0-10V)
	20W/22W Cut-out ϕ 100		White				
	28W/29W Cut-out ϕ 125						
Glareless Adjustable Downlight	10W/12W Cut-out ϕ 75	White Frame	Chrome Shining Black	15° 24° 36°	2700K 3000K 3500K* 4000K 5000K* *Customized	CRI 80 High CRI CRI 90	Non Dimmable Dimmable (0-10V)
	20W/22W Cut-out ϕ 100		White				
	28W/29W Cut-out ϕ 125						
Small Glareless Downlight	6.5W /8.5W Cut-out ϕ 55	White Frame	Chrome Shining Black	15° 24° 36°	2700K 3000K 3500K 4000K	CRI 80 High CRI CRI 90	Non Dimmable Dimmable (0-10V)
Small Glareless Adjustable Downlight	6.5W /8.5W Cut-out ϕ 55	White Frame	Chrome Shining Black	15° 24° 36°	2700K 3000K 3500K 4000K	CRI 80 High CRI CRI 90	Non Dimmable Dimmable (0-10V)
Pin-hole Downlight	6.5W /8.5W Cut-out ϕ 55	White Frame		15° 24°	2700K 3000K 3500K 4000K	CRI 80	Non Dimmable Dimmable (0-10V)
Pin-hole Adjustable Downlight	6.5W /8.5W Cut-out ϕ 55	White Frame		15° 24°	2700K 3000K 3500K 4000K	CRI 80	Non Dimmable Dimmable (0-10V)

Product	Wattage /Cut-out Size	Body /Frame	Cone	Beam Angle	CCT	CRI	Dimming
High Wattage Downlight	30W Cut-out ϕ 125	White Frame		30W/45W 36° 60° 70W 12° 24°	2700K* 3000K 3500K* 4000K 5000K* *Customized	CRI 80	Non Dimmable Dimmable (0-10V)
	45W Cut-out ϕ 170						
	70W Cut-out ϕ 190						
Ceiling Downlight	25W	White Body		25W 24° 36° 45W 24° 36° 60° 80/130W 40° 60°	2700K* 3000K 3500K* 4000K 5000K* *Customized	CRI 80	Non Dimmable Dimmable (0-10V)
	45W	Black Body					
	80W						
	130W						
Ceiling Adjustable Downlight	8W/10W	White Body		15° 24° 36°	2700K 3000K 3500K* 4000K 5000K* *Customized	CRI 80	Non Dimmable Dimmable (0-10V)
	18W/20W	Black Body					

*Products in this catalog are under development, please be noted in advance that final specification and details may vary.

Glareless Downlight Series



Wattage	(Non-Dimming) 10W/20W/28W (Dimming) 12W/22W/29W
CCT	2700K/3000K/4000K (Customized) 3500K/5000K
Beam Angle	15/24/36
Voltage	220-240V
Frequency	50/60Hz
Lifetime	50,000 hours
CRI	80/90
Ambient Temperature	5°C~35°C
Power Factor	0.9
Materials	Body & Frame: ADC12
IP rate	20

Ex-A Series Glareless Downlight

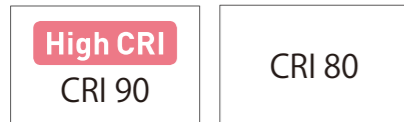


Specification

Voltage	220-240V
Frequency	50/60Hz
Lifetime	50,000 hours
CRI	80/90
Ambient Temperature	5°C~35°C
Power Factor	0.9
Materials	Body & Frame: ADC12
IP rate	20

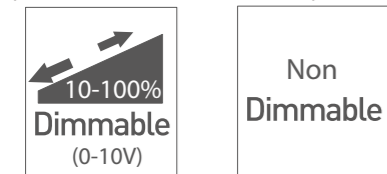
High CRI (Ra 90)

Both of High CRI (Ra90) and Basic (Ra80) type are prepared.



Dimming type

Dimming type is available.(0-10V)
Dimming Range : 10 -100%
(Model no. NNNC*****LZ88)



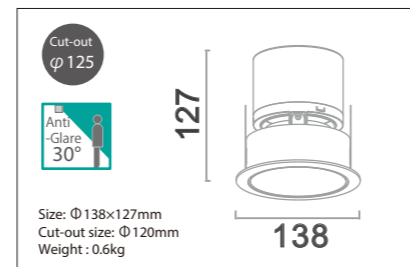
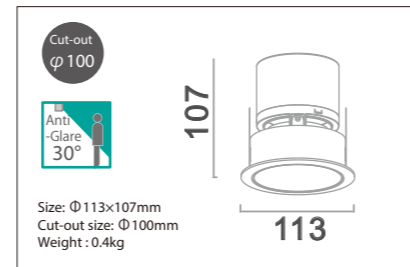
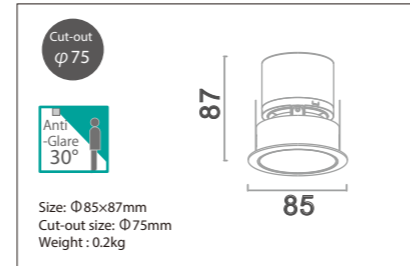
*DALI is Optional

Types of Beam Agnle

3 types of beam angle



Dimension

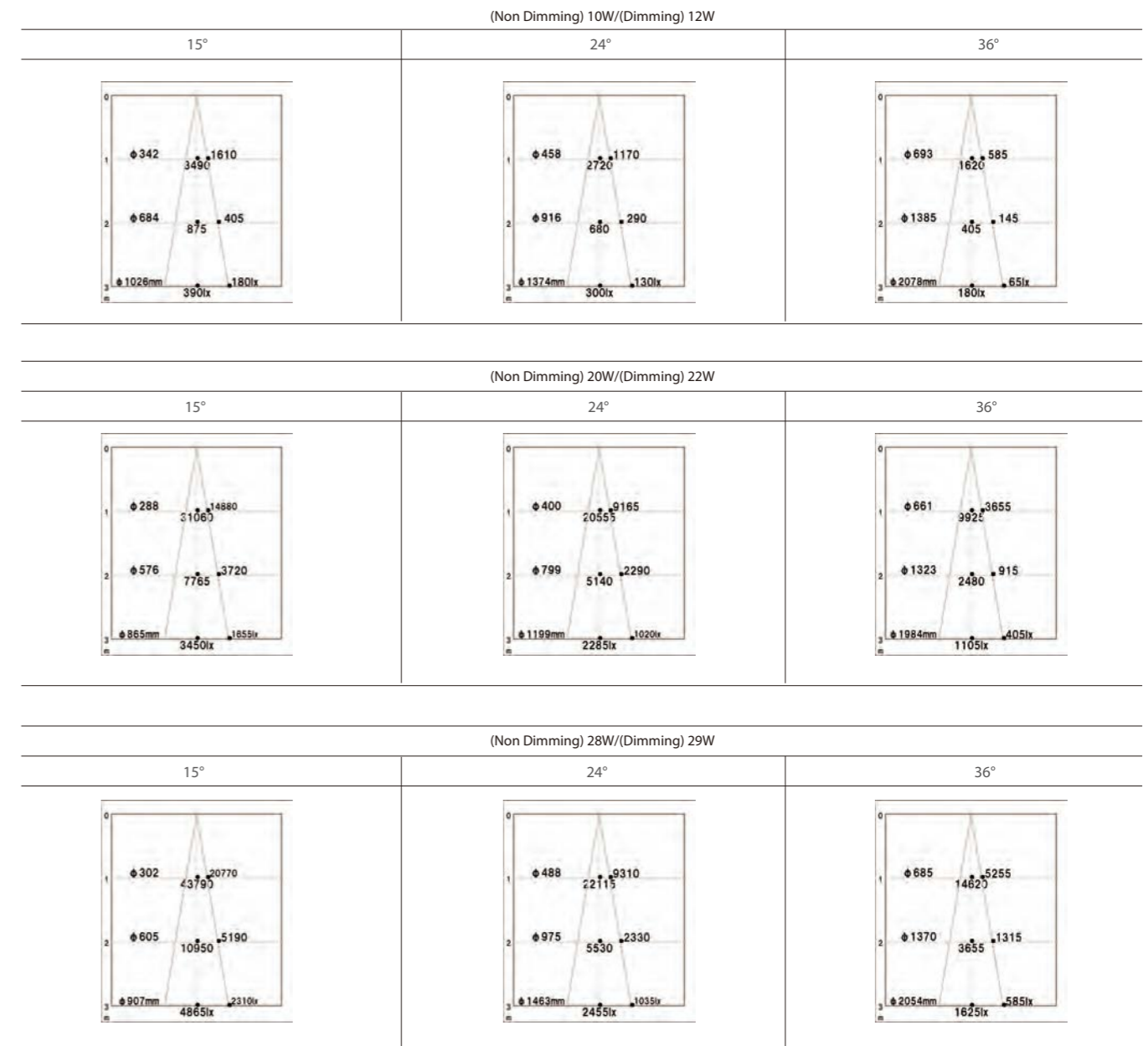


Variation of Cone










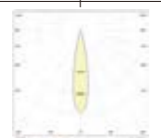
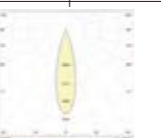
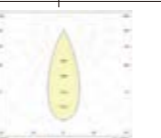
3 color of Cone






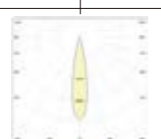
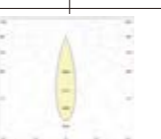
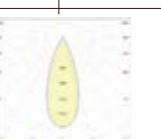








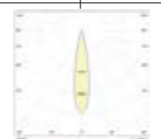
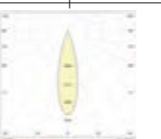
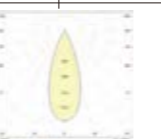
Cone diagram (3000K, CRI80 type)













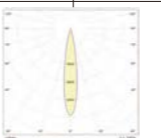
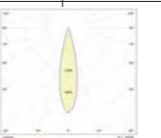
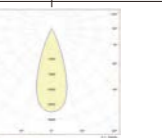
Ex-A Series Glareless Downlight



Wattage	(Non Dimming) 10W/(Dimming) 12W						
Beam Angle	15° 		24° 		36° 		
Cone Type	Chrome						
CRI	80		90		90		
Non Dimming	2700K 	NNNC60001WLE88 670lm, 67lm/W	NNNC60051WLE88 550lm, 55lm/W	NNNC60002WLE88 760lm, 76lm/W	NNNC60052WLE88 630lm, 63lm/W	NNNC60003WLE88 830lm, 83lm/W	NNNC60053WLE88 680lm, 68lm/W
	3000K 	NNNC60011WLE88 670lm, 67lm/W	NNNC60061WLE88 550lm, 55lm/W	NNNC60012WLE88 760lm, 76lm/W	NNNC60062WLE88 630lm, 63lm/W	NNNC60013WLE88 830lm, 83lm/W	NNNC60063WLE88 680lm, 68lm/W
	4000K 	NNNC60031WLE88 700lm, 70lm/W	NNNC60081WLE88 580lm, 58lm/W	NNNC60032WLE88 800lm, 80lm/W	NNNC60082WLE88 660lm, 66lm/W	NNNC60033WLE88 870lm, 87lm/W	NNNC60083WLE88 720lm, 72lm/W
Dimming	2700K 	NNNC60001WLZ88 670lm, 56lm/W	NNNC60051WLZ88 550lm, 46lm/W	NNNC60002WLZ88 760lm, 63lm/W	NNNC60052WLZ88 630lm, 53lm/W	NNNC60003WLZ88 830lm, 69lm/W	NNNC60053WLZ88 680lm, 57lm/W
	3000K 	NNNC60011WLZ88 670lm, 56lm/W	NNNC60061WLZ88 550lm, 46lm/W	NNNC60012WLZ88 760lm, 63lm/W	NNNC60062WLZ88 630lm, 53lm/W	NNNC60013WLZ88 830lm, 69lm/W	NNNC60063WLZ88 680lm, 57lm/W
	4000K 	NNNC60031WLZ88 700lm, 58lm/W	NNNC60081WLZ88 580lm, 48lm/W	NNNC60032WLZ88 800lm, 67lm/W	NNNC60082WLZ88 660lm, 55lm/W	NNNC60033WLZ88 870lm, 73lm/W	NNNC60083WLZ88 720lm, 60lm/W
							







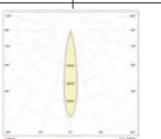
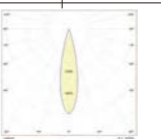
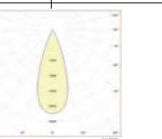
Cone Type	Shining Black						
CRI	80		90		90		
Non Dimming	2700K 	NNNC60007WLE88 670lm, 67lm/W	NNNC60057WLE88 550lm, 55lm/W	NNNC60008WLE88 760lm, 76lm/W	NNNC60058WLE88 630lm, 63lm/W	NNNC60009WLE88 830lm, 83lm/W	NNNC60059WLE88 680lm, 68lm/W
	3000K 	NNNC60017WLE88 670lm, 67lm/W	NNNC60067WLE88 550lm, 55lm/W	NNNC60018WLE88 760lm, 76lm/W	NNNC60068WLE88 630lm, 63lm/W	NNNC60019WLE88 830lm, 83lm/W	NNNC60069WLE88 680lm, 68lm/W
	4000K 	NNNC60037WLE88 700lm, 70lm/W	NNNC60087WLE88 580lm, 58lm/W	NNNC60038WLE88 800lm, 80lm/W	NNNC60088WLE88 660lm, 66lm/W	NNNC60039WLE88 870lm, 87lm/W	NNNC60089WLE88 720lm, 72lm/W
Dimming	2700K 	NNNC60007WLZ88 670lm, 56lm/W	NNNC60057WLZ88 550lm, 46lm/W	NNNC60008WLZ88 760lm, 63lm/W	NNNC60058WLZ88 630lm, 53lm/W	NNNC60009WLZ88 830lm, 69lm/W	NNNC60059WLZ88 680lm, 57lm/W
	3000K 	NNNC60017WLZ88 670lm, 56lm/W	NNNC60067WLZ88 550lm, 46lm/W	NNNC60018WLZ88 760lm, 63lm/W	NNNC60068WLZ88 630lm, 53lm/W	NNNC60019WLZ88 830lm, 69lm/W	NNNC60069WLZ88 680lm, 57lm/W
	4000K 	NNNC60037WLZ88 700lm, 58lm/W	NNNC60087WLZ88 580lm, 48lm/W	NNNC60038WLZ88 800lm, 67lm/W	NNNC60088WLZ88 660lm, 55lm/W	NNNC60039WLZ88 870lm, 73lm/W	NNNC60089WLZ88 720lm, 60lm/W
							

Cone Type	White						
CRI	80		90		90		
Non Dimming	2700K 	NNNC60004WLE88 670lm, 67lm/W	NNNC60054WLE88 550lm, 55lm/W	NNNC60005WLE88 760lm, 76lm/W	NNNC60055WLE88 630lm, 63lm/W	NNNC60006WLE88 830lm, 83lm/W	NNNC60056WLE88 680lm, 68lm/W
	3000K 	NNNC60014WLE88 670lm, 67lm/W	NNNC60064WLE88 550lm, 55lm/W	NNNC60015WLE88 760lm, 76lm/W	NNNC60065WLE88 630lm, 63lm/W	NNNC60016WLE88 830lm, 83lm/W	NNNC60066WLE88 680lm, 68lm/W
	4000K 	NNNC60034WLE88 700lm, 70lm/W	NNNC60084WLE88 580lm, 58lm/W	NNNC60035WLE88 800lm, 80lm/W	NNNC60085WLE88 660lm, 66lm/W	NNNC60036WLE88 870lm, 87lm/W	NNNC60086WLE88 720lm, 72lm/W
Dimming	2700K 	NNNC60004WLZ88 670lm, 56lm/W	NNNC60054WLZ88 550lm, 46lm/W	NNNC60005WLZ88 760lm, 63lm/W	NNNC60055WLZ88 630lm, 53lm/W	NNNC60006WLZ88 830lm, 69lm/W	NNNC60056WLZ88 680lm, 57lm/W
	3000K 	NNNC60014WLZ88 670lm, 56lm/W	NNNC60064WLZ88 550lm, 46lm/W	NNNC60015WLZ88 760lm, 63lm/W	NNNC60065WLZ88 630lm, 53lm/W	NNNC60016WLZ88 830lm, 69lm/W	NNNC60066WLZ88 680lm, 57lm/W
	4000K 	NNNC60034WLZ88 700lm, 58lm/W	NNNC60084WLZ88 580lm, 48lm/W	NNNC60035WLZ88 800lm, 67lm/W	NNNC60085WLZ88 660lm, 55lm/W	NNNC60036WLZ88 870lm, 73lm/W	NNNC60086WLZ88 720lm, 60lm/W
							

*Customize: 2 types of CCT  3500K  5000K are also available *DALI is Optional










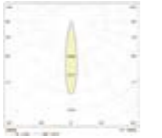
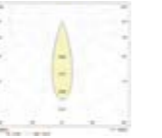
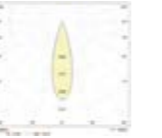
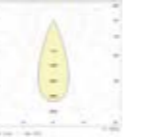
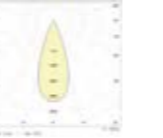
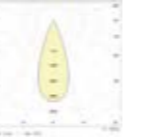
Wattage	(Non Dimming) 20W/(Dimming) 22W						
Beam Angle	15° 		24° 		36° 		
Cone Type	Chrome						
CRI	80		90		90		
Non Dimming	2700K 	NNNC60201WLE88 1700lm, 85lm/W	NNNC60251WLE88 1410lm, 71lm/W	NNNC60202WLE88 1800lm, 90lm/W	NNNC60252WLE88 1490lm, 75lm/W	NNNC60203WLE88 1900lm, 95lm/W	NNNC60253WLE88 1570lm, 79lm/W
	3000K 	NNNC60211WLE88 1700lm, 85lm/W	NNNC60261WLE88 1410lm, 71lm/W	NNNC60212WLE88 1800lm, 90lm/W	NNNC60262WLE88 1490lm, 75lm/W	NNNC60213WLE88 1900lm, 95lm/W	NNNC60263WLE88 1570lm, 79lm/W
	4000K 	NNNC60231WLE88 1780lm, 89lm/W	NNNC60281WLE88 1470lm, 74lm/W	NNNC60232WLE88 1890lm, 95lm/W	NNNC60282WLE88 1560lm, 78lm/W	NNNC60233WLE88 2000lm, 100lm/W	NNNC60283WLE88 1660lm, 83lm/W
Dimming	2700K 	NNNC60201WLZ88 1700lm, 77lm/W	NNNC60251WLZ88 1410lm, 64lm/W	NNNC60202WLZ88 1800lm, 82lm/W	NNNC60252WLZ88 1490lm, 68lm/W	NNNC60203WLZ88 1900lm, 86lm/W	NNNC60253WLZ88 1570lm, 71lm/W
	3000K 	NNNC60211WLZ88 1700lm, 77lm/W	NNNC60261WLZ88 1410lm, 64lm/W	NNNC60212WLZ88 1800lm, 82lm/W	NNNC60262WLZ88 1490lm, 68lm/W	NNNC60213WLZ88 1900lm, 86lm/W	NNNC60263WLZ88 1570lm, 71lm/W
	4000K 	NNNC60231WLZ88 1780lm, 81lm/W	NNNC60281WLZ88 1470lm, 67lm/W	NNNC60232WLZ88 1890lm, 86lm/W	NNNC60282WLZ88 1560lm, 71lm/W	NNNC60233WLZ88 2000lm, 91lm/W	NNNC60283WLZ88 1660lm, 75lm/W
							


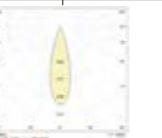
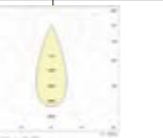
Cone Type	Shining Black						
CRI	80		90		90		
Non Dimming	2700K 	NNNC60207WLE88 1700lm, 85lm/W	NNNC60257WLE88 1410lm, 71lm/W	NNNC60208WLE88 1800lm, 90lm/W	NNNC60258WLE88 1490lm, 75lm/W	NNNC60209WLE88 1900lm, 95lm/W	NNNC60259WLE88 1570lm, 79lm/W
	3000K 	NNNC60217WLE88 1700lm, 85lm/W	NNNC60267WLE88 1410lm, 71lm/W	NNNC60218WLE88 1800lm, 90lm/W	NNNC60268WLE88 1490lm, 75lm/W	NNNC60219WLE88 1900lm, 95lm/W	NNNC60269WLE88 1570lm, 79lm/W
	4000K 	NNNC60237WLE88 1780lm, 89lm/W	NNNC60287WLE88 1470lm, 74lm/W	NNNC60238WLE88 1890lm, 95lm/W	NNNC60288WLE88 1560lm, 78lm/W	NNNC60239WLE88 2000lm, 100lm/W	NNNC60289WLE88 1660lm, 83lm/W
Dimming	2700K 	NNNC60207WLZ88 1700lm, 77lm/W	NNNC60257WLZ88 1410lm, 64lm/W	NNNC60208WLZ88 1800lm, 82lm/W	NNNC60258WLZ88 1490lm, 68lm/W	NNNC60209WLZ88 1900lm, 86lm/W	NNNC60259WLZ88 1570lm, 71lm/W
	3000K 	NNNC60217WLZ88 1700lm, 77lm/W	NNNC60267WLZ88 1410lm, 64lm/W	NNNC60218WLZ88 1800lm, 82lm/W	NNNC60268WLZ88 1490lm, 68lm/W	NNNC60219WLZ88 1900lm, 86lm/W	NNNC60269WLZ88 1570lm, 71lm/W
	4000K 	NNNC60237WLZ88 1780lm, 81lm/W	NNNC60287WLZ88 1470lm, 67lm/W	NNNC60238WLZ88 1890lm, 86lm/W	NNNC60288WLZ88 1560lm, 71lm/W	NNNC60239WLZ88 2000lm, 91lm/W	NNNC60289WLZ88 1660lm, 75lm/W
							







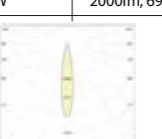
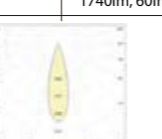
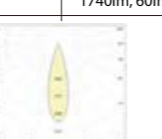
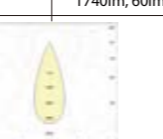
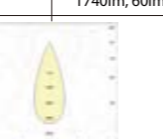
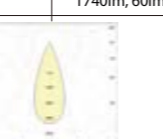
Cone Type	White						
CRI	80		90		90		
Non Dimming	2700K 	NNNC60204WLE88 1700lm, 85lm/W	NNNC60254WLE88 1410lm, 71lm/W	NNNC60205WLE88 1800lm, 90lm/W	NNNC60255WLE88 1490lm, 75lm/W	NNNC60206WLE88 1900lm, 95lm/W	NNNC60256WLE88 1570lm, 79lm/W
	3000K 	NNNC60214WLE88 1700lm, 85lm/W	NNNC60264WLE88 1410lm, 71lm/W	NNNC60215WLE88 1800lm, 90lm/W	NNNC60265WLE88 1490lm, 75lm/W	NNNC60216WLE88 1900lm, 95lm/W	NNNC60266WLE88 1570lm, 79lm/W
	4000K 	NNNC60234WLE88 1780lm, 89lm/W	NNNC60284WLE88 1470lm, 74lm/W	NNNC60235WLE88 1890lm, 95lm/W	NNNC60285WLE88 1560lm, 78lm/W	NNNC60236WLE88 2000lm, 100lm/W	NNNC60286WLE88 1660lm, 83lm/W
Dimming	2700K 	NNNC60204WLZ88 1700lm, 77lm/W	NNNC60254WLZ88 1410lm, 64lm/W	NNNC60205WLZ88 1800lm, 82lm/W	NNNC60255WLZ88 1490lm, 68lm/W	NNNC60206WLZ88 1900lm, 86lm/W	NNNC60256WLZ88 1570lm, 71lm/W
	3000K 	NNNC60214WLZ88 1700lm, 77lm/W	NNNC60264WLZ88 1410lm, 64lm/W	NNNC60215WLZ88 1800lm, 82lm/W	NNNC60265WLZ88 1490lm, 68lm/W	NNNC60216WLZ88 1900lm, 86lm/W	NNNC60266WLZ88 1570lm, 71lm/W
	4000K 	NNNC60234WLZ88 1780lm, 81lm/W	NNNC60284WLZ88 1470lm, 67lm/W	NNNC60235WLZ88 1890lm, 86lm/W	NNNC60285WLZ88 1560lm, 71lm/W	NNNC60236WLZ88 2000lm, 91lm/W	NNNC60286WLZ88 1660lm, 75lm/W
							

*Customize: 2 types of CCT  3500K  5000K are also available *DALI is Optional

Ex-A Series Glareless Downlight

Wattage		(Non Dimming) 28W/(Dimming) 29W					
Beam Angle	15° 	24° 		36° 			
Cone Type	Chrome						
CRI	80	90	80	90	80	90	
Non Dimming	2700K 	NNNC60401WLE88 2300lm, 82lm/W	NNNC60451WLE88 1900lm, 68lm/W	NNNC60402WLE88 2000lm, 71lm/W	NNNC60452WLE88 1660lm, 59lm/W	NNNC60403WLE88 2000lm, 71lm/W	NNNC60453WLE88 1660lm, 59lm/W
	3000K 	NNNC60411WLE88 2300lm, 82lm/W	NNNC60461WLE88 1900lm, 68lm/W	NNNC60412WLE88 2000lm, 71lm/W	NNNC60462WLE88 1660lm, 59lm/W	NNNC60413WLE88 2000lm, 71lm/W	NNNC60463WLE88 1660lm, 59lm/W
	4000K 	NNNC60431WLE88 2420lm, 86lm/W	NNNC60481WLE88 2000lm, 71lm/W	NNNC60432WLE88 2100lm, 75lm/W	NNNC60482WLE88 1740lm, 62lm/W	NNNC60433WLE88 2100lm, 75lm/W	NNNC60483WLE88 1740lm, 62lm/W
Dimming	2700K 	NNNC60401WLZ88 2300lm, 79lm/W	NNNC60451WLZ88 1900lm, 66lm/W	NNNC60402WLZ88 2000lm, 69lm/W	NNNC60452WLZ88 1660lm, 57lm/W	NNNC60403WLZ88 2000lm, 69lm/W	NNNC60453WLZ88 1660lm, 57lm/W
	3000K 	NNNC60411WLZ88 2300lm, 79lm/W	NNNC60461WLZ88 1900lm, 66lm/W	NNNC60412WLZ88 2000lm, 69lm/W	NNNC60462WLZ88 1660lm, 57lm/W	NNNC60413WLZ88 2000lm, 69lm/W	NNNC60463WLZ88 1660lm, 57lm/W
	4000K 	NNNC60431WLZ88 2420lm, 83lm/W	NNNC60481WLZ88 2000lm, 69lm/W	NNNC60432WLZ88 2100lm, 72lm/W	NNNC60482WLZ88 1740lm, 60lm/W	NNNC60433WLZ88 2100lm, 72lm/W	NNNC60483WLZ88 1740lm, 60lm/W
							

Cone Type		Shining Black					
CRI	80	90	80	90	80	90	
Non Dimming	2700K 	NNNC60407WLE88 2300lm, 82lm/W	NNNC60457WLE88 1900lm, 68lm/W	NNNC60408WLE88 2000lm, 71lm/W	NNNC60458WLE88 1660lm, 59lm/W	NNNC60409WLE88 2000lm, 71lm/W	NNNC60459WLE88 1660lm, 59lm/W
	3000K 	NNNC60417WLE88 2300lm, 82lm/W	NNNC60467WLE88 1900lm, 68lm/W	NNNC60418WLE88 2000lm, 71lm/W	NNNC60468WLE88 1660lm, 59lm/W	NNNC60419WLE88 2000lm, 71lm/W	NNNC60469WLE88 1660lm, 59lm/W
	4000K 	NNNC60437WLE88 2420lm, 86lm/W	NNNC60487WLE88 2000lm, 71lm/W	NNNC60438WLE88 2100lm, 75lm/W	NNNC60488WLE88 1740lm, 62lm/W	NNNC60439WLE88 2100lm, 75lm/W	NNNC60489WLE88 1740lm, 62lm/W
Dimming	2700K 	NNNC60407WLZ88 2300lm, 79lm/W	NNNC60457WLZ88 1900lm, 66lm/W	NNNC60408WLZ88 2000lm, 69lm/W	NNNC60458WLZ88 1660lm, 57lm/W	NNNC60409WLZ88 2000lm, 69lm/W	NNNC60459WLZ88 1660lm, 57lm/W
	3000K 	NNNC60417WLZ88 2300lm, 79lm/W	NNNC60467WLZ88 1900lm, 66lm/W	NNNC60418WLZ88 2000lm, 69lm/W	NNNC60468WLZ88 1660lm, 57lm/W	NNNC60419WLZ88 2000lm, 69lm/W	NNNC60469WLZ88 1660lm, 57lm/W
	4000K 	NNNC60437WLZ88 2420lm, 83lm/W	NNNC60487WLZ88 2000lm, 69lm/W	NNNC60438WLZ88 2100lm, 72lm/W	NNNC60488WLZ88 1740lm, 60lm/W	NNNC60439WLZ88 2100lm, 72lm/W	NNNC60489WLZ88 1740lm, 60lm/W
							

Cone Type		White					
CRI	80	90	80	90	80	90	
Non Dimming	2700K 	NNNC60404WLE88 2300lm, 82lm/W	NNNC60454WLE88 1900lm, 68lm/W	NNNC60405WLE88 2000lm, 71lm/W	NNNC60455WLE88 1660lm, 59lm/W	NNNC60406WLE88 2000lm, 71lm/W	NNNC60456WLE88 1660lm, 59lm/W
	3000K 	NNNC60414WLE88 2300lm, 82lm/W	NNNC60464WLE88 1900lm, 68lm/W	NNNC60415WLE88 2000lm, 71lm/W	NNNC60465WLE88 1660lm, 59lm/W	NNNC60416WLE88 2000lm, 71lm/W	NNNC60466WLE88 1660lm, 59lm/W
	4000K 	NNNC60434WLE88 2420lm, 86lm/W	NNNC60484WLE88 2000lm, 71lm/W	NNNC60435WLE88 2100lm, 75lm/W	NNNC60485WLE88 1740lm, 62lm/W	NNNC60436WLE88 2100lm, 75lm/W	NNNC60486WLE88 1740lm, 62lm/W
Dimming	2700K 	NNNC60404WLZ88 2300lm, 79lm/W	NNNC60454WLZ88 1900lm, 66lm/W	NNNC60405WLZ88 2000lm, 69lm/W	NNNC60455WLZ88 1660lm, 57lm/W	NNNC60406WLZ88 2000lm, 69lm/W	NNNC60456WLZ88 1660lm, 57lm/W
	3000K 	NNNC60414WLZ88 2300lm, 79lm/W	NNNC60464WLZ88 1900lm, 66lm/W	NNNC60415WLZ88 2000lm, 69lm/W	NNNC60465WLZ88 1660lm, 57lm/W	NNNC60416WLZ88 2000lm, 69lm/W	NNNC60466WLZ88 1660lm, 57lm/W
	4000K 	NNNC60434WLZ88 2420lm, 83lm/W	NNNC60484WLZ88 2000lm, 69lm/W	NNNC60435WLZ88 2100lm, 72lm/W	NNNC60485WLZ88 1740lm, 60lm/W	NNNC60436WLZ88 2100lm, 72lm/W	NNNC60486WLZ88 1740lm, 60lm/W
							

*Customize: 2 types of CCT  3500K  5000K are also available *DALI is Optional



Ex-A Series Glareless Adjustable Downlight



Specification

Voltage	220-240V
Frequency	50/60Hz
Lifetime	50,000 hours
CRI	80/90
Ambient Temperature	5°C~35°C
Power Factor	0.9
Materials	Body & Frame: ADC12
IP rate	20

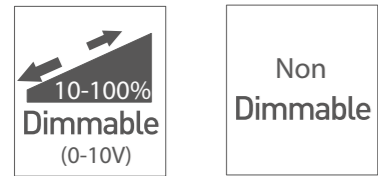
High CRI (Ra 90)

Both of High CRI (Ra90) and Basic (Ra80) type are prepared.



Dimming type

Dimming type is available.(0-10V)
Dimming Range : 10 -100%
(Model no. NNNC****LZ88)



*DALI is Optional

Types of Beam Angle

3 types of beam angle

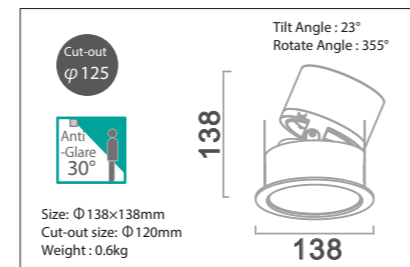
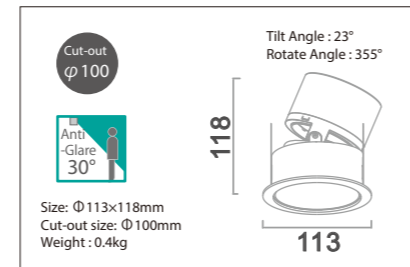
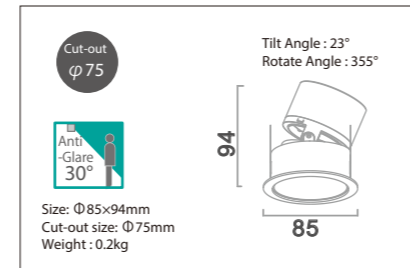


Variation of Cone

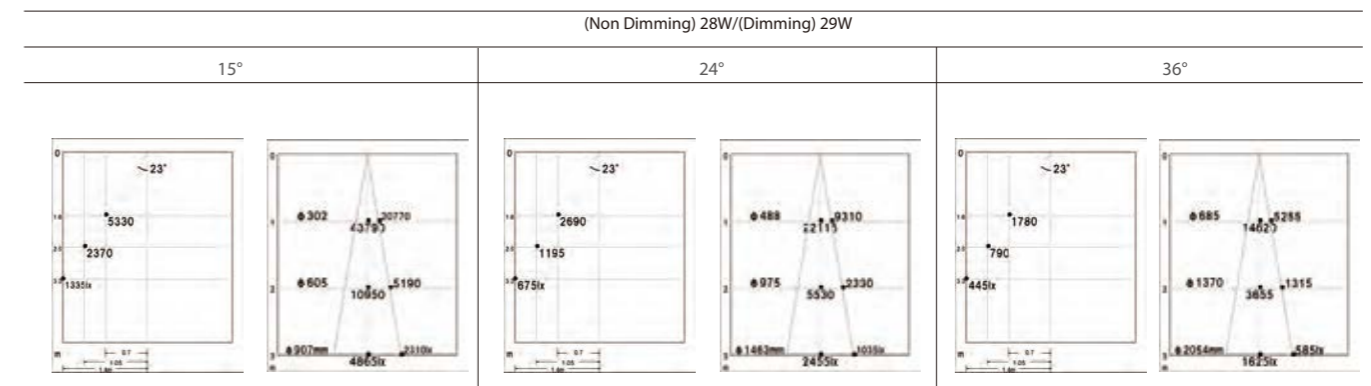
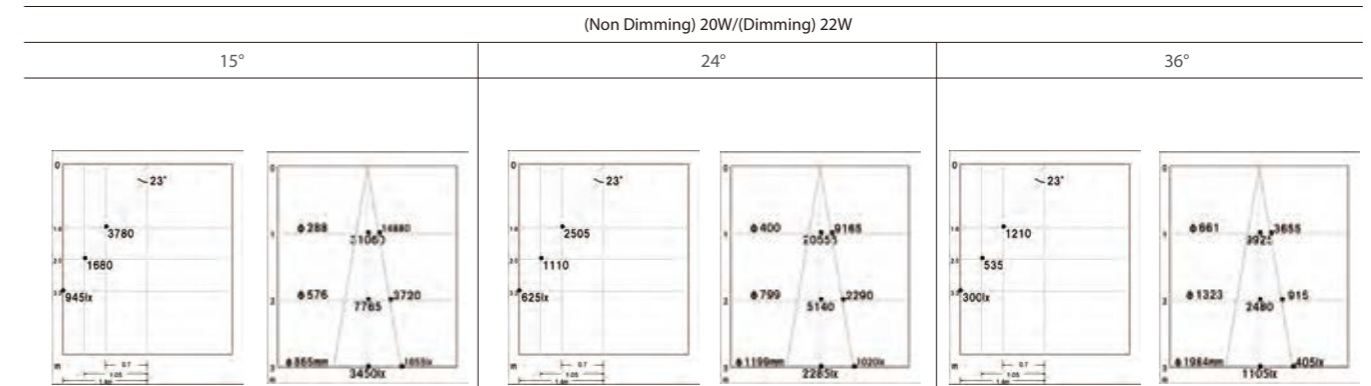
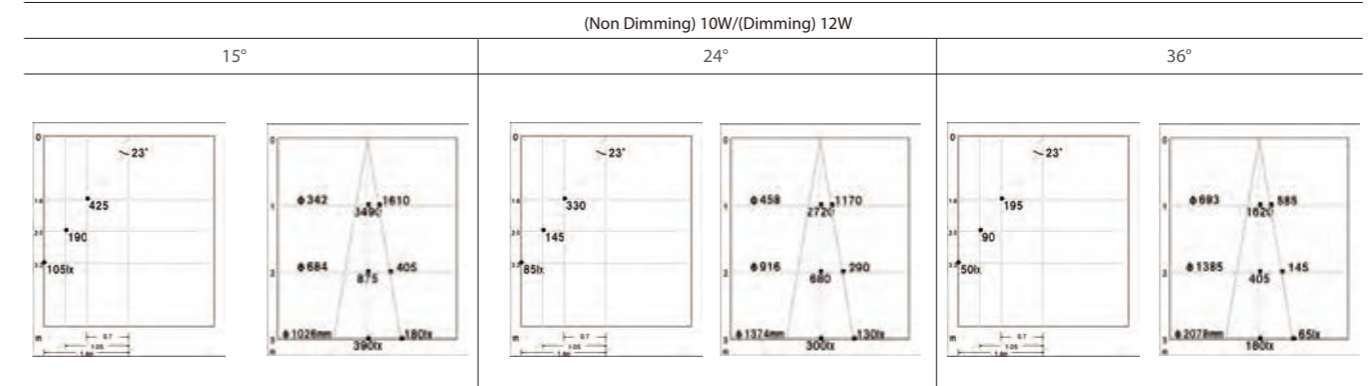
3 color of Cone












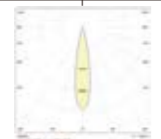
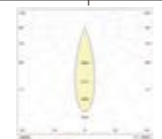
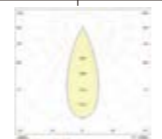
Dimension







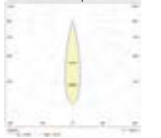
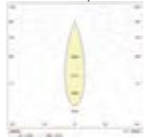
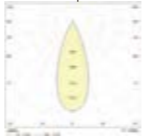








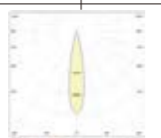
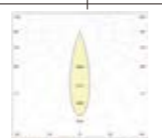
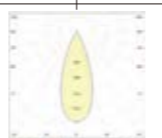
Cone diagram (3000K, CRI80 type)












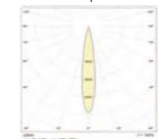
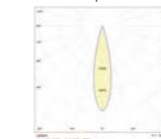
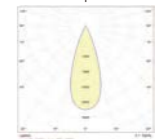
Ex-A Series Glareless Adjustable Downlight







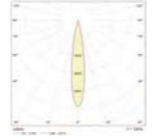
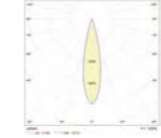
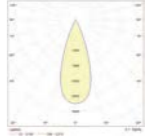
Wattage		(Non Dimming) 10W/(Dimming) 12W					
Beam Angle		15° 		24° 		36° 	
Cone Type		Chrome					
CRI		80		90		90	
Non Dimming	2700K 	NNNC60101WLE88 670lm, 67lm/W	NNNC60151WLE88 550lm, 55lm/W	NNNC60102WLE88 760lm, 76lm/W	NNNC60152WLE88 630lm, 63lm/W	NNNC60103WLE88 830lm, 83lm/W	NNNC60153WLE88 680lm, 68lm/W
	3000K 	NNNC60111WLE88 670lm, 67lm/W	NNNC60161WLE88 550lm, 55lm/W	NNNC60112WLE88 760lm, 76lm/W	NNNC60162WLE88 630lm, 63lm/W	NNNC60113WLE88 830lm, 83lm/W	NNNC60163WLE88 680lm, 68lm/W
	4000K 	NNNC60131WLE88 700lm, 70lm/W	NNNC60181WLE88 580lm, 58lm/W	NNNC60132WLE88 800lm, 80lm/W	NNNC60182WLE88 660lm, 66lm/W	NNNC60133WLE88 870lm, 87lm/W	NNNC60183WLE88 720lm, 72lm/W
Dimming	2700K 	NNNC60101WLZ88 670lm, 56lm/W	NNNC60151WLZ88 550lm, 46lm/W	NNNC60102WLZ88 760lm, 63lm/W	NNNC60152WLZ88 630lm, 53lm/W	NNNC60103WLZ88 830lm, 69lm/W	NNNC60153WLZ88 680lm, 57lm/W
	3000K 	NNNC60111WLZ88 670lm, 56lm/W	NNNC60161WLZ88 550lm, 46lm/W	NNNC60112WLZ88 760lm, 63lm/W	NNNC60162WLZ88 630lm, 53lm/W	NNNC60113WLZ88 830lm, 69lm/W	NNNC60163WLZ88 680lm, 57lm/W
	4000K 	NNNC60131WLZ88 700lm, 58lm/W	NNNC60181WLZ88 580lm, 48lm/W	NNNC60132WLZ88 800lm, 67lm/W	NNNC60182WLZ88 660lm, 55lm/W	NNNC60133WLZ88 870lm, 73lm/W	NNNC60183WLZ88 720lm, 60lm/W
							






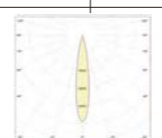
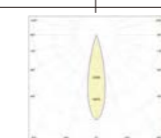
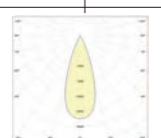
Cone Type		Shining Black					
CRI		80		90		90	
Non Dimming	2700K 	NNNC60107WLE88 670lm, 67lm/W	NNNC60157WLE88 550lm, 55lm/W	NNNC60108WLE88 760lm, 76lm/W	NNNC60158WLE88 630lm, 63lm/W	NNNC60109WLE88 830lm, 83lm/W	NNNC60159WLE88 680lm, 68lm/W
	3000K 	NNNC60117WLE88 670lm, 67lm/W	NNNC60167WLE88 550lm, 55lm/W	NNNC60118WLE88 760lm, 76lm/W	NNNC60168WLE88 630lm, 63lm/W	NNNC60119WLE88 830lm, 83lm/W	NNNC60169WLE88 680lm, 68lm/W
	4000K 	NNNC60137WLE88 700lm, 70lm/W	NNNC60187WLE88 580lm, 58lm/W	NNNC60138WLE88 800lm, 80lm/W	NNNC60188WLE88 660lm, 66lm/W	NNNC60139WLE88 870lm, 87lm/W	NNNC60189WLE88 720lm, 72lm/W
Dimming	2700K 	NNNC60107WLZ88 670lm, 56lm/W	NNNC60157WLZ88 550lm, 46lm/W	NNNC60108WLZ88 760lm, 63lm/W	NNNC60158WLZ88 630lm, 53lm/W	NNNC60109WLZ88 830lm, 69lm/W	NNNC60159WLZ88 680lm, 57lm/W
	3000K 	NNNC60117WLZ88 670lm, 56lm/W	NNNC60167WLZ88 550lm, 46lm/W	NNNC60118WLZ88 760lm, 63lm/W	NNNC60168WLZ88 630lm, 53lm/W	NNNC60119WLZ88 830lm, 69lm/W	NNNC60169WLZ88 680lm, 57lm/W
	4000K 	NNNC60137WLZ88 700lm, 58lm/W	NNNC60187WLZ88 580lm, 48lm/W	NNNC60138WLZ88 800lm, 67lm/W	NNNC60188WLZ88 660lm, 55lm/W	NNNC60139WLZ88 870lm, 73lm/W	NNNC60189WLZ88 720lm, 60lm/W
							

Cone Type		White					
CRI		80		90		90	
Non Dimming	2700K 	NNNC60104WLE88 670lm, 67lm/W	NNNC60154WLE88 550lm, 55lm/W	NNNC60105WLE88 760lm, 76lm/W	NNNC60155WLE88 630lm, 63lm/W	NNNC60106WLE88 830lm, 83lm/W	NNNC60156WLE88 680lm, 68lm/W
	3000K 	NNNC60114WLE88 670lm, 67lm/W	NNNC60164WLE88 550lm, 55lm/W	NNNC60115WLE88 760lm, 76lm/W	NNNC60165WLE88 630lm, 63lm/W	NNNC60116WLE88 830lm, 83lm/W	NNNC60166WLE88 680lm, 68lm/W
	4000K 	NNNC60134WLE88 700lm, 70lm/W	NNNC60184WLE88 580lm, 58lm/W	NNNC60135WLE88 800lm, 80lm/W	NNNC60185WLE88 660lm, 66lm/W	NNNC60136WLE88 870lm, 87lm/W	NNNC60186WLE88 720lm, 72lm/W
Dimming	2700K 	NNNC60104WLZ88 670lm, 56lm/W	NNNC60154WLZ88 550lm, 46lm/W	NNNC60105WLZ88 760lm, 63lm/W	NNNC60155WLZ88 630lm, 53lm/W	NNNC60106WLZ88 830lm, 69lm/W	NNNC60156WLZ88 680lm, 57lm/W
	3000K 	NNNC60114WLZ88 670lm, 56lm/W	NNNC60164WLZ88 550lm, 46lm/W	NNNC60115WLZ88 760lm, 63lm/W	NNNC60165WLZ88 630lm, 53lm/W	NNNC60116WLZ88 830lm, 69lm/W	NNNC60166WLZ88 680lm, 57lm/W
	4000K 	NNNC60134WLZ88 700lm, 58lm/W	NNNC60184WLZ88 580lm, 48lm/W	NNNC60135WLZ88 800lm, 67lm/W	NNNC60185WLZ88 660lm, 55lm/W	NNNC60136WLZ88 870lm, 73lm/W	NNNC60186WLZ88 720lm, 60lm/W
							

*Customize: 2 types of CCT  3500K  5000K are also available *DALI is Optional










Wattage		(Non Dimming) 20W/(Dimming) 22W					
Beam Angle		15° 		24° 		36° 	
Cone Type		Chrome					
CRI		80		90		90	
Non Dimming	2700K 	NNNC60301WLE88 1700lm, 85lm/W	NNNC60351WLE88 1410lm, 71lm/W	NNNC60302WLE88 1800lm, 90lm/W	NNNC60352WLE88 1490lm, 75lm/W	NNNC60303WLE88 1900lm, 95lm/W	NNNC60353WLE88 1570lm, 79lm/W
	3000K 	NNNC60311WLE88 1700lm, 85lm/W	NNNC60361WLE88 1410lm, 71lm/W	NNNC60312WLE88 1800lm, 90lm/W	NNNC60362WLE88 1490lm, 75lm/W	NNNC60313WLE88 1900lm, 95lm/W	NNNC60363WLE88 1570lm, 79lm/W
	4000K 	NNNC60331WLE88 1780lm, 89lm/W	NNNC60381WLE88 1470lm, 74lm/W	NNNC60332WLE88 1890lm, 95lm/W	NNNC60382WLE88 1560lm, 78lm/W	NNNC60333WLE88 2000lm, 100lm/W	NNNC60383WLE88 1660lm, 83lm/W
Dimming	2700K 	NNNC60301WLZ88 1700lm, 77lm/W	NNNC60351WLZ88 1410lm, 64lm/W	NNNC60302WLZ88 1800lm, 82lm/W	NNNC60352WLZ88 1490lm, 68lm/W	NNNC60303WLZ88 1900lm, 86lm/W	NNNC60353WLZ88 1570lm, 71lm/W
	3000K 	NNNC60311WLZ88 1700lm, 77lm/W	NNNC60361WLZ88 1410lm, 64lm/W	NNNC60312WLZ88 1800lm, 82lm/W	NNNC60362WLZ88 1490lm, 68lm/W	NNNC60313WLZ88 1900lm, 86lm/W	NNNC60363WLZ88 1570lm, 71lm/W
	4000K 	NNNC60331WLZ88 1780lm, 81lm/W	NNNC60381WLZ88 1470lm, 67lm/W	NNNC60332WLZ88 1890lm, 86lm/W	NNNC60382WLZ88 1560lm, 71lm/W	NNNC60333WLZ88 2000lm, 91lm/W	NNNC60383WLZ88 1660lm, 75lm/W
							







Cone Type		Shining Black					
CRI		80		90		90	
Non Dimming	2700K 	NNNC60307WLE88 1700lm, 85lm/W	NNNC60357WLE88 1410lm, 71lm/W	NNNC60308WLE88 1800lm, 90lm/W	NNNC60358WLE88 1490lm, 75lm/W	NNNC60309WLE88 1900lm, 95lm/W	NNNC60359WLE88 1570lm, 79lm/W
	3000K 	NNNC60317WLE88 1700lm, 85lm/W	NNNC60367WLE88 1410lm, 71lm/W	NNNC60318WLE88 1800lm, 90lm/W	NNNC60368WLE88 1490lm, 75lm/W	NNNC60319WLE88 1900lm, 95lm/W	NNNC60369WLE88 1570lm, 79lm/W
	4000K 	NNNC60337WLE88 1780lm, 89lm/W	NNNC60387WLE88 1470lm, 74lm/W	NNNC60338WLE88 1890lm, 95lm/W	NNNC60388WLE88 1560lm, 78lm/W	NNNC60339WLE88 2000lm, 100lm/W	NNNC60389WLE88 1660lm, 83lm/W
Dimming	2700K 	NNNC60307WLZ88 1700lm, 77lm/W	NNNC60357WLZ88 1410lm, 64lm/W	NNNC60308WLZ88 1800lm, 82lm/W	NNNC60358WLZ88 1490lm, 68lm/W	NNNC60309WLZ88 1900lm, 86lm/W	NNNC60359WLZ88 1570lm, 71lm/W
	3000K 	NNNC60317WLZ88 1700lm, 77lm/W	NNNC60367WLZ88 1410lm, 64lm/W	NNNC60318WLZ88 1800lm, 82lm/W	NNNC60368WLZ88 1490lm, 68lm/W	NNNC60319WLZ88 1900lm, 86lm/W	NNNC60369WLZ88 1570lm, 71lm/W
	4000K 	NNNC60337WLZ88 1780lm, 81lm/W	NNNC60387WLZ88 1470lm, 67lm/W	NNNC60338WLZ88 1890lm, 86lm/W	NNNC60388WLZ88 1560lm, 71lm/W	NNNC60339WLZ88 2000lm, 91lm/W	NNNC60389WLZ88 1660lm, 75lm/W
							







Cone Type		White					
CRI		80		90		90	
Non Dimming	2700K 	NNNC60304WLE88 1700lm, 85lm/W	NNNC60354WLE88 1410lm, 71lm/W	NNNC60305WLE88 1800lm, 90lm/W	NNNC60355WLE88 1490lm, 75lm/W	NNNC60306WLE88 1900lm, 95lm/W	NNNC60356WLE88 1570lm, 79lm/W
	3000K 	NNNC60314WLE88 1700lm, 85lm/W	NNNC60364WLE88 1410lm, 71lm/W	NNNC60315WLE88 1800lm, 90lm/W	NNNC60365WLE88 1490lm, 75lm/W	NNNC60316WLE88 1900lm, 95lm/W	NNNC60366WLE88 1570lm, 79lm/W
	4000K 	NNNC60334WLE88 1780lm, 89lm/W	NNNC60384WLE88 1470lm, 74lm/W	NNNC60335WLE88 1890lm, 95lm/W	NNNC60385WLE88 1560lm, 78lm/W	NNNC60336WLE88 2000lm, 100lm/W	NNNC60386WLE88 1660lm, 83lm/W
Dimming	2700K 	NNNC60304WLZ88 1700lm, 77lm/W	NNNC60354WLZ88 1410lm, 64lm/W	NNNC60305WLZ88 1800lm, 82lm/W	NNNC60355WLZ88 1490lm, 68lm/W	NNNC60306WLZ88 1900lm, 86lm/W	NNNC60356WLZ88 1570lm, 71lm/W
	3000K 	NNNC60314WLZ88 1700lm, 77lm/W	NNNC60364WLZ88 1410lm, 64lm/W	NNNC60315WLZ88 1800lm, 82lm/W	NNNC60365WLZ88 1490lm, 68lm/W	NNNC60316WLZ88 1900lm, 86lm/W	NNNC60366WLZ88 1570lm, 71lm/W
	4000K 	NNNC60334WLZ88 1780lm, 81lm/W	NNNC60384WLZ88 1470lm, 67lm/W	NNNC60335WLZ88 1890lm, 86lm/W	NNNC60385WLZ88 1560lm, 71lm/W	NNNC60336WLZ88 2000lm, 91lm/W	NNNC60386WLZ88 1660lm, 75lm/W
							

*Customize: 2 types of CCT  3500K  5000K are also available *DALI is Optional

Ex-A Series Glareless Adjustable Downlight

Wattage	(Non Dimming) 28W/(Dimming) 29W						
Beam Angle	15° 		24° 		36° 		
Cone Type	Chrome						
CRI	80	90	80	90	80	90	
Non Dimming	2700K 	NNNC60501WLE88 2300lm, 82lm/W	NNNC60551WLE88 1900lm, 68lm/W	NNNC60502WLE88 2000lm, 71lm/W	NNNC60552WLE88 1660lm, 59lm/W	NNNC60503WLE88 2000lm, 71lm/W	NNNC60553WLE88 1660lm, 59lm/W
	3000K 	NNNC60511WLE88 2300lm, 82lm/W	NNNC60561WLE88 1900lm, 68lm/W	NNNC60512WLE88 2000lm, 71lm/W	NNNC60562WLE88 1660lm, 59lm/W	NNNC60513WLE88 2000lm, 71lm/W	NNNC60563WLE88 1660lm, 59lm/W
	4000K 	NNNC60531WLE88 2420lm, 86lm/W	NNNC60581WLE88 2000lm, 71lm/W	NNNC60532WLE88 2100lm, 75lm/W	NNNC60582WLE88 1740lm, 62lm/W	NNNC60533WLE88 2100lm, 75lm/W	NNNC60583WLE88 1740lm, 62lm/W
Dimming	2700K 	NNNC60501WLZ88 2300lm, 79lm/W	NNNC60551WLZ88 1900lm, 66lm/W	NNNC60502WLZ88 2000lm, 69lm/W	NNNC60552WLZ88 1660lm, 57lm/W	NNNC60503WLZ88 2000lm, 69lm/W	NNNC60553WLZ88 1660lm, 57lm/W
	3000K 	NNNC60511WLZ88 2300lm, 79lm/W	NNNC60561WLZ88 1900lm, 66lm/W	NNNC60512WLZ88 2000lm, 69lm/W	NNNC60562WLZ88 1660lm, 57lm/W	NNNC60513WLZ88 2000lm, 69lm/W	NNNC60563WLZ88 1660lm, 57lm/W
	4000K 	NNNC60531WLZ88 2420lm, 83lm/W	NNNC60581WLZ88 2000lm, 69lm/W	NNNC60532WLZ88 2100lm, 72lm/W	NNNC60582WLZ88 1740lm, 60lm/W	NNNC60533WLZ88 2100lm, 72lm/W	NNNC60583WLZ88 1740lm, 60lm/W

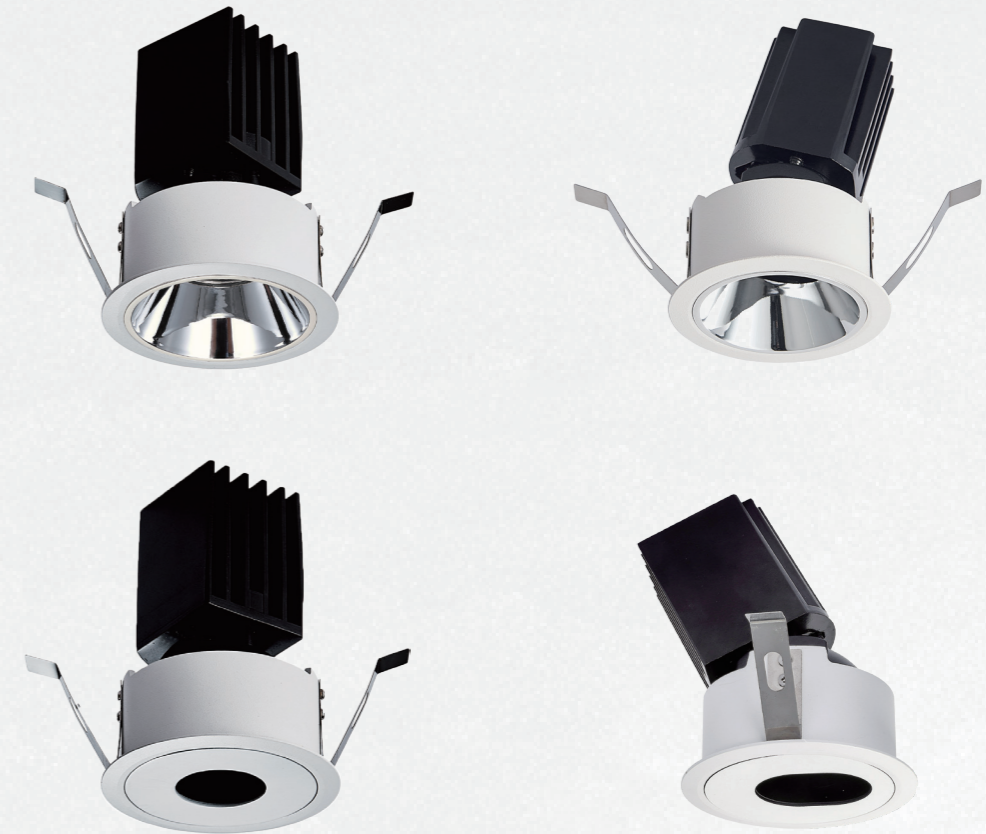
Cone Type	Shining Black						
CRI	80	90	80	90	80	90	
Non Dimming	2700K 	NNNC60507WLE88 2300lm, 82lm/W	NNNC60557WLE88 1900lm, 68lm/W	NNNC60508WLE88 2000lm, 71lm/W	NNNC60558WLE88 1660lm, 59lm/W	NNNC60509WLE88 2000lm, 71lm/W	NNNC60559WLE88 1660lm, 59lm/W
	3000K 	NNNC60517WLE88 2300lm, 82lm/W	NNNC60567WLE88 1900lm, 68lm/W	NNNC60518WLE88 2000lm, 71lm/W	NNNC60568WLE88 1660lm, 59lm/W	NNNC60519WLE88 2000lm, 71lm/W	NNNC60569WLE88 1660lm, 59lm/W
	4000K 	NNNC60537WLE88 2420lm, 86lm/W	NNNC60587WLE88 2000lm, 71lm/W	NNNC60538WLE88 2100lm, 75lm/W	NNNC60588WLE88 1740lm, 62lm/W	NNNC60539WLE88 2100lm, 75lm/W	NNNC60589WLE88 1740lm, 62lm/W
Dimming	2700K 	NNNC60507WLZ88 2300lm, 79lm/W	NNNC60557WLZ88 1900lm, 66lm/W	NNNC60508WLZ88 2000lm, 69lm/W	NNNC60558WLZ88 1660lm, 57lm/W	NNNC60509WLZ88 2000lm, 69lm/W	NNNC60559WLZ88 1660lm, 57lm/W
	3000K 	NNNC60517WLZ88 2300lm, 79lm/W	NNNC60567WLZ88 1900lm, 66lm/W	NNNC60518WLZ88 2000lm, 69lm/W	NNNC60568WLZ88 1660lm, 57lm/W	NNNC60519WLZ88 2000lm, 69lm/W	NNNC60569WLZ88 1660lm, 57lm/W
	4000K 	NNNC60537WLZ88 2420lm, 83lm/W	NNNC60587WLZ88 2000lm, 69lm/W	NNNC60538WLZ88 2100lm, 72lm/W	NNNC60588WLZ88 1740lm, 60lm/W	NNNC60539WLZ88 2100lm, 72lm/W	NNNC60589WLZ88 1740lm, 60lm/W

Cone Type	White						
CRI	80	90	80	90	80	90	
Non Dimming	2700K 	NNNC60504WLE88 2300lm, 82lm/W	NNNC60554WLE88 1900lm, 68lm/W	NNNC60505WLE88 2000lm, 71lm/W	NNNC60555WLE88 1660lm, 59lm/W	NNNC60506WLE88 2000lm, 71lm/W	NNNC60556WLE88 1660lm, 59lm/W
	3000K 	NNNC60514WLE88 2300lm, 82lm/W	NNNC60564WLE88 1900lm, 68lm/W	NNNC60515WLE88 2000lm, 71lm/W	NNNC60565WLE88 1660lm, 59lm/W	NNNC60516WLE88 2000lm, 71lm/W	NNNC60566WLE88 1660lm, 59lm/W
	4000K 	NNNC60534WLE88 2420lm, 86lm/W	NNNC60584WLE88 2000lm, 71lm/W	NNNC60535WLE88 2100lm, 75lm/W	NNNC60585WLE88 1740lm, 62lm/W	NNNC60536WLE88 2100lm, 75lm/W	NNNC60586WLE88 1740lm, 62lm/W
Dimming	2700K 	NNNC60504WLZ88 2300lm, 79lm/W	NNNC60554WLZ88 1900lm, 66lm/W	NNNC60505WLZ88 2000lm, 69lm/W	NNNC60555WLZ88 1660lm, 57lm/W	NNNC60506WLZ88 2000lm, 69lm/W	NNNC60556WLZ88 1660lm, 57lm/W
	3000K 	NNNC60514WLZ88 2300lm, 79lm/W	NNNC60564WLZ88 1900lm, 66lm/W	NNNC60515WLZ88 2000lm, 69lm/W	NNNC60565WLZ88 1660lm, 57lm/W	NNNC60516WLZ88 2000lm, 69lm/W	NNNC60566WLZ88 1660lm, 57lm/W
	4000K 	NNNC60534WLZ88 2420lm, 83lm/W	NNNC60584WLZ88 2000lm, 69lm/W	NNNC60535WLZ88 2100lm, 72lm/W	NNNC60585WLZ88 1740lm, 60lm/W	NNNC60536WLZ88 2100lm, 72lm/W	NNNC60586WLZ88 1740lm, 60lm/W

*Customize: 2 types of CCT  3500K  5000K are also available *DALI is Optional



Small Glareless Downlight Series



Wattage	(Non-Dimming)6.5W (Dimming)8.5W
CCT	2700K/3000K/3500K/4000K
Beam Angle	15/24/36 (Customized) 48
Voltage	220-240V
Frequency	50/60Hz
Lifetime	50,000 hours
CRI	80/90
Ambient Temperature	5°C~35°C
Power Factor	0.9
Materials	Body & Frame: ADC12
IP rate	20

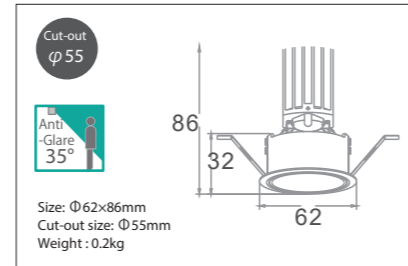
Ex-A Series Small Glareless Downlight

Specification

Voltage	220-240V
Frequency	50/60Hz
Lifetime	50,000 hours
CRI	80/90
Ambient Temperature	5°C~35°C
Power Factor	0.9
Materials	Body & Frame: ADC12
IP rate	20



Dimension



High CRI (Ra 90)

Both of High CRI (Ra90) and Basic (Ra80) type are prepared.

High CRI
CRI 90

CRI 80

Types of Beam Angle

3 types of beam angle



*48° type is available by using a diffuser cap for 36° type.

Dimming type

Dimming type is available.(0-10V)
Dimming Range : 10 -100%
(Model no. NNNC****LZ88)

10-100%
Dimmable
(0-10V)

Non Dimmable

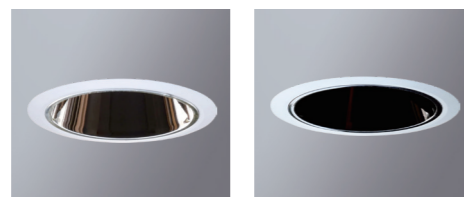
*DALI is Optional

Optional difuser cap

Diffuser cap can be combined with Beam angle 36° type.
That realizes Beam angle 48°

Variation of Cone

3 color of Cone



Chrome

Shining Black

Cone diagram (3000K, CRI80 type)

(Non Dimming) 6.5W/(Dimming) 8.5W		
15°	24°	36°

Wattage	(Non Dimming) 6.5W/(Dimming) 8.5W						
Beam Angle	15°		24°		36°		
Cone Type	Shinning Black						
CRI	80	90	80	90	80	90	
Non Dimming	2700K	NNNC61006WLE88 400lm, 62lm/W	NNNC61056WLE88 330lm, 51lm/W	NNNC61007WLE88 440lm, 68lm/W	NNNC61057WLE88 360lm, 55lm/W	NNNC61008WLE88 530lm, 82lm/W	NNNC61058WLE88 430lm, 66lm/W
	3000K	NNNC61016WLE88 400lm, 62lm/W	NNNC61066WLE88 330lm, 51lm/W	NNNC61017WLE88 440lm, 68lm/W	NNNC61067WLE88 360lm, 55lm/W	NNNC61018WLE88 530lm, 82lm/W	NNNC61068WLE88 430lm, 66lm/W
	3500K	NNNC61026WLE88 420lm, 65lm/W	NNNC61076WLE88 340lm, 52lm/W	NNNC61027WLE88 460lm, 71lm/W	NNNC61077WLE88 380lm, 58lm/W	NNNC61028WLE88 550lm, 85lm/W	NNNC61078WLE88 450lm, 69lm/W
	4000K	NNNC61036WLE88 420lm, 65lm/W	NNNC61086WLE88 340lm, 52lm/W	NNNC61037WLE88 460lm, 71lm/W	NNNC61087WLE88 380lm, 58lm/W	NNNC61038WLE88 550lm, 85lm/W	NNNC61088WLE88 450lm, 69lm/W
Dimming	2700K	NNNC61006W LZ88 400lm, 47lm/W	NNNC61056W LZ88 330lm, 39lm/W	NNNC61007W LZ88 440lm, 52lm/W	NNNC61057W LZ88 360lm, 42lm/W	NNNC61008W LZ88 530lm, 62lm/W	NNNC61058W LZ88 430lm, 51lm/W
	3000K	NNNC61016W LZ88 400lm, 47lm/W	NNNC61066W LZ88 330lm, 39lm/W	NNNC61017W LZ88 440lm, 52lm/W	NNNC61067W LZ88 360lm, 42lm/W	NNNC61018W LZ88 530lm, 62lm/W	NNNC61068W LZ88 430lm, 51lm/W
	3500K	NNNC61026W LZ88 420lm, 49lm/W	NNNC61076W LZ88 340lm, 40lm/W	NNNC61027W LZ88 460lm, 54lm/W	NNNC61077W LZ88 380lm, 45lm/W	NNNC61028W LZ88 550lm, 65lm/W	NNNC61078W LZ88 450lm, 53lm/W
	4000K	NNNC61036W LZ88 420lm, 49lm/W	NNNC61086W LZ88 340lm, 40lm/W	NNNC61037W LZ88 460lm, 54lm/W	NNNC61087W LZ88 380lm, 45lm/W	NNNC61038W LZ88 550lm, 65lm/W	NNNC61088W LZ88 450lm, 53lm/W

Cone Type	chrome						
CRI	80	90	80	90	80	90	
Non Dimming	2700K	NNNC61001WLE88 400lm, 62lm/W	NNNC61051WLE88 330lm, 51lm/W	NNNC61002WLE88 440lm, 68lm/W	NNNC61052WLE88 360lm, 55lm/W	NNNC61003WLE88 530lm, 82lm/W	NNNC61053WLE88 430lm, 66lm/W
	3000K	NNNC61011WLE88 400lm, 62lm/W	NNNC61061WLE88 330lm, 51lm/W	NNNC61012WLE88 440lm, 68lm/W	NNNC61062WLE88 360lm, 55lm/W	NNNC61013WLE88 530lm, 82lm/W	NNNC61063WLE88 430lm, 66lm/W
	3500K	NNNC61021WLE88 420lm, 65lm/W	NNNC61071WLE88 340lm, 52lm/W	NNNC61022WLE88 460lm, 71lm/W	NNNC61072WLE88 380lm, 58lm/W	NNNC61023WLE88 550lm, 85lm/W	NNNC61073WLE88 450lm, 69lm/W
	4000K	NNNC61031WLE88 420lm, 65lm/W	NNNC61081WLE88 340lm, 52lm/W	NNNC61032WLE88 460lm, 71lm/W	NNNC61082WLE88 380lm, 58lm/W	NNNC61033WLE88 550lm, 85lm/W	NNNC61083WLE88 450lm, 69lm/W
Dimming	2700K	NNNC61001W LZ88 400lm, 47lm/W	NNNC61051W LZ88 330lm, 39lm/W	NNNC61002W LZ88 440lm, 52lm/W	NNNC61052W LZ88 360lm, 42lm/W	NNNC61003W LZ88 530lm, 62lm/W	NNNC61053W LZ88 430lm, 51lm/W
	3000K	NNNC61011W LZ88 400lm, 47lm/W	NNNC61061W LZ88 330lm, 39lm/W	NNNC61012W LZ88 440lm, 52lm/W	NNNC61062W LZ88 360lm, 42lm/W	NNNC61013W LZ88 530lm, 62lm/W	NNNC61063W LZ88 430lm, 51lm/W
	3500K	NNNC61021W LZ88 420lm, 49lm/W	NNNC61071W LZ88 340lm, 40lm/W	NNNC61022W LZ88 460lm, 54lm/W	NNNC61072W LZ88 380lm, 45lm/W	NNNC61023W LZ88 550lm, 65lm/W	NNNC61073W LZ88 450lm, 53lm/W
	4000K	NNNC61031W LZ88 420lm, 49lm/W	NNNC61081W LZ88 340lm, 40lm/W	NNNC61032W LZ88 460lm, 54lm/W	NNNC61082W LZ88 380lm, 45lm/W	NNNC61033W LZ88 550lm, 65lm/W	NNNC61083W LZ88 450lm, 53lm/W

*DALI is Optional

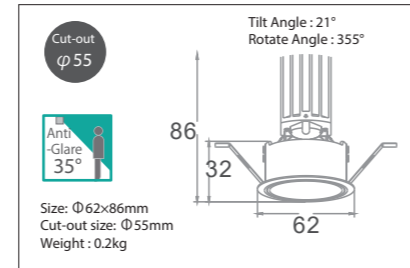
Ex-A Series Small Glareless Adjustable Downlight

Specification

Voltage	220-240V
Frequency	50/60Hz
Lifetime	50,000 hours
CRI	80/90
Ambient Temperature	5°C~35°C
Power Factor	0.9
Materials	Body & Frame: ADC12
IP rate	20



Dimension



High CRI (Ra 90)

Both of High CRI (Ra90) and Basic (Ra80) type are prepared.



Types of Beam Angle

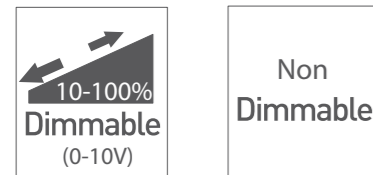
3 types of beam angle



*48° type is available by using a diffuser cap for 36° type.

Dimming type

Dimming type is available.(0-10V)
Dimming Range : 10 -100%
(Model no. NNNC****LZ88)



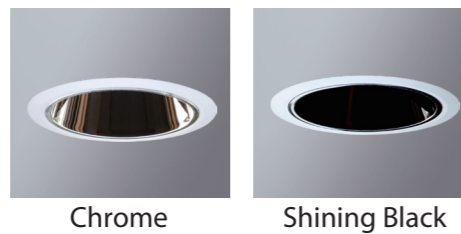
*DALI is Optional

Optional difuser cap

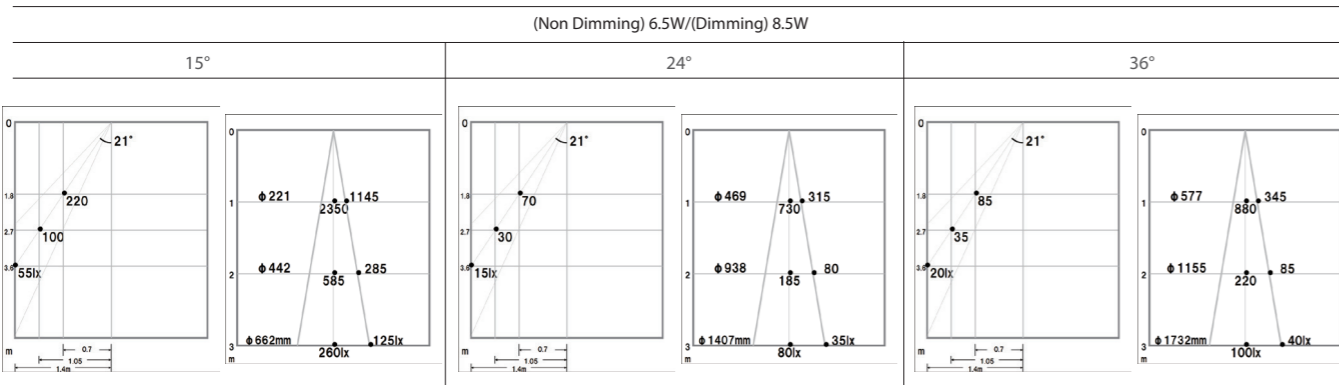
Diffuser cap can be combined with Beam angle 36° type.
That realizes Beam angle 48°

Variation of Cone

3 color of Cone



Cone diagram (3000K, CRI80 type)



Wattage	(Non Dimming) 6.5W/(Dimming) 8.5W						
	15°		24°		36°		
Beam Angle							
Cone Type	Shining Black						
CRI	80	90	80	90	80	90	
Non Dimming	2700K	NNNC61106WLE88 390lm, 60lm/W	NNNC61156WLE88 325lm, 50lm/W	NNNC61107WLE88 395lm, 61lm/W	NNNC61157WLE88 330lm, 51lm/W	NNNC61108WLE88 450lm, 69lm/W	NNNC61158WLE88 375lm, 58lm/W
	3000K	NNNC61116WLE88 390lm, 60lm/W	NNNC61166WLE88 325lm, 50lm/W	NNNC61117WLE88 395lm, 61lm/W	NNNC61167WLE88 330lm, 51lm/W	NNNC61118WLE88 450lm, 69lm/W	NNNC61168WLE88 375lm, 58lm/W
	3500K	NNNC61126WLE88 410lm, 63lm/W	NNNC61176WLE88 340lm, 52lm/W	NNNC61127WLE88 415lm, 64lm/W	NNNC61177WLE88 345lm, 53lm/W	NNNC61128WLE88 475lm, 73lm/W	NNNC61178WLE88 395lm, 61lm/W
	4000K	NNNC61136WLE88 410lm, 63lm/W	NNNC61186WLE88 340lm, 52lm/W	NNNC61137WLE88 415lm, 64lm/W	NNNC61187WLE88 345lm, 53lm/W	NNNC61138WLE88 475lm, 73lm/W	NNNC61188WLE88 395lm, 61lm/W
Dimming	2700K	NNNC61106WZ88 390lm, 46lm/W	NNNC61156WZ88 325lm, 38lm/W	NNNC61107WZ88 395lm, 46lm/W	NNNC61157WZ88 330lm, 39lm/W	NNNC61108WZ88 450lm, 53lm/W	NNNC61158WZ88 375lm, 44lm/W
	3000K	NNNC61116WZ88 390lm, 46lm/W	NNNC61166WZ88 325lm, 38lm/W	NNNC61117WZ88 395lm, 46lm/W	NNNC61167WZ88 330lm, 39lm/W	NNNC61118WZ88 450lm, 53lm/W	NNNC61168WZ88 375lm, 44lm/W
	3500K	NNNC61126WZ88 410lm, 48lm/W	NNNC61176WZ88 340lm, 40lm/W	NNNC61127WZ88 415lm, 49lm/W	NNNC61177WZ88 345lm, 41lm/W	NNNC61128WZ88 475lm, 56lm/W	NNNC61178WZ88 395lm, 46lm/W
	4000K	NNNC61136WZ88 410lm, 48lm/W	NNNC61186WZ88 340lm, 40lm/W	NNNC61137WZ88 415lm, 49lm/W	NNNC61187WZ88 345lm, 41lm/W	NNNC61138WZ88 475lm, 56lm/W	NNNC61188WZ88 395lm, 46lm/W

Cone Type	Chrome						
	80	90	80	90	80	90	
Non Dimming	2700K	NNNC61101WLE88 390lm, 60lm/W	NNNC61151WLE88 325lm, 50lm/W	NNNC61102WLE88 395lm, 61lm/W	NNNC61152WLE88 330lm, 51lm/W	NNNC61103WLE88 450lm, 69lm/W	NNNC61153WLE88 375lm, 58lm/W
	3000K	NNNC61111WLE88 390lm, 60lm/W	NNNC61161WLE88 325lm, 50lm/W	NNNC61112WLE88 395lm, 61lm/W	NNNC61162WLE88 330lm, 51lm/W	NNNC61113WLE88 450lm, 69lm/W	NNNC61163WLE88 375lm, 58lm/W
	3500K	NNNC61121WLE88 410lm, 63lm/W	NNNC61171WLE88 340lm, 52lm/W	NNNC61122WLE88 415lm, 64lm/W	NNNC61172WLE88 345lm, 53lm/W	NNNC61123WLE88 475lm, 73lm/W	NNNC61173WLE88 395lm, 61lm/W
	4000K	NNNC61131WLE88 410lm, 63lm/W	NNNC61181WLE88 340lm, 52lm/W	NNNC61132WLE88 415lm, 64lm/W	NNNC61182WLE88 345lm, 53lm/W	NNNC61133WLE88 475lm, 73lm/W	NNNC61183WLE88 395lm, 61lm/W
Dimming	2700K	NNNC61101WZ88 390lm, 46lm/W	NNNC61151WZ88 325lm, 38lm/W	NNNC61102WZ88 395lm, 46lm/W	NNNC61152WZ88 330lm, 39lm/W	NNNC61103WZ88 450lm, 53lm/W	NNNC61153WZ88 375lm, 44lm/W
	3000K	NNNC61111WZ88 390lm, 46lm/W	NNNC61161WZ88 325lm, 38lm/W	NNNC61112WZ88 395lm, 46lm/W	NNNC61162WZ88 330lm, 39lm/W	NNNC61113WZ88 450lm, 53lm/W	NNNC61163WZ88 375lm, 44lm/W
	3500K	NNNC61121WZ88 410lm, 48lm/W	NNNC61171WZ88 340lm, 40lm/W	NNNC61122WZ88 415lm, 49lm/W	NNNC61172WZ88 345lm, 41lm/W	NNNC61123WZ88 475lm, 56lm/W	NNNC61173WZ88 395lm, 46lm/W
	4000K	NNNC61131WZ88 410lm, 48lm/W	NNNC61181WZ88 340lm, 40lm/W	NNNC61132WZ88 415lm, 49lm/W	NNNC61182WZ88 345lm, 41lm/W	NNNC61133WZ88 475lm, 56lm/W	NNNC61183WZ88 395lm, 46lm/W

*DALI is Optional

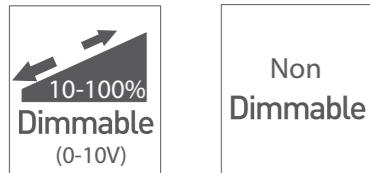
Ex-A Series Pin-hole/Pin-hole Adjustable Downlight

Specification

Voltage	220-240V
Frequency	50/60Hz
Lifetime	50,000 hours
CRI	80
Ambient Temperature	5°C~35°C
Power Factor	0.9
Materials	Body & Frame: ADC12
IP rate	20

Dimming type

Dimming type is available.(0-10V)
Dimming Range : 10 -100%
(Model no. NNNC****LZ88)



*DALI is Optional

Types of Beam Angle

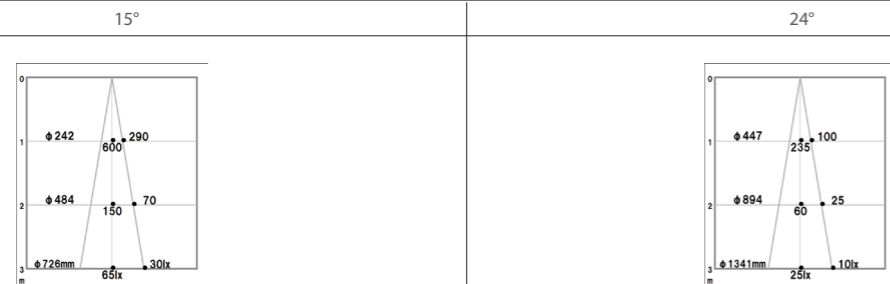
3 types of beam angle



Narrow Middle

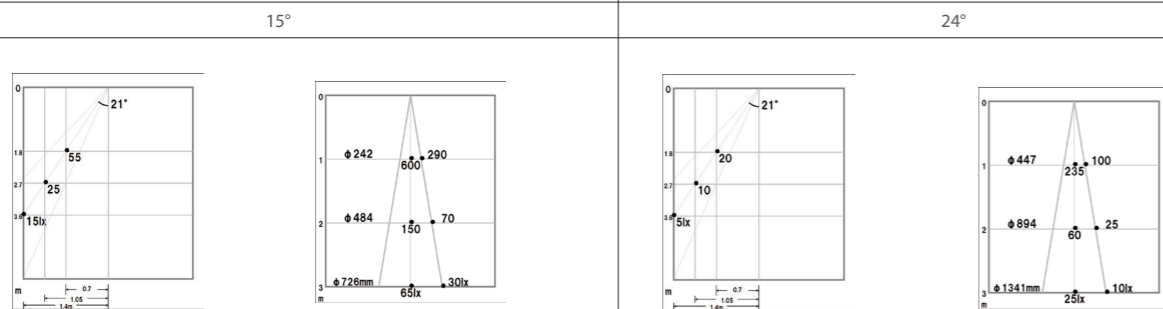
Cone diagram (3000K, CRI90 type)

(Non Dimming) 6.5W/(Dimming) 8.5W

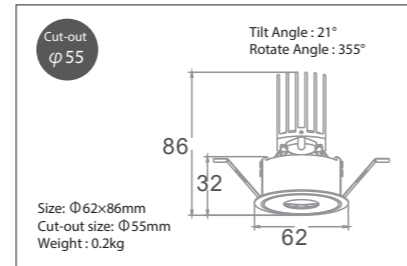
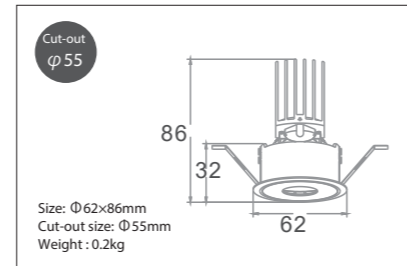


Cone diagram (Adjustable 3000K, CRI90 type)

(Non Dimming) 6.5W/(Dimming) 8.5W



Dimension

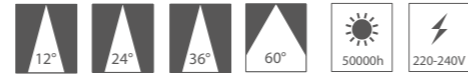


Product Type	Pin-hole		
Wattage	(Non Dimming) 6.5W/(Dimming) 8.5W		
Beam Angle	15°	24°	
CRI	90	90	
Non Dimming	2700K	NNNC61004WLE88 220lm, 34lm/W	NNNC61005WLE88 250lm, 38lm/W
	3000K	NNNC61014WLE88 220lm, 34lm/W	NNNC61015WLE88 250lm, 38lm/W
	3500K	NNNC61024WLE88 230lm, 35lm/W	NNNC61025WLE88 260lm, 40lm/W
	4000K	NNNC61034WLE88 230lm, 35lm/W	NNNC61035WLE88 260lm, 40lm/W
Dimming	2700K	NNNC61004WLZ88 220lm, 26lm/W	NNNC61005WLZ88 250lm, 29lm/W
	3000K	NNNC61014WLZ88 220lm, 26lm/W	NNNC61015WLZ88 250lm, 29lm/W
	3500K	NNNC61024WLZ88 230lm, 27lm/W	NNNC61025WLZ88 260lm, 31lm/W
	4000K	NNNC61034WLZ88 230lm, 27lm/W	NNNC61035WLZ88 260lm, 31lm/W

Product Type	Pin-hole Adjustable		
Wattage	(Non Dimming) 6.5W/(Dimming) 8.5W		
Beam Angle	15°	24°	
CRI	90	90	
Non Dimming	2700K	NNNC61104WLE88 220lm, 34lm/W	NNNC61105WLE88 250lm, 38lm/W
	3000K	NNNC61114WLE88 220lm, 34lm/W	NNNC61115WLE88 250lm, 38lm/W
	3500K	NNNC61124WLE88 230lm, 35lm/W	NNNC61125WLE88 260lm, 40lm/W
	4000K	NNNC61134WLE88 230lm, 35lm/W	NNNC61135WLE88 260lm, 40lm/W
Dimming	2700K	NNNC61104WLZ88 220lm, 26lm/W	NNNC61105WLZ88 250lm, 29lm/W
	3000K	NNNC61114WLZ88 220lm, 26lm/W	NNNC61115WLZ88 250lm, 29lm/W
	3500K	NNNC61124WLZ88 230lm, 27lm/W	NNNC61125WLZ88 260lm, 31lm/W
	4000K	NNNC61134WLZ88 230lm, 27lm/W	NNNC61135WLZ88 260lm, 31lm/W

*DALI is Optional

Ex-A Series High Wattage Downlight

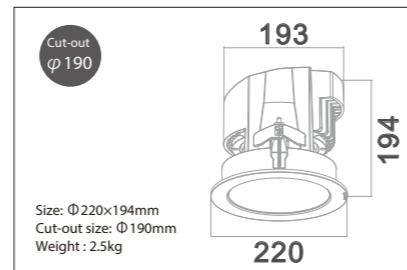
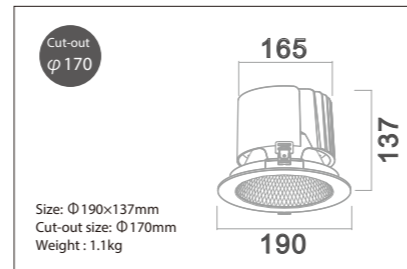
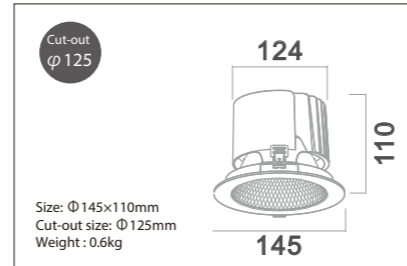


Specification

Voltage	220-240V
Frequency	50/60Hz
Lifetime	50,000 hours
CRI	80
Ambient Temperature	5°C~35°C
Power Factor	0.9
Materials	Body & Frame: ADC12
IP rate	20

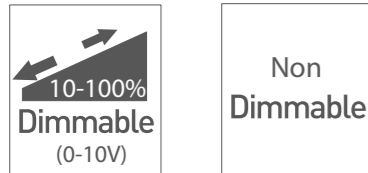


Dimension



Dimming type

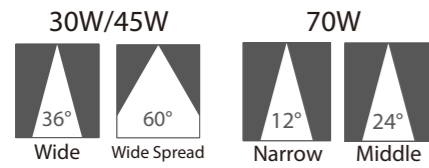
Dimming type is available.(0-10V)
Dimming Range : 10 -100%
(Model no. NNNC****LZ88)



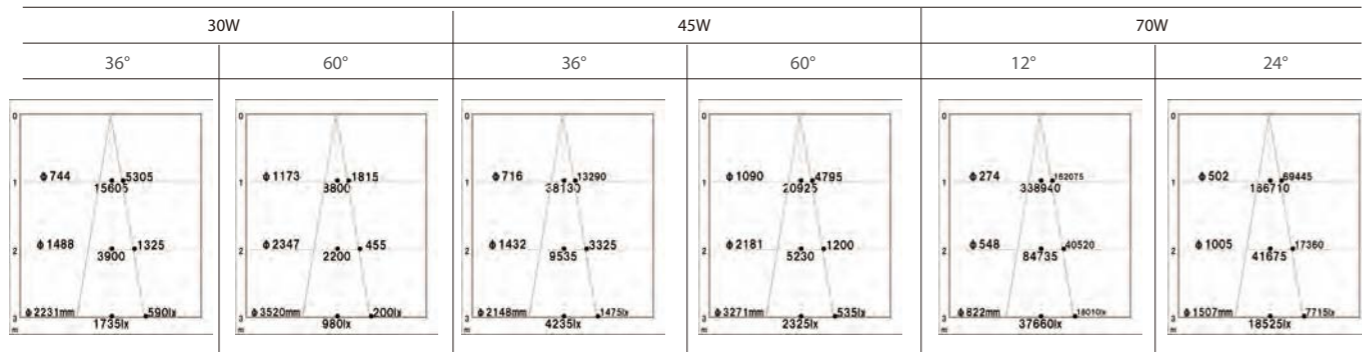
*DALI is Optional

Types of Beam Angle

2 types of beam angle for each wattage



Cone diagram (3000K, CRI80 type)



Wattage	30W		45W	
	36°	60°	36°	60°
Beam Angle	36°	60°	36°	60°
CRI	80	80	80	80
Non Dimming	3000K ●	NNNC60613WLE88 2800lm, 93lm/W	NNNC60616WLE88 2800lm, 93lm/W	NNNC60713WLE88 4200lm, 93lm/W
	4000K ○	NNNC60633WLE88 2940lm, 98lm/W	NNNC60636WLE88 2940lm, 98lm/W	NNNC60736WLE88 4420lm, 98lm/W
Dimming	3000K ●	NNNC60613WLZ88 2800lm, 93lm/W	NNNC60616WLZ88 2800lm, 93lm/W	NNNC60713WLZ88 4200lm, 93lm/W
	4000K ○	NNNC60633WLZ88 2940lm, 98lm/W	NNNC60636WLZ88 2940lm, 98lm/W	NNNC60733WLZ88 4420lm, 98lm/W

Wattage	70W	
	12°	24°
Beam Angle	12°	24°
CRI	80	80
Non Dimming	3000K ●	NNNC60811WLE88 7200lm, 103lm/W
	4000K ○	NNNC60831WLE88 7570lm, 108lm/W
Dimming	3000K ●	NNNC60811WLZ88 7200lm, 103lm/W
	4000K ○	NNNC60831WLZ88 7570lm, 108lm/W

*Customize: 3 types of CCT ● 2700K ● 3500K ● 5000K are also available



Ceiling Adjustable Downlight



Wattage	(Non-Dimming)8W/18W (Dimming)10W/20W
CCT	2700K/3000K/4000K
Beam Angle	15/24/36
Voltage	220-240V
Frequency	50/60Hz
Lifetime	50,000 hours
CRI	80/90
Ambient Temperature	5°C~35°C
Power Factor	0.9
Materials	Body & Frame: ADC12
IP rate	20

Ex-A Series Ceiling Adjustable Downlight

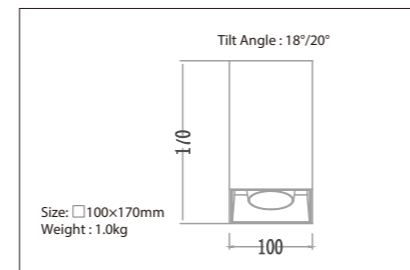
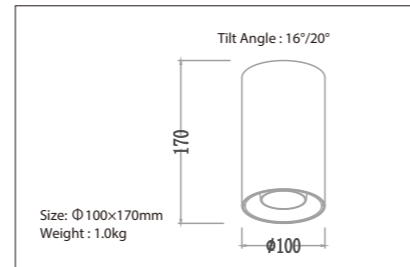
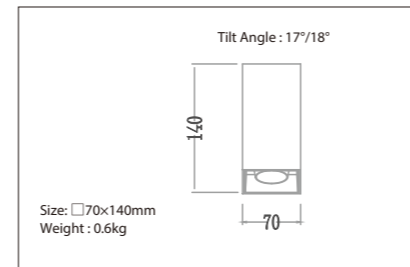
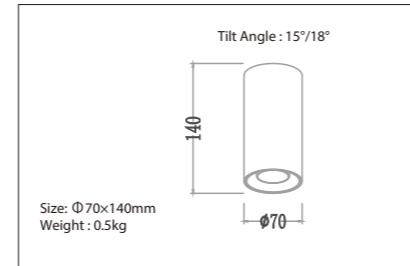


Specification

Voltage	220-240V
Frequency	50/60Hz
Lifetime	50,000 hours
CRI	80
Ambient Temperature	5°C~35°C
Power Factor	0.5
Materials	Body & Frame: ADC12
IP rate	20

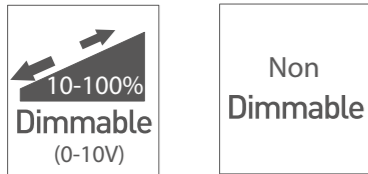


Dimension



Dimming type

Dimming type is available.(0-10V)
Dimming Range : 10 -100%
(Model no. NNNC*****LZ88)



*Driver of dimming type is separated from fixture, not installed inside fixture
*DALI is Optional

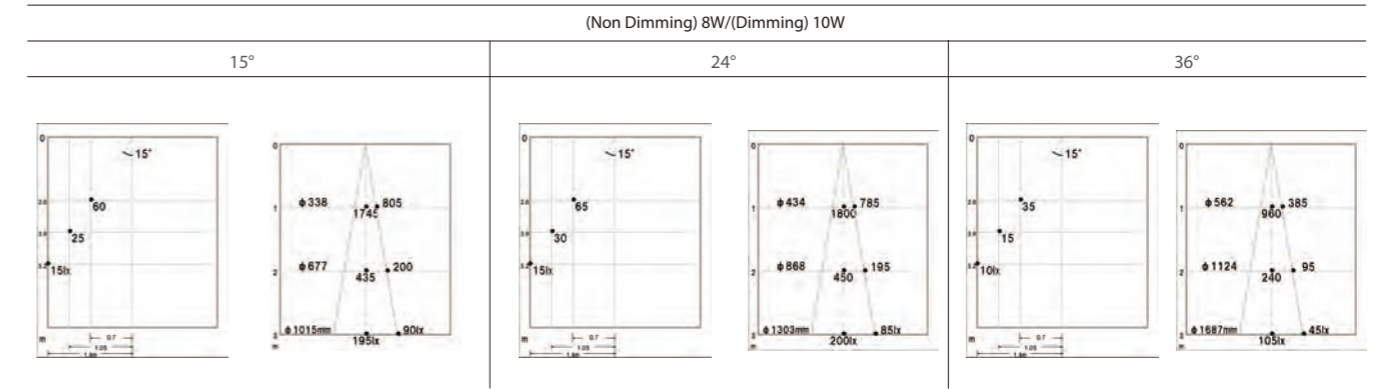
Types of Beam Angle

3 types of beam angle

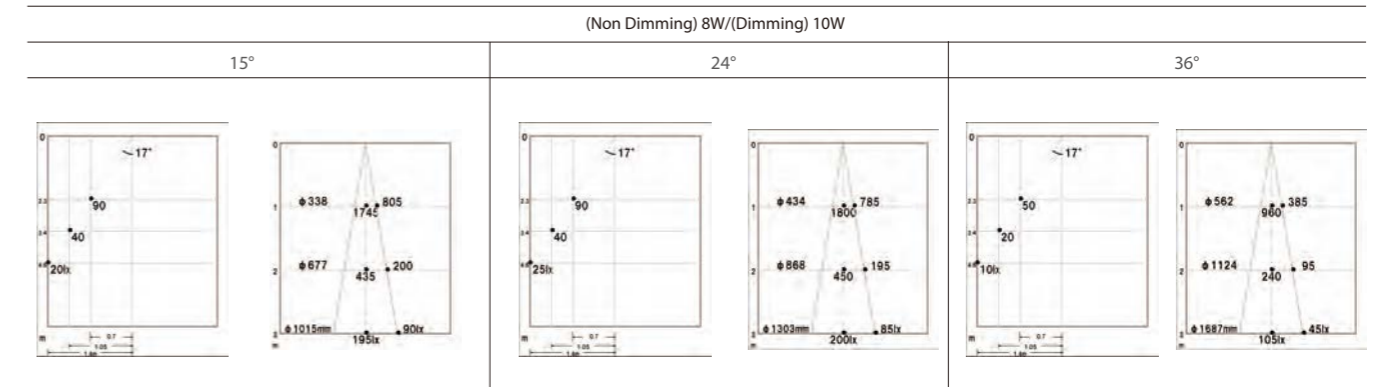


*Black Body type is also available

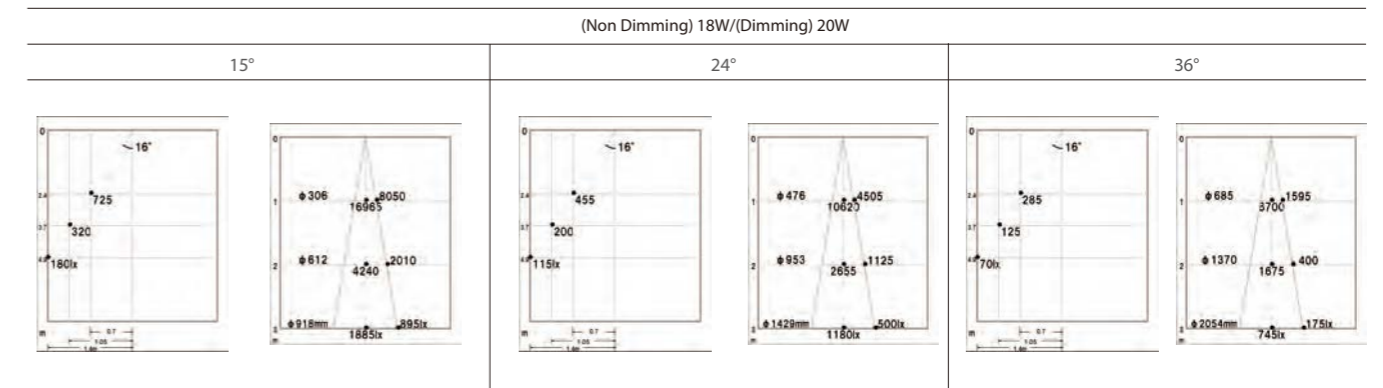
Cone diagram (3000K, CRI80, Round type)



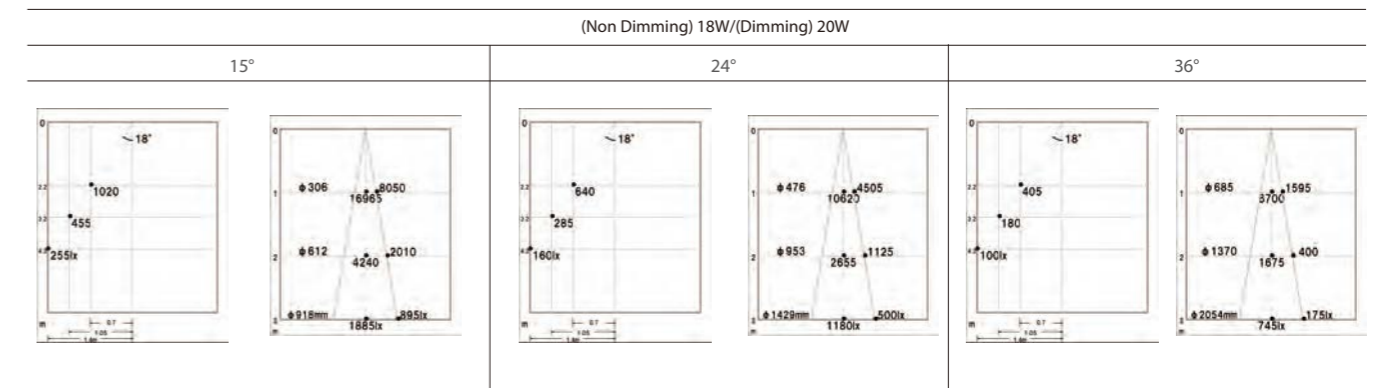
Cone diagram (3000K, CRI80, Square type)



Cone diagram (3000K, CRI80, Round type)



Cone diagram (3000K, CRI80, Square type)



Ex-A Series Ceiling Adjustable Downlight

Wattage	Non Dimming 8W/Dimming 10W						
Beam Angle	15°		24°		36°		
Shape	Round						
Body Color	White	Black	White	Black	White	Black	
Non Dimming	2700K	NNNC51001WLE88 580lm, 73lm/W	NNNC51001BLE88 580lm, 73lm/W	NNNC51002WLE88 700lm, 88lm/W	NNNC51002BLE88 700lm, 88lm/W	NNNC51003WLE88 600lm, 75lm/W	NNNC51003BLE88 600lm, 75lm/W
	3000K	NNNC51011WLE88 580lm, 73lm/W	NNNC51011BLE88 580lm, 73lm/W	NNNC51012WLE88 700lm, 88lm/W	NNNC51012BLE88 700lm, 88lm/W	NNNC51013WLE88 600lm, 75lm/W	NNNC51013BLE88 600lm, 75lm/W
	4000K	NNNC51031WLE88 610lm, 76lm/W	NNNC51031BLE88 610lm, 76lm/W	NNNC51032WLE88 730lm, 91lm/W	NNNC51032BLE88 730lm, 91lm/W	NNNC51033WLE88 630lm, 79lm/W	NNNC51033BLE88 630lm, 79lm/W
Dimming	2700K	NNNC51001WLZ88 580lm, 58lm/W	NNNC51001BLZ88 580lm, 58lm/W	NNNC51002WLZ88 700lm, 70lm/W	NNNC51002BLZ88 700lm, 70lm/W	NNNC51003WLZ88 600lm, 60lm/W	NNNC51003BLZ88 600lm, 60lm/W
	3000K	NNNC51011WLZ88 580lm, 58lm/W	NNNC51011BLZ88 580lm, 58lm/W	NNNC51012WLZ88 700lm, 70lm/W	NNNC51012BLZ88 700lm, 70lm/W	NNNC51013WLZ88 600lm, 60lm/W	NNNC51013BLZ88 600lm, 60lm/W
	4000K	NNNC51031WLZ88 610lm, 61lm/W	NNNC51031BLZ88 610lm, 61lm/W	NNNC51032WLZ88 730lm, 73lm/W	NNNC51032BLZ88 730lm, 73lm/W	NNNC51033WLZ88 630lm, 63lm/W	NNNC51033BLZ88 630lm, 63lm/W

Shape	Square						
Body Color	White	Black	White	Black	White	Black	
Non Dimming	2700K	NNNC51101WLE88 580lm, 73lm/W	NNNC51101BLE88 580lm, 73lm/W	NNNC51102WLE88 700lm, 88lm/W	NNNC51102BLE88 700lm, 88lm/W	NNNC51103WLE88 600lm, 75lm/W	NNNC51103BLE88 600lm, 75lm/W
	3000K	NNNC51111WLE88 580lm, 73lm/W	NNNC51111BLE88 580lm, 73lm/W	NNNC51112WLE88 700lm, 88lm/W	NNNC51112BLE88 700lm, 88lm/W	NNNC51113WLE88 600lm, 75lm/W	NNNC51113BLE88 600lm, 75lm/W
	4000K	NNNC51131WLE88 610lm, 76lm/W	NNNC51131BLE88 610lm, 76lm/W	NNNC51132WLE88 730lm, 91lm/W	NNNC51132BLE88 730lm, 91lm/W	NNNC51133WLE88 630lm, 79lm/W	NNNC51133BLE88 630lm, 79lm/W
Dimming	2700K	NNNC51101WLZ88 580lm, 58lm/W	NNNC51101BLZ88 580lm, 58lm/W	NNNC51102WLZ88 700lm, 70lm/W	NNNC51102BLZ88 700lm, 70lm/W	NNNC51103WLZ88 600lm, 60lm/W	NNNC51103BLZ88 600lm, 60lm/W
	3000K	NNNC51111WLZ88 580lm, 58lm/W	NNNC51111BLZ88 580lm, 58lm/W	NNNC51112WLZ88 700lm, 70lm/W	NNNC51112BLZ88 700lm, 70lm/W	NNNC51113WLZ88 600lm, 60lm/W	NNNC51113BLZ88 600lm, 60lm/W
	4000K	NNNC51131WLZ88 610lm, 61lm/W	NNNC51131BLZ88 610lm, 61lm/W	NNNC51132WLZ88 730lm, 73lm/W	NNNC51132BLZ88 730lm, 73lm/W	NNNC51133WLZ88 630lm, 63lm/W	NNNC51133BLZ88 630lm, 63lm/W

*Customize: 2 types of CCT 3500K 5000K are also available *DALI is Optional

Wattage	Non Dimming 18W/Dimming 20W						
Beam Angle	15°		24°		36°		
Shape	Round						
Body Color	White	Black	White	Black	White	Black	
Non Dimming	2700K	NNNC51201WLE88 1500lm, 83lm/W	NNNC51201BLE88 1500lm, 83lm/W	NNNC51202WLE88 1600lm, 89lm/W	NNNC51202BLE88 1600lm, 89lm/W	NNNC51203WLE88 1600lm, 89lm/W	NNNC51203BLE88 1600lm, 89lm/W
	3000K	NNNC51211WLE88 1500lm, 83lm/W	NNNC51211BLE88 1500lm, 83lm/W	NNNC51212WLE88 1600lm, 89lm/W	NNNC51212BLE88 1600lm, 89lm/W	NNNC51213WLE88 1600lm, 89lm/W	NNNC51213BLE88 1600lm, 89lm/W
	4000K	NNNC51231WLE88 1570lm, 87lm/W	NNNC51231BLE88 1570lm, 87lm/W	NNNC51232WLE88 1680lm, 93lm/W	NNNC51232BLE88 1680lm, 93lm/W	NNNC51233WLE88 1680lm, 93lm/W	NNNC51233BLE88 1680lm, 93lm/W
Dimming	2700K	NNNC51201WLZ88 1500lm, 75lm/W	NNNC51201BLZ88 1500lm, 75lm/W	NNNC51202WLZ88 1600lm, 80lm/W	NNNC51202BLZ88 1600lm, 80lm/W	NNNC51203WLZ88 1600lm, 80lm/W	NNNC51203BLZ88 1600lm, 80lm/W
	3000K	NNNC51211WLZ88 1500lm, 75lm/W	NNNC51211BLZ88 1500lm, 75lm/W	NNNC51212WLZ88 1600lm, 80lm/W	NNNC51212BLZ88 1600lm, 80lm/W	NNNC51213WLZ88 1600lm, 80lm/W	NNNC51213BLZ88 1600lm, 80lm/W
	4000K	NNNC51231WLZ88 1570lm, 79lm/W	NNNC51231BLZ88 1570lm, 79lm/W	NNNC51232WLZ88 1680lm, 84lm/W	NNNC51232BLZ88 1680lm, 84lm/W	NNNC51233WLZ88 1680lm, 84lm/W	NNNC51233BLZ88 1680lm, 84lm/W

Shape	Square						
Body Color	White	Black	White	Black	White	Black	
Non Dimming	2700K	NNNC51301WLE88 1500lm, 83lm/W	NNNC51301BLE88 1500lm, 83lm/W	NNNC51302WLE88 1600lm, 89lm/W	NNNC51302BLE88 1600lm, 89lm/W	NNNC51303WLE88 1600lm, 89lm/W	NNNC51303BLE88 1600lm, 89lm/W
	3000K	NNNC51311WLE88 1500lm, 83lm/W	NNNC51311BLE88 1500lm, 83lm/W	NNNC51312WLE88 1600lm, 89lm/W	NNNC51312BLE88 1600lm, 89lm/W	NNNC51313WLE88 1600lm, 89lm/W	NNNC51313BLE88 1600lm, 89lm/W
	4000K	NNNC51331WLE88 1570lm, 87lm/W	NNNC51331BLE88 1570lm, 87lm/W	NNNC51332WLE88 1680lm, 93lm/W	NNNC51332BLE88 1680lm, 93lm/W	NNNC51333WLE88 1680lm, 93lm/W	NNNC51333BLE88 1680lm, 93lm/W
Dimming	2700K	NNNC51301WLZ88 1500lm, 75lm/W	NNNC51301BLZ88 1500lm, 75lm/W	NNNC51302WLZ88 1600lm, 80lm/W	NNNC51302BLZ88 1600lm, 80lm/W	NNNC51303WLZ88 1600lm, 80lm/W	NNNC51303BLZ88 1600lm, 80lm/W
	3000K	NNNC51311WLZ88 1500lm, 75lm/W	NNNC51311BLZ88 1500lm, 75lm/W	NNNC51312WLZ88 1600lm, 80lm/W	NNNC51312BLZ88 1600lm, 80lm/W	NNNC51313WLZ88 1600lm, 80lm/W	NNNC51313BLZ88 1600lm, 80lm/W
	4000K	NNNC51331WLZ88 1570lm, 79lm/W	NNNC51331BLZ88 1570lm, 79lm/W	NNNC51332WLZ88 1680lm, 84lm/W	NNNC51332BLZ88 1680lm, 84lm/W	NNNC51333WLZ88 1680lm, 84lm/W	NNNC51333BLZ88 1680lm, 84lm/W

*Customize: 2 types of CCT 3500K 5000K are also available *DALI is Optional

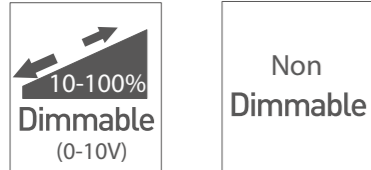
Ex-A Series Ceiling Downlight

Specification

Voltage	220-240V
Frequency	50/60Hz
Lifetime	50,000 hours
CRI	80
Ambient Temperature	5°C~35°C
Power Factor	0.9
Materials	Body & Frame: ADC12
IP rate	20

Dimming type

Dimming type is available.(0-10V)
Dimming Range : 10 -100%
(Model no. NNNC*****LZ88)

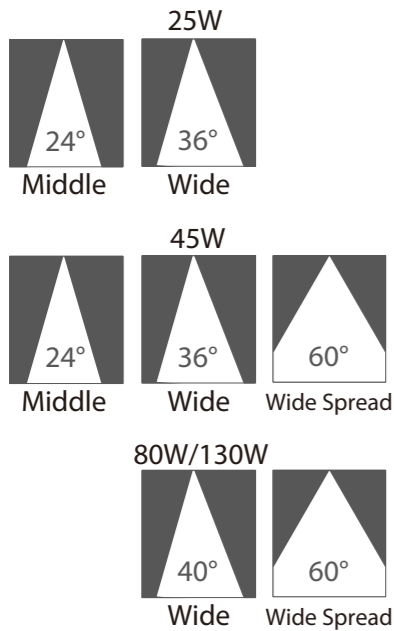


*Driver of dimming type is separated from fixture, not installed inside fixture

*DALI is Optional

Types of Beam Angle

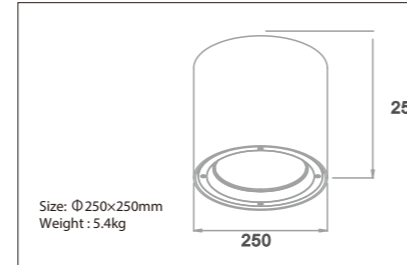
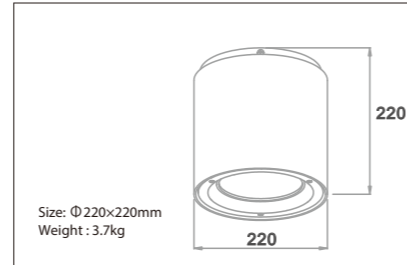
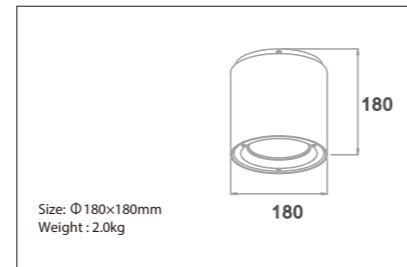
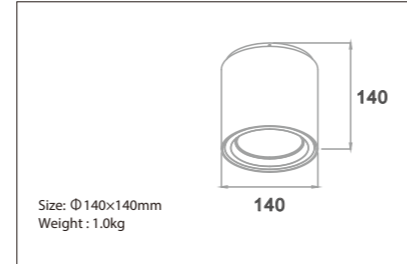
Multi types of beam angle for each wattage



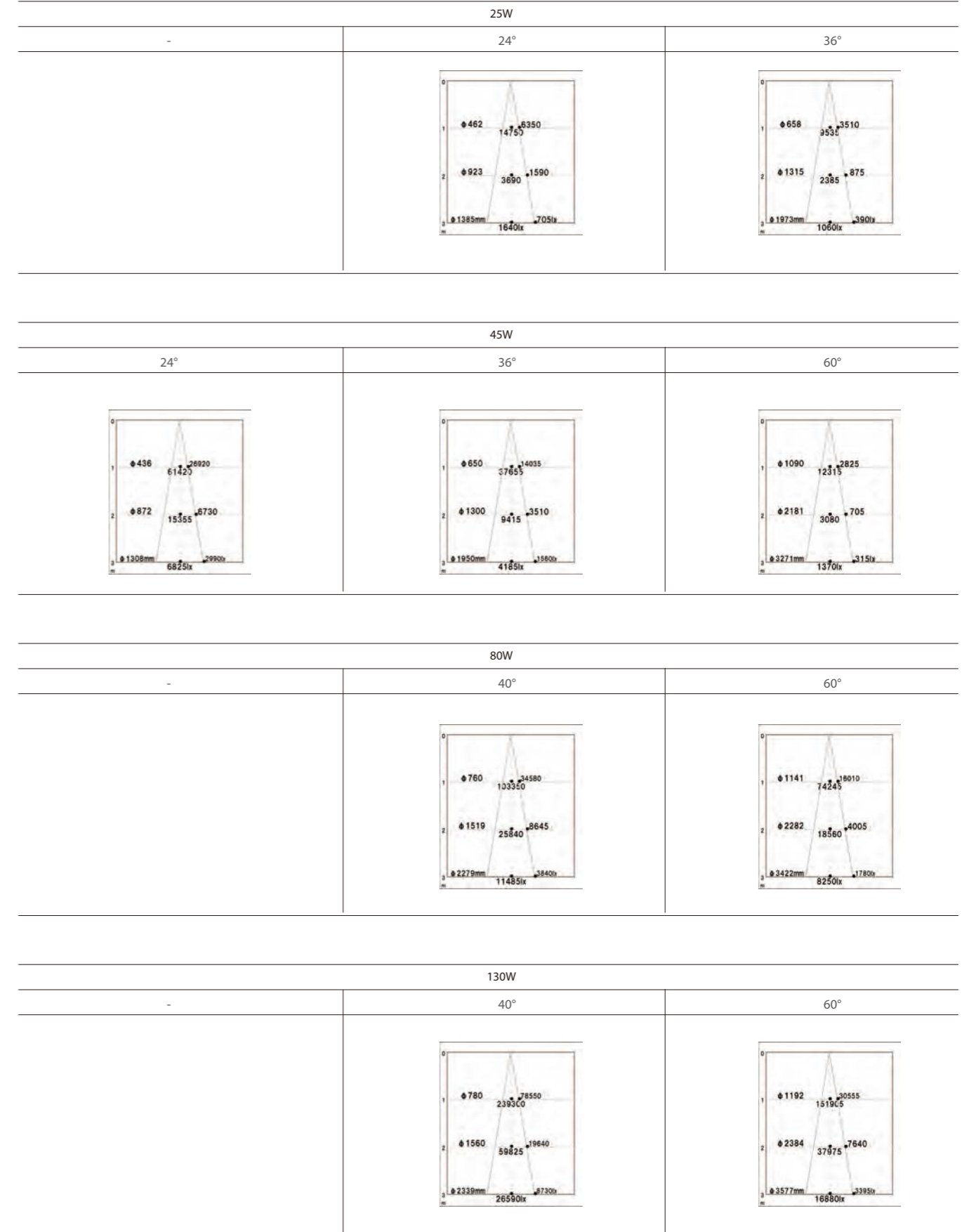
*Black Body type is also available



Dimension

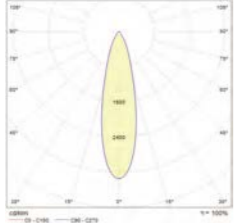
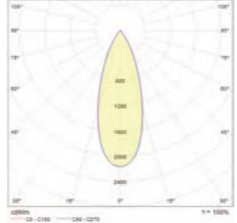


Cone diagram (3000K, CRI80 type)

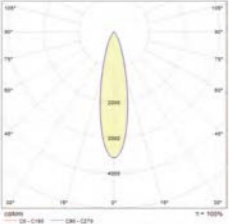
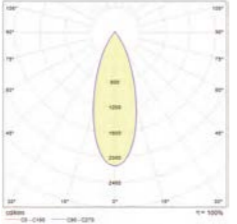
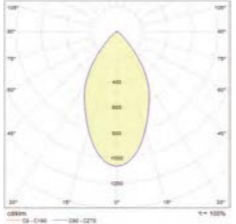


Ex-A Series Ceiling Adjustable Downlight

Wattage		25W					
Beam Angle		24°		36°		60°	
Body Color		White	Black	White	Black	White	Black
Non Dimming	3000K	NNNC51412WLE88 2100lm, 84lm/W	NNNC51412BLE88 2100lm, 84lm/W	NNNC51413WLE88 2100lm, 84lm/W	NNNC51413BLE88 2100lm, 84lm/W	-	-
	4000K	NNNC51432WLE88 2210lm, 88lm/W	NNNC51432BLE88 2210lm, 88lm/W	NNNC51433WLE88 2210lm, 88lm/W	NNNC51433BLE88 2210lm, 88lm/W	-	-
Dimming	3000K	NNNC51412WLZ88 2100lm, 84lm/W	NNNC51412BLZ88 2100lm, 84lm/W	NNNC51413WLZ88 2100lm, 84lm/W	NNNC51413BLZ88 2100lm, 84lm/W	-	-
	4000K	NNNC51432WLZ88 2210lm, 88lm/W	NNNC51432BLZ88 2210lm, 88lm/W	NNNC51433WLZ88 2210lm, 88lm/W	NNNC51433BLZ88 2210lm, 88lm/W	-	-

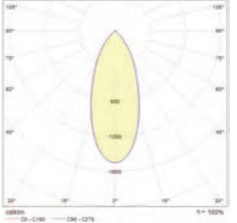
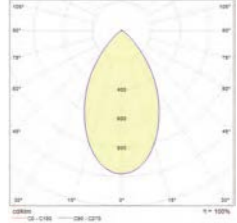



Wattage		45W					
Beam Angle		24°		36°		60°	
Body Color		White	Black	White	Black	White	Black
Non Dimming	3000K	NNNC51512WLE88 4150lm, 92lm/W	NNNC51512BLE88 4150lm, 92lm/W	NNNC51513WLE88 4200lm, 93lm/W	NNNC51513BLE88 4200lm, 93lm/W	NNNC51516WLE88 3400lm, 76lm/W	NNNC51516BLE88 3400lm, 76lm/W
	4000K	NNNC51532WLE88 4360lm, 97lm/W	NNNC51532BLE88 4360lm, 97lm/W	NNNC51533WLE88 4420lm, 98lm/W	NNNC51533BLE88 4420lm, 98lm/W	NNNC51536WLE88 3570lm, 79lm/W	NNNC51536BLE88 3570lm, 79lm/W
Dimming	3000K	NNNC51512WLZ88 4150lm, 92lm/W	NNNC51512BLZ88 4150lm, 92lm/W	NNNC51513WLZ88 4200lm, 93lm/W	NNNC51513BLZ88 4200lm, 93lm/W	NNNC51516WLZ88 3400lm, 76lm/W	NNNC51516BLZ88 3400lm, 76lm/W
	4000K	NNNC51532WLZ88 4360lm, 97lm/W	NNNC51532BLZ88 4360lm, 97lm/W	NNNC51533WLZ88 4420lm, 98lm/W	NNNC51533BLZ88 4420lm, 98lm/W	NNNC51536WLZ88 3570lm, 79lm/W	NNNC51536BLZ88 3570lm, 79lm/W

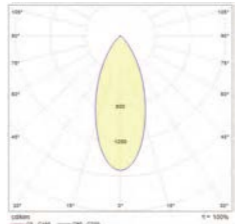
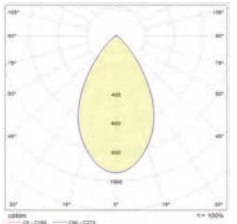




*Customize: 3 types of CCT ● 2700K ● 3500K ● 5000K are also available

Wattage		80W					
Beam Angle		24°		40°		60°	
Body Color		White	Black	White	Black	White	Black
Non Dimming	3000K	-	-	NNNC51614WLE88 8300lm, 104lm/W	NNNC51614BLE88 8300lm, 104lm/W	NNNC51616WLE88 8700lm, 109lm/W	NNNC51616BLE88 8700lm, 109lm/W
	4000K	-	-	NNNC51634WLE88 8730lm, 109lm/W	NNNC51634BLE88 8730lm, 109lm/W	NNNC51636WLE88 9150lm, 114lm/W	NNNC51636BLE88 9150lm, 114lm/W
Dimming	3000K	-	-	NNNC51614WLZ88 8300lm, 104lm/W	NNNC51614BLZ88 8300lm, 104lm/W	NNNC51616WLZ88 8700lm, 109lm/W	NNNC51616BLZ88 8700lm, 109lm/W
	4000K	-	-	NNNC51634WLZ88 8730lm, 109lm/W	NNNC51634BLZ88 8730lm, 109lm/W	NNNC51636WLZ88 9150lm, 114lm/W	NNNC51636BLZ88 9150lm, 114lm/W

Wattage		130W					
Beam Angle		24°		40°		60°	
Body Color		White	Black	White	Black	White	Black
Non Dimming	3000K	-	-	NNNC51714WLE88 12500lm, 96lm/W	NNNC51714BLE88 12500lm, 96lm/W	NNNC51716WLE88 12700lm, 98lm/W	NNNC51716BLE88 12700lm, 98lm/W
	4000K	-	-	NNNC51734WLE88 13150lm, 101lm/W	NNNC51734BLE88 13150lm, 101lm/W	NNNC51736WLE88 13360lm, 103lm/W	NNNC51736BLE88 13360lm, 103lm/W
Dimming	3000K	-	-	NNNC51714WLZ88 12500lm, 96lm/W	NNNC51714BLZ88 12500lm, 96lm/W	NNNC51716WLZ88 12700lm, 98lm/W	NNNC51716BLZ88 12700lm, 98lm/W
	4000K	-	-	NNNC51734WLZ88 13150lm, 101lm/W	NNNC51734BLZ88 13150lm, 101lm/W	NNNC51736WLZ88 13360lm, 103lm/W	NNNC51736BLZ88 13360lm, 103lm/W





*Customize: 3 types of CCT ● 2700K ● 3500K ● 5000K are also available


Downlight Ex-H/F Series Product Line-up

Ex-H

Downlight	Glareless Downlight	Water proof Downlight	Glareless Adjustable Downlight
			










































Ex-F

High CRI			
Downlight	Glareless Downlight	Adjustable Downlight	Glareless Adjustable Downlight
			

Downlight	Glareless Downlight	Surface Mounted Downlight	Adjustable Downlight	Glareless Adjustable Downlight
				

Ex-2G series

High Wattage Downlight


		Ex Series										
		Flux	9000Type	7000Type	5000Type	4000Type	3200Type	2200Type	1500Type	1000Type	750Type	500Type
Cut-out	Type											
75mm	DL	Downlight										
		Glareless Downlight										
		Water proof Downlight										
	Adjustable	Glareless Adjustable Downlight										
125mm	DL	Downlight										
		Glareless Downlight										
	Adjustable	Adjustable Downlight										
		Glareless Adjustable Downlight										
		High CRI										
		High CRI										
150mm	DL	High Wattage Downlight										
		Surface Mounted Downlight										

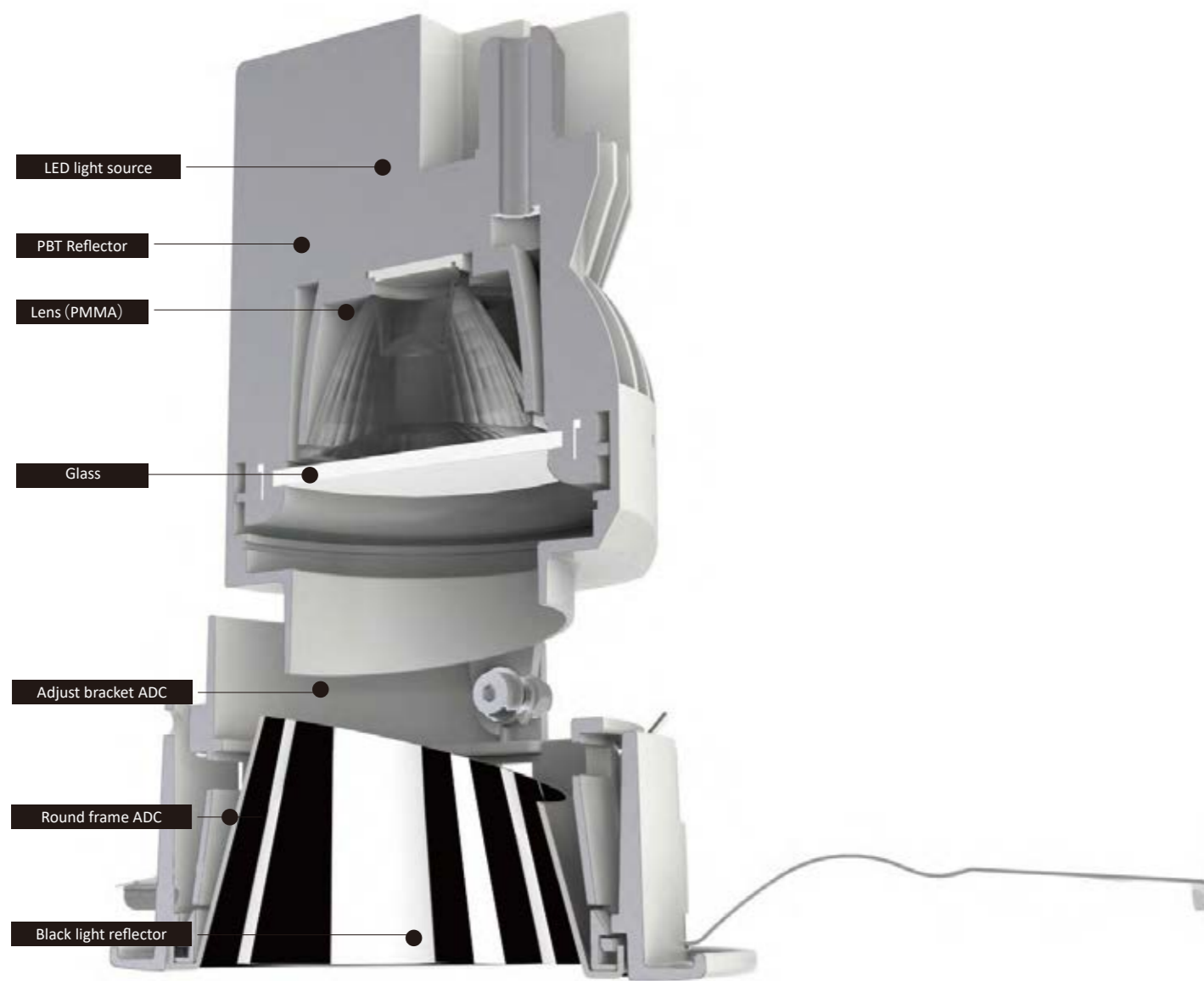
Ex-H Series

Trinity Design, Creating the perfect Light

Cooling system

Optical system

Lighting fixtures structure

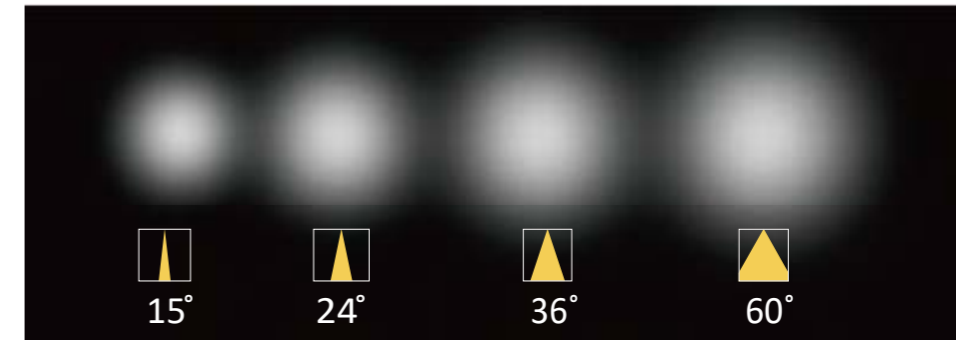


Using a reliable materials

- Using high-quality aluminum alloy (ADC12) die-casting method.
- Through the unique design of the cooling system, the height, weight and stability of the cooling body reach the Trinity balance

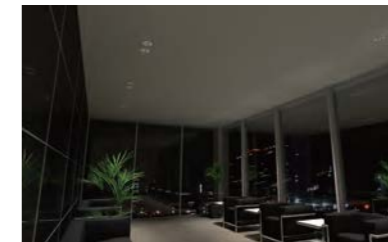
High Quality design and material of Lens, which have a variety of choices.

- 95% transmittance of PMMA optical grade materials, and perfect match secondary optical lens design
- Depending on the application, there are max 4 type options (15° / 24° / 36° / 60°) to choose from.



Perfect Optical Design

Using black mirror high-reflective glass three optical designs, to ensure the perfect light effect.

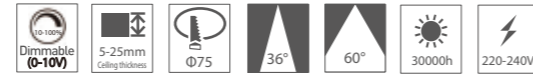


Safety for installers and consumers

Safety design: to ensure easy installation and prevent falling



Ex-H Series Downlight

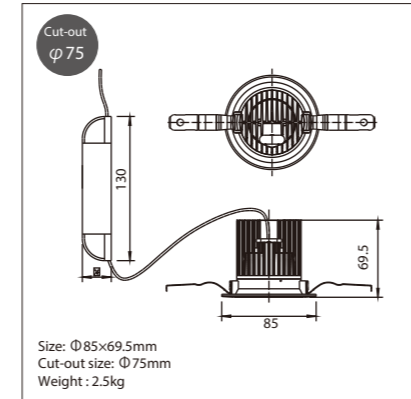


Specification

Voltage	220-240V
Frequency	50/60Hz
Lifetime	30,000 hours
CRI	90
Ambient Temperature	5°C~35°C
Power Factor	0.9
Materials	Body & Frame: ADC(White) Lens: PMMA Reflector: Aluminum
IP rate	20

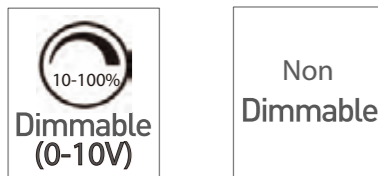


Dimension

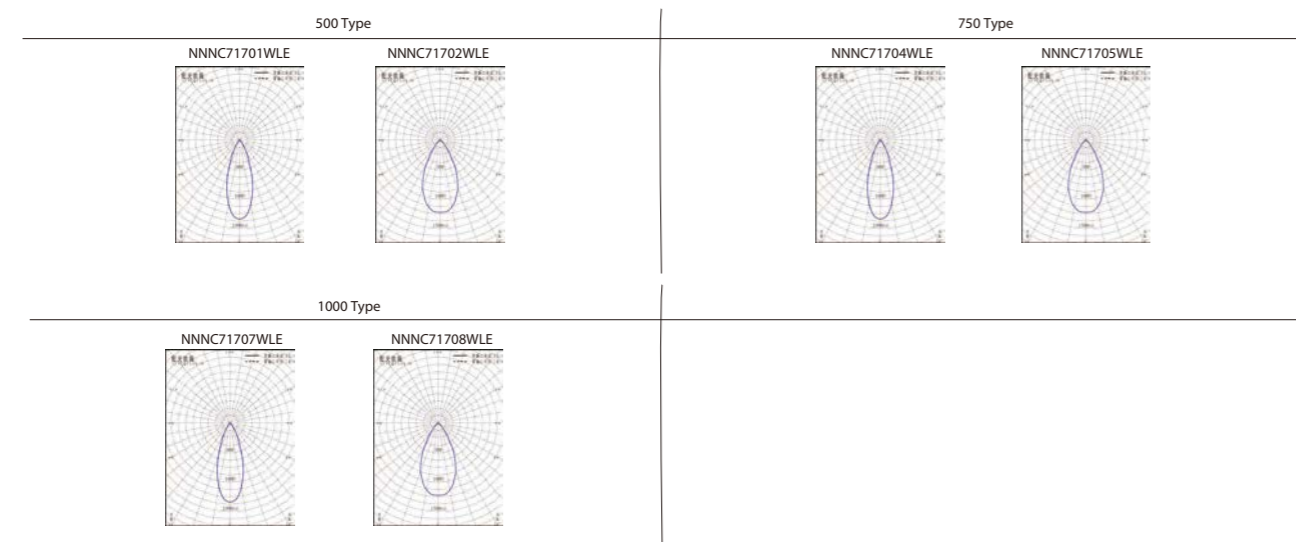


Dimming type

Dimming type is available.(0-10V)
Dimming Range : 10 -100%
(Model no. NNNC****LZ)



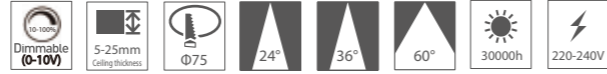
Ligh Distribution (reference)



Type	500 Type		750 Type		
Wattage	7W				
Beam Angle	36°	60°	36°	60°	
Non Dimming	2700K ●	NNNC71701WLE 570lm, 81lm/W	NNNC71702WLE 510lm, 73lm/W	NNNC71704WLE 780lm, 87lm/W	NNNC71705WLE 690lm, 77lm/W
	3000K ○	NNNC71726WLE 595lm, 85lm/W	NNNC71727WLE 530m, 76lm/W	NNNC71729WLE 815m, 91lm/W	NNNC71730WLE 725m, 81lm/W
	4000K ○	NNNC71776WLE 615lm, 88lm/W	NNNC71777WLE 545lm, 78lm/W	NNNC71779WLE 840lm, 93lm/W	NNNC71780WLE 745lm, 83lm/W
Dimming	2700K ●	NNNC71701WLZ 570lm, 81lm/W	NNNC71702WLZ 510lm, 73lm/W	NNNC71704WLZ 780lm, 87lm/W	NNNC71705WLZ 690lm, 77lm/W
	3000K ○	NNNC71726WLZ 595lm, 85lm/W	NNNC71727WLZ 530m, 76lm/W	NNNC71729WLZ 815m, 91lm/W	NNNC71730WLZ 725m, 81lm/W
	4000K ○	NNNC71776WLZ 615lm, 88lm/W	NNNC71777WLZ 545lm, 78lm/W	NNNC71779WLZ 840lm, 93lm/W	NNNC71780WLZ 745lm, 83lm/W
Illuminance Distribution					

Type	1000 Type			
Wattage	12W			
Beam Angle	36°	60°		
Non Dimming	2700K ●	NNNC71707WLE 1080lm, 90lm/W	NNNC71708WLE 975lm, 81lm/W	
	3000K ○	NNNC71732WLE 1125m, 94lm/W	NNNC71733WLE 1015m, 85lm/W	
	4000K ○	NNNC71782WLE 1160lm, 97lm/W	NNNC71783WLE 1050lm, 88lm/W	
Dimming	2700K ●	NNNC71707WLZ 1080lm, 90lm/W	NNNC71708WLZ 975lm, 81lm/W	
	3000K ○	NNNC71732WLZ 1125m, 94lm/W	NNNC71733WLZ 1015m, 85lm/W	
	4000K ○	NNNC71782WLZ 1160lm, 97lm/W	NNNC71783WLZ 1050lm, 88lm/W	
Illuminance Distribution				

Ex-H Series Glareless Downlight

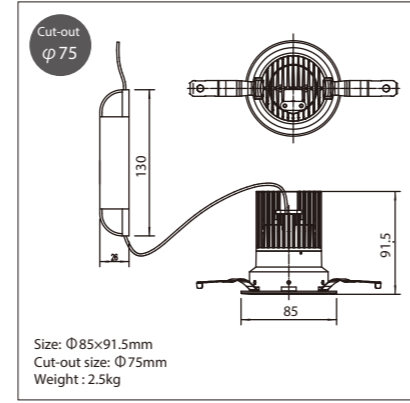


Specification

Voltage	220-240V
Frequency	50/60Hz
Lifetime	30,000 hours
CRI	90
Ambient Temperature	5°C~35°C
Power Factor	0.95(12W) 0.9(7, 9W)
Materials	Body & Frame: ADC(White) Lens: PMMA Reflector: Aluminum
IP rate	20

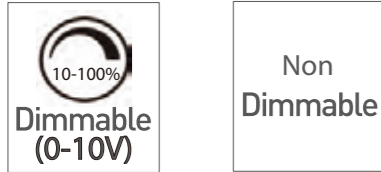


Dimension

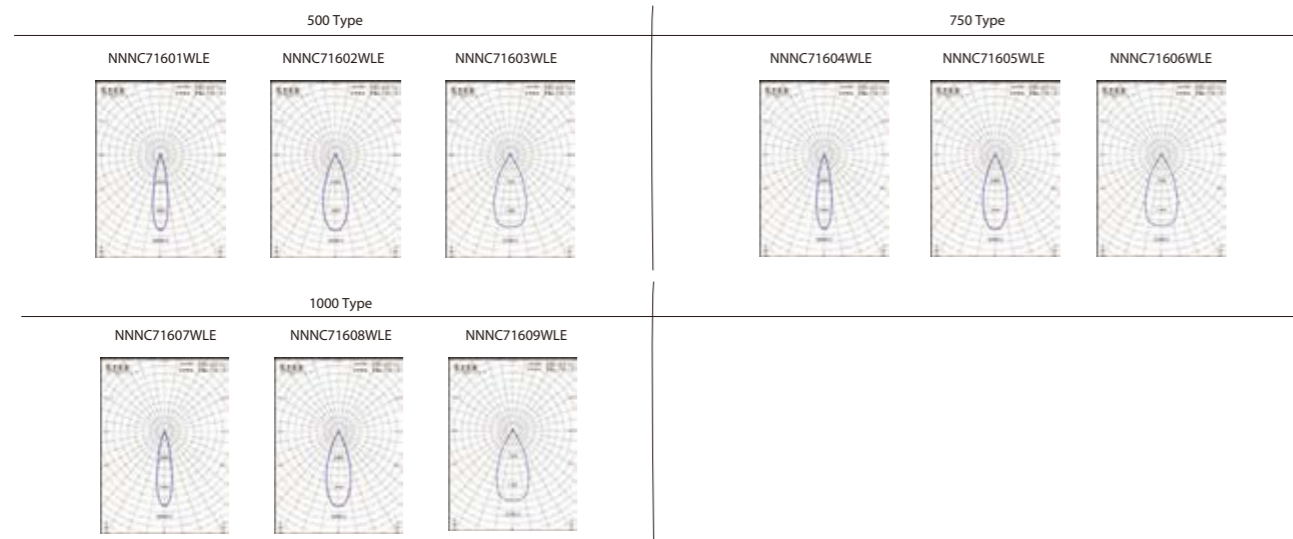


Dimming type

Dimming type is available.(0-10V)
Dimming Range : 10 -100%
(Model no. NNNC****LZ)



Ligh Distribution (reference)



Type	500 Type			750 Type			
Wattage	6.5W	7W	7W	8W	9W	9W	
Beam Angle	24°	36°	60°	24°	36°	60°	
Non Dimming	2700K ●	NNNC71601WLE 425lm, 65lm/W	NNNC71602WLE 475lm, 68lm/W	NNNC71603WLE 400lm, 57lm/W	NNNC71604WLE 520lm, 65lm/W	NNNC71605WLE 660lm, 73lm/W	NNNC71606WLE 520lm, 58lm/W
	3000K ○	NNNC71626WLE 460m, 71lm/W	NNNC71627WLE 495m, 71lm/W	NNNC71628WLE 415m, 59lm/W	NNNC71629WLE 545m, 68lm/W	NNNC71630WLE 690m, 77lm/W	NNNC71631WLE 545m, 61lm/W
	4000K ○	NNNC71676WLE 465lm, 62lm/W	NNNC71677WLE 510lm, 73lm/W	NNNC71678WLE 430lm, 61lm/W	NNNC71679WLE 570lm, 71lm/W	NNNC71680WLE 710lm, 79lm/W	NNNC71681WLE 560lm, 62lm/W
Dimming	2700K ●	NNNC71601WLZ 425lm, 65lm/W	NNNC71602WLZ 475lm, 68lm/W	NNNC71603WLZ 400lm, 57lm/W	NNNC71604WLZ 520lm, 65lm/W	NNNC71605WLZ 660lm, 73lm/W	NNNC71606WLZ 520lm, 58lm/W
	3000K ○	NNNC71626WLZ 460m, 71lm/W	NNNC71627WLZ 495m, 71lm/W	NNNC71628WLZ 415m, 59lm/W	NNNC71629WLZ 545m, 68lm/W	NNNC71630WLZ 690m, 77lm/W	NNNC71631WLZ 545m, 61lm/W
	4000K ○	NNNC71676WLZ 465lm, 62lm/W	NNNC71677WLZ 510lm, 73lm/W	NNNC71678WLZ 430lm, 61lm/W	NNNC71679WLZ 570lm, 71lm/W	NNNC71680WLZ 710lm, 79lm/W	NNNC71681WLZ 560lm, 62lm/W
Illuminance Distribution							

Type	1000 Type			
Wattage	11W	12W	12W	
Beam Angle	24°	36°	60°	
Non Dimming	2700K ●	NNNC71607WLE 700lm, 64lm/W	NNNC71608WLE 915lm, 76lm/W	NNNC71609WLE 755lm, 63lm/W
	3000K ○	NNNC71632WLE 735m, 67lm/W	NNNC71633WLE 955m, 80lm/W	NNNC71634WLE 785m, 65lm/W
	4000K ○	NNNC71682WLE 765lm, 70lm/W	NNNC71683WLE 985lm, 82lm/W	NNNC71684WLE 810lm, 68lm/W
Dimming	2700K ●	NNNC71607WLZ 700lm, 64lm/W	NNNC71608WLZ 915lm, 76lm/W	NNNC71609WLZ 755lm, 63lm/W
	3000K ○	NNNC71632WLZ 735m, 67lm/W	NNNC71633WLZ 955m, 80lm/W	NNNC71634WLZ 785m, 65lm/W
	4000K ○	NNNC71682WLZ 765lm, 70lm/W	NNNC71683WLZ 985lm, 82lm/W	NNNC71684WLZ 810lm, 68lm/W
Illuminance Distribution				

Ex-H Series Glareless Adjustable Downlight

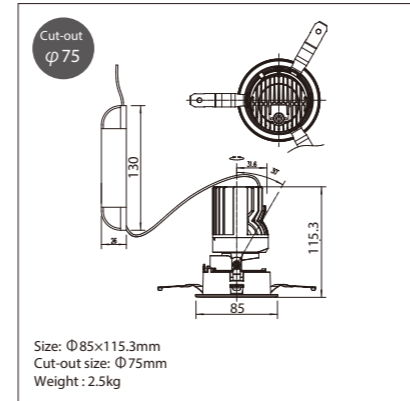


Specification

Voltage	220-240V
Frequency	50/60Hz
Lifetime	30,000 hours
CRI	90
Ambient Temperature	5°C~35°C
Power Factor	0.95(12W) 0.9(7, 9W)
Materials	Body & Frame: ADC(White) Lens: PMMA Reflector: Aluminum
IP rate	20

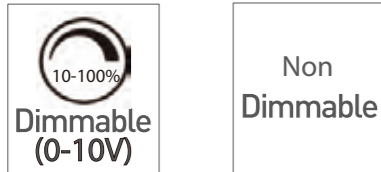


Dimension

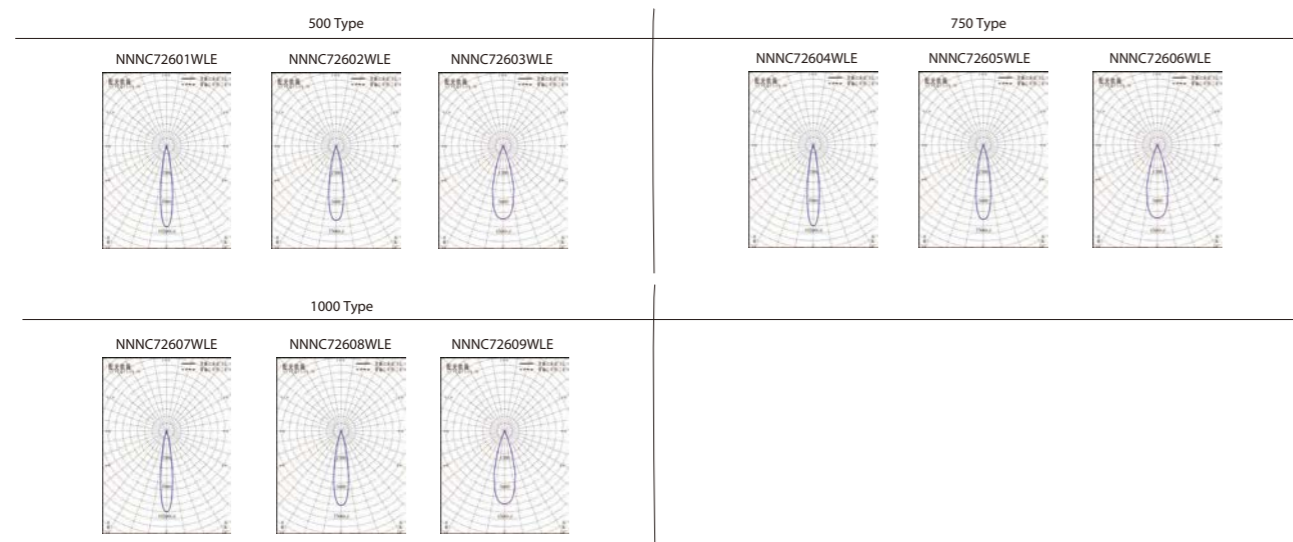


Dimming type

Dimming type is available.(0-10V)
Dimming Range : 10 -100%
(Model no. NNNC****LZ)



Ligh Distribution (reference)



Type	500 Type			750 Type				
Wattage	6.5W	6.5W	7W	8W	8W	9W		
Beam Angle	15°	24°	36°	15°	24°	36°		
Non Dimming	2700K ●	NNNC72601WLE 425lm, 65lm/W	NNNC72602WLE 475lm, 68lm/W	NNNC72603WLE 400lm, 57lm/W	NNNC72604WLE 520lm, 65lm/W	NNNC72605WLE 660lm, 73lm/W	NNNC72606WLE 520lm, 58lm/W	
	3000K ○	NNNC72626WLE 460m, 71lm/W	NNNC72627WLE 495m, 71lm/W	NNNC72628WLE 415m, 59lm/W	NNNC72629WLE 545m, 68lm/W	NNNC72630WLE 690m, 77lm/W	NNNC72631WLE 545m, 61lm/W	
	4000K ○	NNNC72676WLE 465lm, 62lm/W	NNNC72677WLE 510lm, 73lm/W	NNNC72678WLE 430lm, 61lm/W	NNNC72679WLE 570lm, 71lm/W	NNNC72680WLE 710lm, 79lm/W	NNNC72681WLE 560lm, 62lm/W	
Dimming	2700K ●	NNNC72601WLZ 425lm, 65lm/W	NNNC72602WLZ 475lm, 68lm/W	NNNC72603WLZ 400lm, 57lm/W	NNNC72604WLZ 520lm, 65lm/W	NNNC72605WLZ 660lm, 73lm/W	NNNC72606WLZ 520lm, 58lm/W	
	3000K ○	NNNC72626WLZ 460m, 71lm/W	NNNC72627WLZ 495m, 71lm/W	NNNC72628WLZ 415m, 59lm/W	NNNC72629WLZ 545m, 68lm/W	NNNC72630WLZ 690m, 77lm/W	NNNC72631WLZ 545m, 61lm/W	
	4000K ○	NNNC712676WLZ 465lm, 62lm/W	NNNC72677WLZ 510lm, 73lm/W	NNNC72678WLZ 430lm, 61lm/W	NNNC72679WLZ 570lm, 71lm/W	NNNC72680WLZ 710lm, 79lm/W	NNNC72681WLZ 560lm, 62lm/W	
Illuminance Distribution	[Diagrams for 15° and 24° beam angles]		[Diagrams for 15° and 24° beam angles]		[Diagrams for 15° and 24° beam angles]		[Diagrams for 15° and 24° beam angles]	

Type	1000 Type			
Wattage	11W	11W	12W	
Beam Angle	15°	24°	36°	
Non Dimming	2700K ●	NNNC72607WLE 700lm, 64lm/W	NNNC72608WLE 915lm, 76lm/W	NNNC72609WLE 755lm, 63lm/W
	3000K ○	NNNC72632WLE 735lm, 67lm/W	NNNC72633WLE 955m, 80lm/W	NNNC72634WLE 785m, 65lm/W
	4000K ○	NNNC72682WLE 765lm, 70lm/W	NNNC72683WLE 985lm, 82lm/W	NNNC721684WLE 810lm, 68lm/W
Dimming	2700K ●	NNNC72607WLZ 700lm, 64lm/W	NNNC72608WLZ 915lm, 76lm/W	NNNC72609WLZ 755lm, 63lm/W
	3000K ○	NNNC72632WLZ 735m, 67lm/W	NNNC72633WLZ 955m, 80lm/W	NNNC72634WLZ 785m, 65lm/W
	4000K ○	NNNC72682WLZ 765lm, 70lm/W	NNNC72683WLZ 985lm, 82lm/W	NNNC72684WLZ 810lm, 68lm/W
Illuminance Distribution	[Diagrams for 15° and 24° beam angles]		[Diagrams for 15° and 24° beam angles]	

Ex-H Series Water proof Downlight

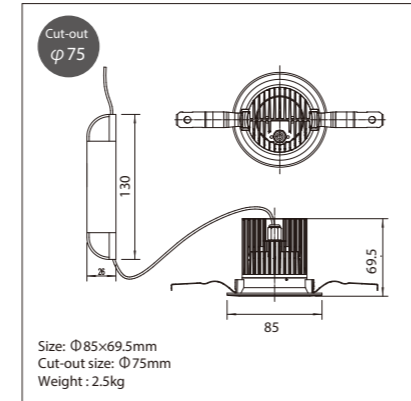


Specification

Voltage	220-240V
Frequency	50/60Hz
Lifetime	30,000 hours
CRI	90
Ambient Temperature	5°C~35°C
Power Factor	0.95(12W) 0.9(7, 9W)
Materials	Body & Frame: ADC(White) Lens: PMMA Reflector: Aluminum
IP rate	54

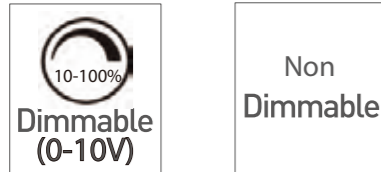


Dimension



Dimming type

Dimming type is available.(0-10V)
Dimming Range : 10 -100%
(Model no. NNNC****LZ)



Type	500 Type	750 Type	1000 Type	
Wattage	7W	9W	12W	
Beam Angle	60°	60°	60°	
Non Dimming	2700K ●	NNNC71801WLE 510lm, 73lm/W	NNNC71803WLE 690lm, 77lm/W	NNNC71805WLE 975lm, 81lm/W
	3000K ○	NNNC71826WLE 530m, 76lm/W	NNNC71828WLE 725m, 81lm/W	NNNC71830WLE 1015m, 85lm/W
	4000K ○	NNNC71876WLE 545lm, 78lm/W	NNNC71878WLE 745lm, 83lm/W	NNNC71880WLE 1050lm, 88lm/W
Dimming	2700K ●	NNNC71801WLZ 510lm, 73lm/W	NNNC71803WLZ 690lm, 77lm/W	NNNC71805WLZ 975lm, 81lm/W
	3000K ○	NNNC71826WLZ 530m, 76lm/W	NNNC71828WLZ 725m, 81lm/W	NNNC71830WLZ 1015m, 85lm/W
	4000K ○	NNNC71876WLZ 545lm, 78lm/W	NNNC71878WLZ 745lm, 83lm/W	NNNC71880WLZ 1050lm, 88lm/W
Illuminance Distribution				

Ligh Distribution (reference)



Ex-F Series

Customized "Light" and "Design" for Shop Display

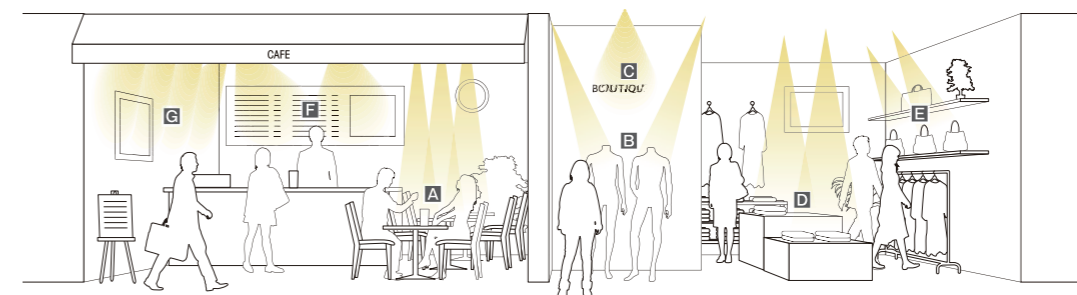


The perfect Lighting effect

Provides a soft transition and spot uniform effect to enhance the visual of the product being shown, while also improving shopping comfort



A variety of brightness and light distributions to satisfy uses in different places

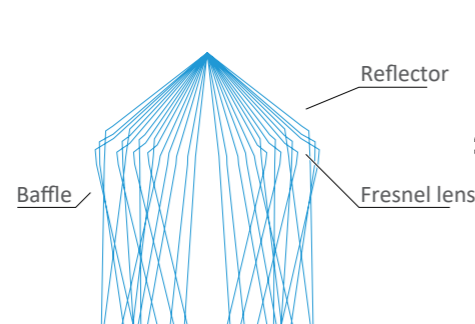


Beam angle	Approx.13°	Approx.25°	Approx.36°	Approx.60°
A Counter / Table Lighting	●	○	—	—
B Mannequin / Torso Lighting	●	○	—	—
C Sign Lighting	—	●	○	—
D Flatbed Lighting	—	●	○	—
E Wall Fixture Lighting	—	●	○	—
F Wall / Pillar(Vertical) Display	—	○	●	—
G Wall Washer	—	—	○	●

Professional optical technology to achieve beautiful light

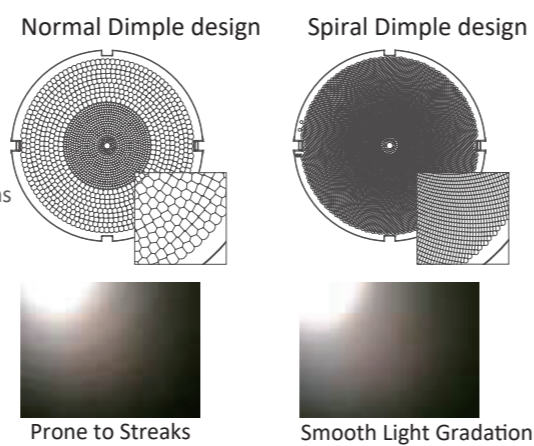
Fresnel Lens

Using Fresnel lens secondary light control technology to make full use of LED light. Efficient, with perfect light quality.



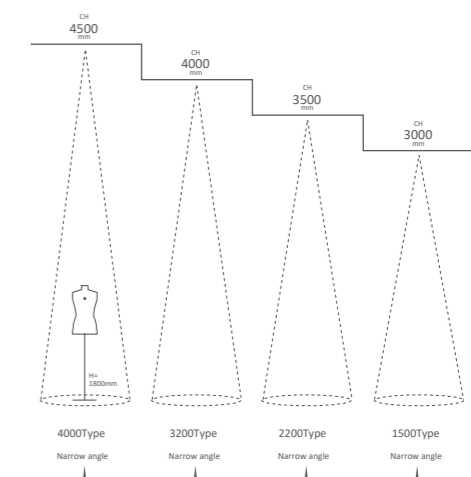
Spiral Dimple Design

Minute dimples are arranged in a spiral rather than concentric circles. This design achieves beautiful light by preventing streaks and unevenness which LEDs with narrow beam angles are usually prone to.



Center light prominent, the perfect presentation of goods

Center light intensity up to 34190cd (4000Type.13°)



Ex-F Series Downlight

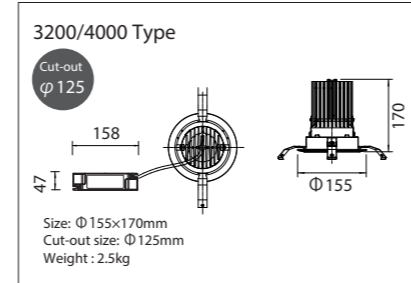
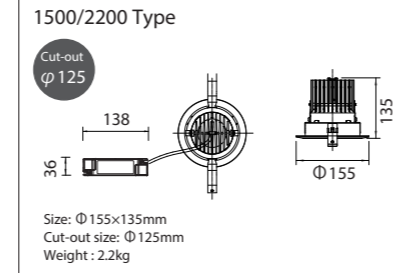


Specification

Voltage 220-240V
 Frequency 50/60Hz
 Lifetime 30,000 hours
 CRI 90
 Ambient Temperature 5°C~35°C
 Power Factor 0.9(1500/2200 Type)
 0.95(3200/4000 Type)
 Materials Body & Frame: ADC(White)
 Lens: PMMA
 Reflector: Aluminum
 IP rate 20

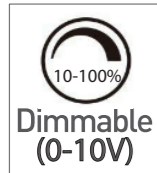


Dimension



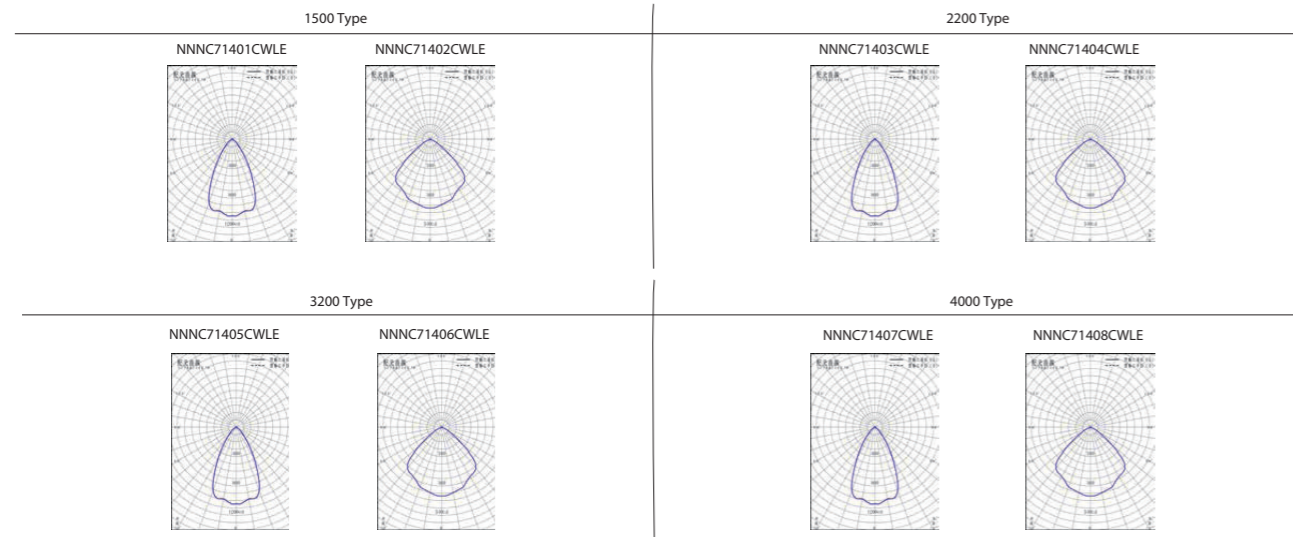
Dimming type

Dimming type is available.(0-10V)
 Dimming Range : 10 -100%
 (Model no. NNNC****LZ)



Type	1500 Type				2200 Type				
Wattage	17W				24W				
Beam Angle	60°		100°		60°		100°		
CRI	85	95	85	95	85	95	85	95	
Non Dimming	3000K	NNNC71401CWLE 2150lm, 126lm/W	NNNC71501CWLE 1790lm, 105lm/W	NNNC71402CWLE 1970lm, 116lm/W	-	NNNC71403CWLE 2575lm, 107lm/W	NNNC71503CWLE 2135lm, 89lm/W	NNNC71404CWLE 2365lm, 99lm/W	-
	4000K	NNNC71451CWLE 2250lm, 132lm/W	NNNC71551CWLE 1865lm, 110lm/W	NNNC71452CWLE 2055lm, 121lm/W	-	NNNC71453CWLE 2695lm, 112lm/W	NNNC71553CWLE 2230lm, 93lm/W	NNNC71454CWLE 2470lm, 103lm/W	-
	5000K	NNNC71476CWLE 2290lm, 135lm/W	-	NNNC71477CWLE 2095lm, 123lm/W	-	NNNC71478CWLE 2740lm, 114lm/W	-	NNNC71479CWLE 2520lm, 105lm/W	-
Dimming	3000K	NNNC71401CWLZ 2150lm, 126lm/W	NNNC71501CWLZ 1790lm, 105lm/W	NNNC71402CWLZ 1970lm, 116lm/W	-	NNNC71403CWLZ 2575lm, 107lm/W	NNNC71503CWLZ 2135lm, 89lm/W	NNNC71404CWLZ 2365lm, 99lm/W	-
	4000K	NNNC71451CWLZ 2250lm, 132lm/W	NNNC71551CWLZ 1865lm, 110lm/W	NNNC71452CWLZ 2055lm, 121lm/W	-	NNNC71453CWLZ 2695lm, 112lm/W	NNNC71553CWLZ 2230lm, 93lm/W	NNNC71454CWLZ 2470lm, 103lm/W	-
	5000K	NNNC71476CWLZ 2290lm, 135lm/W	-	NNNC71477CWLZ 2095lm, 123lm/W	-	NNNC71478CWLZ 2740lm, 114lm/W	-	NNNC71479CWLZ 2520lm, 105lm/W	-
Illuminance Distribution	Horizontal Illuminance		Horizontal Illuminance		Horizontal Illuminance		Horizontal Illuminance		
	Φ3464mm 220lx		Φ2715mm 105lx		Φ2715mm 105lx		Φ2715mm 115lx		
	Φ3464mm 220lx		Φ2715mm 105lx		Φ2715mm 105lx		Φ2715mm 115lx		

Ligh Distribution (reference)



Type	3200 Type				4400 Type				
Wattage	34W				42W				
Beam Angle	60°		100°		60°		100°		
CRI	85	95	85	95	85	95	85	95	
Non Dimming	3000K	NNNC71405CWLE 3375lm, 99lm/W	NNNC71505CWLE 2805lm, 83lm/W	NNNC71406CWLE 3045lm, 90m/W	-	NNNC71407CWLE 4075lm, 97lm/W	NNNC71507CWLE 3385lm, 81lm/W	NNNC71408CWLE 3925lm, 93lm/W	-
	4000K	NNNC71455CWLE 3530lm, 104lm/W	NNNC71555CWLE 2930lm, 86lm/W	NNNC71456CWLE 3185lm, 94lm/W	-	NNNC71457CWLE 4260lm, 101lm/W	NNNC71557CWLE 3535lm, 84lm/W	NNNC71458CWLE 4100lm, 98lm/W	-
	5000K	NNNC71480CWLE 3595lm, 106lm/W	-	NNNC71481CWLE 3245lm, 95lm/W	-	NNNC71482CWLE 4340lm, 103lm/W	-	NNNC71483CWLE 4175lm, 99lm/W	-
Dimming	3000K	NNNC71405CWLZ 3375lm, 99lm/W	NNNC71505CWLZ 2805lm, 83lm/W	NNNC71406CWLZ 3045lm, 90m/W	-	NNNC71407CWLZ 4075lm, 97lm/W	NNNC71507CWLZ 3385lm, 81lm/W	NNNC71408CWLZ 3925lm, 93lm/W	-
	4000K	NNNC71455CWLZ 3530lm, 104lm/W	NNNC71555CWLZ 2930lm, 86lm/W	NNNC71456CWLZ 3185lm, 94lm/W	-	NNNC71457CWLZ 4260lm, 101lm/W	NNNC71557CWLZ 3535lm, 84lm/W	NNNC71458CWLZ 4100lm, 98lm/W	-
	5000K	NNNC71480CWLZ 3595lm, 106lm/W	-	NNNC71481CWLZ 3245lm, 95lm/W	-	NNNC71482CWLZ 4340lm, 103lm/W	-	NNNC71483CWLZ 4175lm, 99lm/W	-
Illuminance Distribution	Horizontal Illuminance		Horizontal Illuminance		Horizontal Illuminance		Horizontal Illuminance		
	Φ3464mm 220lx		Φ2715mm 105lx		Φ2715mm 105lx		Φ2715mm 115lx		
	Φ3464mm 220lx		Φ2715mm 105lx		Φ2715mm 105lx		Φ2715mm 115lx		

Ex-F Series Glareless Downlight

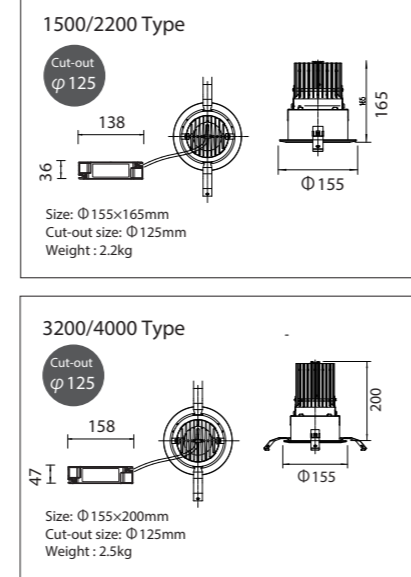


Specification

Voltage 220-240V
 Frequency 50/60Hz
 Lifetime 30,000 hours
 CRI 90
 Ambient Temperature 5°C~35°C
 Power Factor 0.9(1500/2200 Type)
 0.95(3200/4000 Type)
 Materials Body & Frame: ADC(White)
 Lens: PMMA
 Reflector: Aluminum
 IP rate 20



Dimension

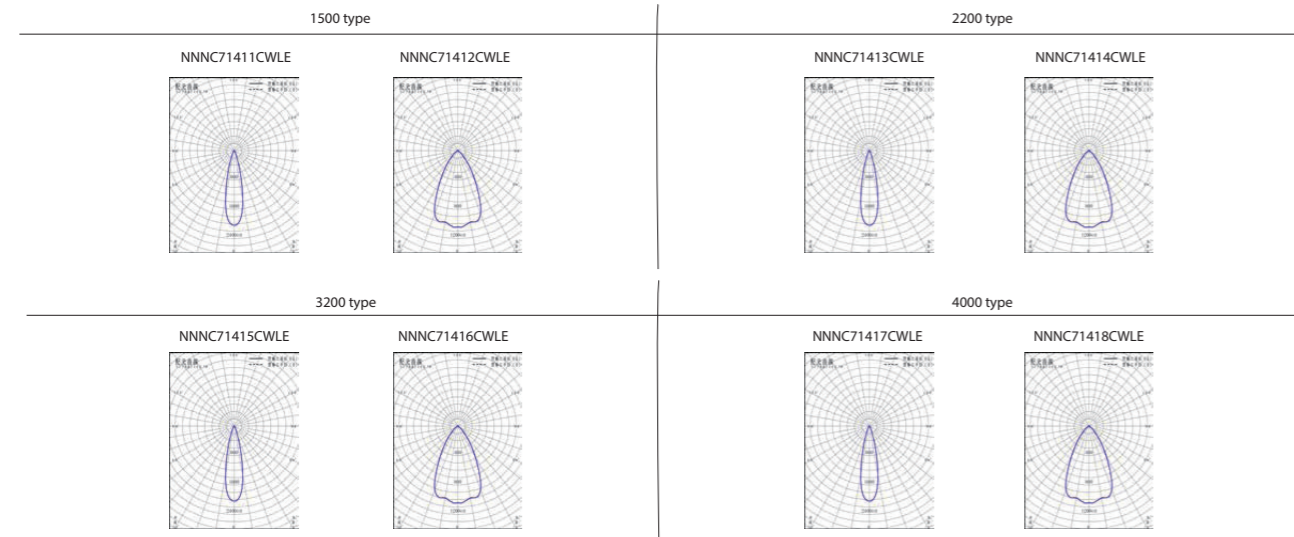


Dimming type

Dimming type is available.(0-10V)
 Dimming Range : 10 -100%
 (Model no. NNNC****LZ)



Ligh Distribution (reference)



Type	1500 Type				2200 Type				
Wattage	17W				24W				
Beam Angle	36°		60°		36°		60°		
CRI	85	95	85	95	85	95	85	95	
Non Dimming	3000K	NNNC71411CWLE 2105lm, 124lm/W	NNNC71511CWLE 1750lm, 103lm/W	NNNC71412CWLE 2105lm, 124lm/W	NNNC71512CWLE 1750lm, 103lm/W	NNNC71413CWLE 2545lm, 106lm/W	NNNC71513CWLE 2110lm, 88lm/W	NNNC71414CWLE 2545lm, 106lm/W	NNNC71514CWLE 2110lm, 88lm/W
	4000K	NNNC71461CWLE 2200lm, 129lm/W	NNNC71561CWLE 1825lm, 107lm/W	NNNC71462CWLE 2200lm, 129lm/W	NNNC71562CWLE 1825lm, 107lm/W	NNNC71463CWLE 2665lm, 111lm/W	NNNC71563CWLE 2210lm, 92lm/W	NNNC71464CWLE 2665lm, 111lm/W	NNNC71564CWLE 2210lm, 92lm/W
Dimming	3000K	NNNC71411CWLZ 2105lm, 124lm/W	NNNC71511CWLZ 1750lm, 103lm/W	NNNC71412CWLZ 2105lm, 124lm/W	NNNC71512CWLZ 1750lm, 103lm/W	NNNC71413CWLZ 2545lm, 106lm/W	NNNC71513CWLZ 2110lm, 88lm/W	NNNC71414CWLZ 2545lm, 106lm/W	NNNC71514CWLZ 2110lm, 88lm/W
	4000K	NNNC71461CWLZ 2200lm, 129lm/W	NNNC71561CWLZ 1825lm, 107lm/W	NNNC71462CWLZ 2200lm, 129lm/W	NNNC71562CWLZ 1825lm, 107lm/W	NNNC71463CWLZ 2665lm, 111lm/W	NNNC71563CWLZ 2210lm, 92lm/W	NNNC71464CWLZ 2665lm, 111lm/W	NNNC71564CWLZ 2210lm, 92lm/W
Illuminance Distribution									

Type	3200 Type				4000 Type				
Wattage	34W				42W				
Beam Angle	36°		60°		36°		60°		
CRI	85	95	85	95	85	95	85	95	
Non Dimming	3000K	NNNC71415CWLE 3285lm, 95lm/W	NNNC71515CWLE 2730lm, 80lm/W	NNNC71416CWLE 3285lm, 95lm/W	NNNC71516CWLE 2730lm, 80lm/W	NNNC71417CWLE 3920lm, 93lm/W	NNNC71517CWLE 3250lm, 77lm/W	NNNC71418CWLE 3920lm, 93lm/W	NNNC71518CWLE 3250lm, 77lm/W
	4000K	NNNC71465CWLE 3430lm, 101lm/W	NNNC71565CWLE 2850lm, 84lm/W	NNNC71466CWLE 3430lm, 101lm/W	NNNC71566CWLE 2850lm, 84lm/W	NNNC71467CWLE 4090lm, 97lm/W	NNNC71567CWLE 3395lm, 81lm/W	NNNC71468CWLE 4090lm, 97lm/W	NNNC71568CWLE 3395lm, 81lm/W
Dimming	3000K	NNNC71415CWLZ 3285lm, 95lm/W	NNNC71515CWLZ 2730lm, 80lm/W	NNNC71416CWLZ 3285lm, 95lm/W	NNNC71516CWLZ 2730lm, 80lm/W	NNNC71417CWLZ 3920lm, 93lm/W	NNNC71517CWLZ 3250lm, 77lm/W	NNNC71418CWLZ 3920lm, 93lm/W	NNNC71518CWLZ 3250lm, 77lm/W
	4000K	NNNC71465CWLZ 3430lm, 101lm/W	NNNC71565CWLZ 2850lm, 84lm/W	NNNC71466CWLZ 3430lm, 101lm/W	NNNC71566CWLZ 2850lm, 84lm/W	NNNC71467CWLZ 4090lm, 97lm/W	NNNC71567CWLZ 3395lm, 81lm/W	NNNC71468CWLZ 4090lm, 97lm/W	NNNC71568CWLZ 3395lm, 81lm/W
Illuminance Distribution									

Ex-F Series Adjustable Downlight

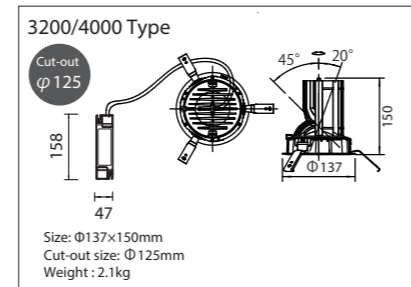
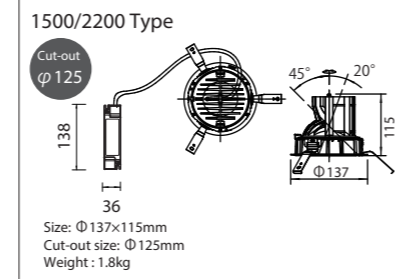


Specification

Voltage 220-240V
 Frequency 50/60Hz
 Lifetime 30,000 hours
 CRI 90
 Ambient Temperature 5°C~35°C
 Power Factor 0.9(1500/2200 type)
 0.95(3200/4000 type)
 Materials Body & Frame: ADC(White)
 Lens: PMMA
 Reflector: Aluminum
 IP rate 20



Dimension

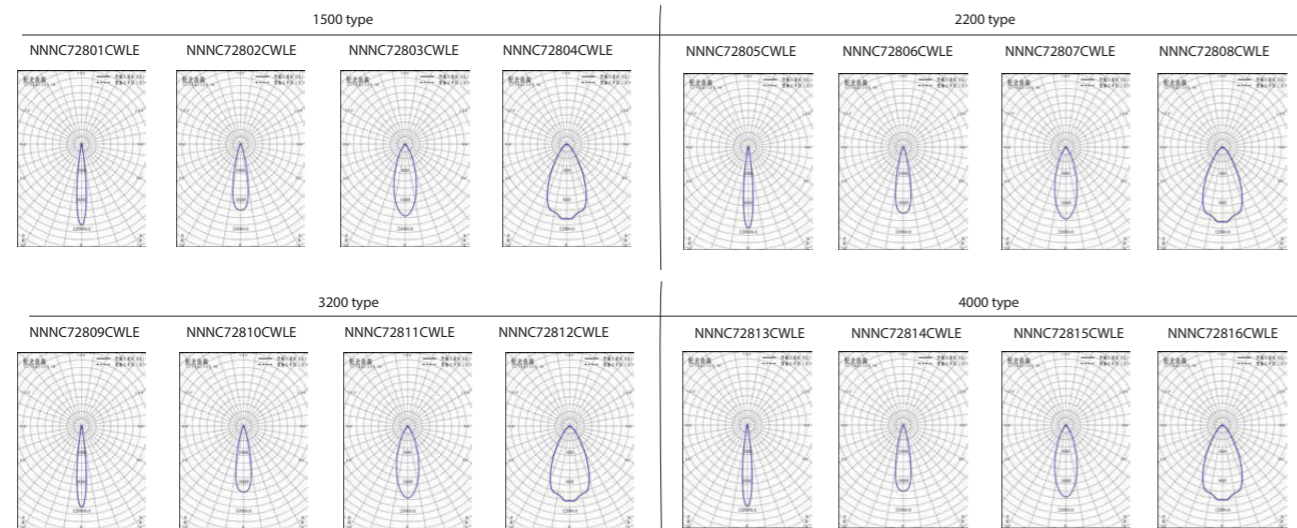


Dimming type

Dimming type is available.(0-10V)
 Dimming Range : 10 -100%
 (Model no. NNNC****LZ)



Ligh Distribution (reference)



Type	1500 Type								
Wattage	17W								
Beam Angle	13°		25°		36°		60°		
CRI	85	95	85	95	85	95	85	95	
Non Dimming	3000K	NNNC74801CWLE 1960lm, 115lm/W	-	NNNC74802CWLE 2030lm, 119lm/W	NNNC74902CWLE 1685lm, 99lm/W	NNNC74803CWLE 2165lm, 127lm/W	NNNC74903CWLE 1800lm, 106lm/W	NNNC74804CWLE 2160lm, 127lm/W	-
	4000K	NNNC74851CWLE 2045lm, 120lm/W	-	NNNC74852CWLE 2120lm, 125lm/W	NNNC74952CWLE 1760lm, 104lm/W	NNNC74853CWLE 2265lm, 133lm/W	NNNC74953CWLE 1880lm, 111lm/W	NNNC74854CWLE 2260lm, 133lm/W	-
Dimming	3000K	NNNC74801CWLZ 1960lm, 115lm/W	-	NNNC74802CWLZ 2030lm, 119lm/W	NNNC74902CWLZ 1685lm, 99lm/W	NNNC74803CWLZ 2165lm, 127lm/W	NNNC74903CWLZ 1800lm, 106lm/W	NNNC74804CWLZ 2160lm, 127lm/W	-
	4000K	NNNC74851CWLZ 2045lm, 120lm/W	-	NNNC74852CWLZ 2120lm, 125lm/W	NNNC74952CWLZ 1760lm, 104lm/W	NNNC74853CWLZ 2265lm, 133lm/W	NNNC74953CWLZ 1880lm, 111lm/W	NNNC74854CWLZ 2260lm, 133lm/W	-
Illuminance Distribution	13°		25°		36°		60°		
	Vertical illuminance		Horizontal illuminance		Vertical illuminance		Horizontal illuminance		
	0 1.0 1.5 2.0		0 1 2		0 1.0 1.5 2.0		0 1 2		
	m		m		m		m		

Type	2200 Type								
Wattage	24W								
Beam Angle	13°		25°		36°		60°		
CRI	85	95	85	95	85	95	85	95	
Non Dimming	3000K	NNNC74805CWLE 2380lm, 99lm/W	-	NNNC74806CWLE 2470lm, 103lm/W	NNNC74906CWLE 2050lm, 85lm/W	NNNC74807CWLE 2640lm, 119lm/W	NNNC74907CWLE 2190lm, 91lm/W	NNNC74808CWLE 2635lm, 110lm/W	-
	4000K	NNNC74855CWLE 2490lm, 104lm/W	-	NNNC74856CWLE 2580lm, 108lm/W	NNNC74956CWLE 2140lm, 89lm/W	NNNC74857CWLE 2670lm, 115lm/W	NNNC74957CWLE 2290lm, 95lm/W	NNNC74858CWLE 2755lm, 115lm/W	-
Dimming	3000K	NNNC74805CWLZ 2380lm, 99lm/W	-	NNNC74806CWLZ 2470lm, 103lm/W	NNNC74906CWLZ 2050lm, 85lm/W	NNNC74807CWLZ 2640lm, 119lm/W	NNNC74907CWLZ 2190lm, 91lm/W	NNNC74808CWLZ 2635lm, 110lm/W	-
	4000K	NNNC74855CWLZ 2490lm, 104lm/W	-	NNNC74856CWLZ 2580lm, 108lm/W	NNNC74956CWLZ 2140lm, 89lm/W	NNNC74857CWLZ 2670lm, 115lm/W	NNNC74957CWLZ 2290lm, 95lm/W	NNNC74858CWLZ 2755lm, 115lm/W	-
Illuminance Distribution	13°		25°		36°		60°		
	Vertical illuminance		Horizontal illuminance		Vertical illuminance		Horizontal illuminance		
	0 1.0 1.5 2.0		0 1 2		0 1.0 1.5 2.0		0 1 2		
	m		m		m		m		

Ex-F Series Adjustable Downlight

Type	3200 Type											
Wattage	34W											
Beam Angle	13°		25°		36°		60°					
CRI	85	95	85	95	85	95	85	95				
Non Dimming	3000K ●	NNNC74809CWLE 3085lm, 91lm/W	-	NNNC74810CWLE 3250lm, 96lm/W	NNNC74910CWLE 2700lm, 79lm/W	NNNC74811CWLE 3455lm, 102lm/W	NNNC74911CWLE 2865lm, 84lm/W	NNNC74812CWLE 3410lm, 100lm/W	-			
	4000K ○	NNNC74859CWLE 3225lm, 95lm/W	-	NNNC74860CWLE 3400lm, 100lm/W	NNNC74960CWLE 2820lm, 83lm/W	NNNC74861CWLE 3610lm, 106lm/W	NNNC74961CWLE 2990lm, 88lm/W	NNNC74862CWLE 3560lm, 105lm/W	-			
Dimming	3000K ●	NNNC74809CWLZ 3085lm, 91lm/W	-	NNNC74810CWLZ 3250lm, 96lm/W	NNNC74910CWLZ 2700lm, 79lm/W	NNNC74811CWLZ 3455lm, 102lm/W	NNNC74911CWLZ 2865lm, 84lm/W	NNNC74812CWLZ 3410lm, 100lm/W	-			
	4000K ○	NNNC74859CWLZ 3225lm, 95lm/W	-	NNNC74860CWLZ 3400lm, 100lm/W	NNNC74960CWLZ 2820lm, 83lm/W	NNNC74861CWLZ 3610lm, 106lm/W	NNNC74961CWLZ 2990lm, 88lm/W	NNNC74862CWLZ 3560lm, 105lm/W	-			
Illuminance Distribution	Vertical illumination		Horizontal illumination		Vertical illumination		Horizontal illumination		Vertical illumination		Horizontal illumination	
	3000K		3000K		3000K		3000K		3000K		3000K	
	4000K		4000K		4000K		4000K		4000K		4000K	
	3000K		3000K		3000K		3000K		3000K		3000K	



Type	4000 Type											
Wattage	42W											
Beam Angle	13°		25°		36°		60°					
CRI	85	95	85	95	85	95	85	95				
Non Dimming	3000K ●	NNNC74813CWLE 3685lm, 88lm/W	-	NNNC74814CWLE 3880lm, 92lm/W	NNNC74914CWLE 3220lm, 77lm/W	NNNC74815CWLE 4120lm, 98lm/W	NNNC74915CWLE 3420lm, 81lm/W	NNNC74816CWLE 4070lm, 97lm/W	-			
	4000K ○	NNNC74863CWLE 3845lm, 92lm/W	-	NNNC74864CWLE 4055lm, 97lm/W	NNNC74964CWLE 3365lm, 80lm/W	NNNC74865CWLE 4310lm, 103lm/W	NNNC74965CWLE 3575lm, 85lm/W	NNNC74866CWLE 4255lm, 101lm/W	-			
Dimming	3000K ●	NNNC74813CWLZ 3685lm, 88lm/W	-	NNNC74814CWLZ 3880lm, 92lm/W	NNNC74914CWLZ 3220lm, 77lm/W	NNNC74815CWLZ 4120lm, 98lm/W	NNNC74915CWLZ 3420lm, 81lm/W	NNNC74816CWLZ 4070lm, 97lm/W	-			
	4000K ○	NNNC74863CWLZ 3845lm, 92lm/W	-	NNNC74864CWLZ 4055lm, 97lm/W	NNNC74964CWLZ 3365lm, 80lm/W	NNNC74865CWLZ 4310lm, 103lm/W	NNNC74965CWLZ 3575lm, 85lm/W	NNNC74866CWLZ 4255lm, 101lm/W	-			
Illuminance Distribution	Vertical illumination		Horizontal illumination		Vertical illumination		Horizontal illumination		Vertical illumination		Horizontal illumination	
	3000K		3000K		3000K		3000K		3000K		3000K	
	4000K		4000K		4000K		4000K		4000K		4000K	
	3000K		3000K		3000K		3000K		3000K		3000K	



Ex-F Series Glareless Adjustable Downlight

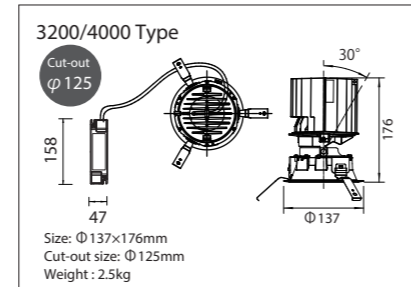
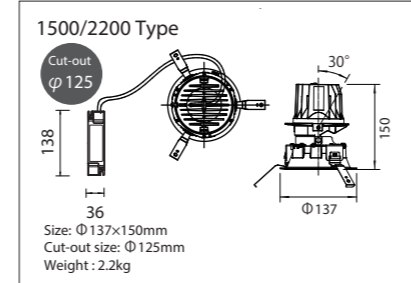


Specification

Voltage	220-240V
Frequency	50/60Hz
Lifetime	30,000 hours
CRI	90
Ambient Temperature	5°C~35°C
Power Factor	0.9(1500/2200 type) 0.95(3200/4000 type)
Materials	Body & Frame: ADC(White) Lens: PMMA Reflector: Aluminum
IP rate	20

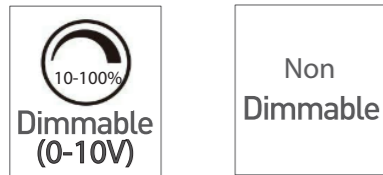


Dimension

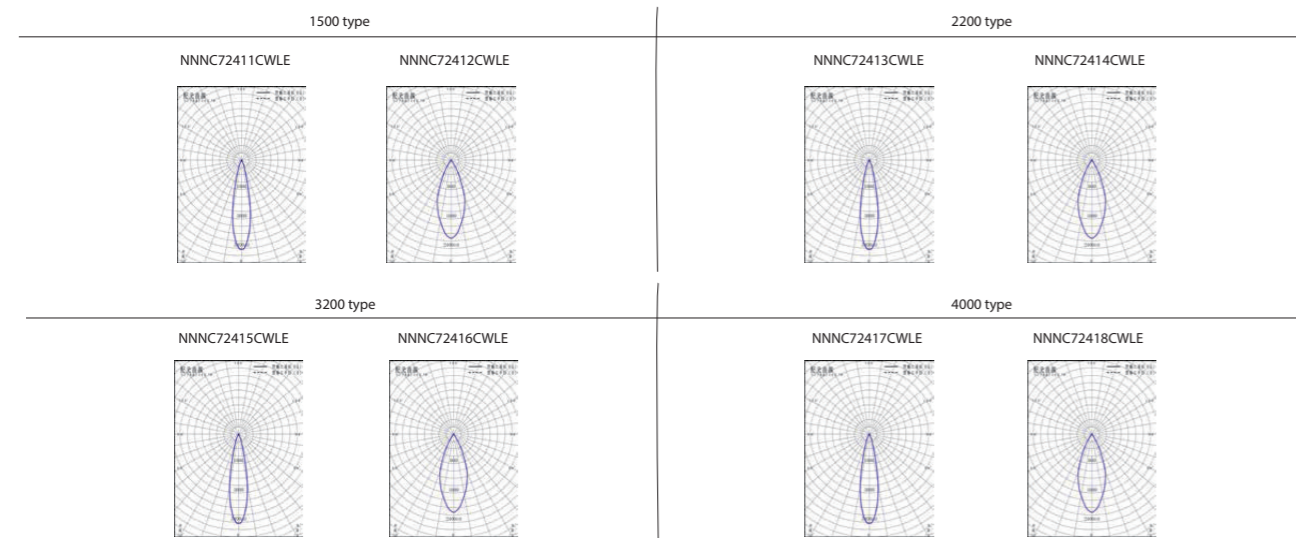


Dimming type

Dimming type is available.(0-10V)
Dimming Range : 10 -100%
(Model no. NNNC****LZ)



Light Distribution (reference)



Type	1500 Type				2200 Type				
Wattage	17W				24W				
Beam Angle	25°		36°		25°		36°		
CRI	85	95	85	95	85	95	85	95	
Non Dimming	3000K	NNNC72411CWLE 1545lm, 91lm/W	NNNC72511CWLE 1280lm, 75lm/W	NNNC72412CWLE 1670lm, 98lm/W	NNNC72512CWLE 1385lm, 81lm/W	NNNC72413CWLE 1885lm, 79lm/W	NNNC72513CWLE 1565lm, 65lm/W	NNNC72414CWLE 2040lm, 85lm/W	NNNC72514CWLE 1690lm, 70lm/W
	4000K	NNNC72461CWLE 1615lm, 95lm/W	NNNC72561CWLE 1340lm, 79lm/W	NNNC72462CWLE 1750lm, 103lm/W	NNNC72562CWLE 1450lm, 85lm/W	NNNC72463CWLE 1970lm, 82lm/W	NNNC72563CWLE 1630lm, 68lm/W	NNNC72464CWLE 2130lm, 89lm/W	NNNC72564CWLE 1770lm, 74lm/W
Dimming	3000K	NNNC72411CWZ 1545lm, 91lm/W	NNNC72511CWZ 1280lm, 75lm/W	NNNC72412CWZ 1670lm, 98lm/W	NNNC72512CWZ 1385lm, 81lm/W	NNNC72413CWZ 1885lm, 79lm/W	NNNC72513CWZ 1565lm, 65lm/W	NNNC72414CWZ 2040lm, 85lm/W	NNNC72514CWZ 1690lm, 70lm/W
	4000K	NNNC72461CWZ 1615lm, 95lm/W	NNNC72561CWZ 1340lm, 79lm/W	NNNC72462CWZ 1750lm, 103lm/W	NNNC72562CWZ 1450lm, 85lm/W	NNNC72463CWZ 1970lm, 82lm/W	NNNC72563CWZ 1630lm, 68lm/W	NNNC72464CWZ 2130lm, 89lm/W	NNNC72564CWZ 1770lm, 74lm/W
Illuminance Distribution	25°		36°		25°		36°		
	Vertical Illuminance		Horizontal Illuminance		Vertical Illuminance		Horizontal Illuminance		

Type	3200 Type				4000 Type				
Wattage	34W				42W				
Beam Angle	25°		36°		25°		36°		
CRI	85	95	85	95	85	95	85	95	
Non Dimming	3000K	NNNC72415CWLE 2465lm, 73lm/W	NNNC72515CWLE 2045lm, 60lm/W	NNNC72416CWLE 2655lm, 78lm/W	NNNC72516CWLE 2205lm, 65lm/W	NNNC72417CWLE 2860lm, 68lm/W	NNNC72517CWLE 2375lm, 57lm/W	NNNC72418CWLE 3040lm, 72lm/W	NNNC72518CWLE 2525lm, 60lm/W
	4000K	NNNC72465CWLE 2580lm, 76lm/W	NNNC72565CWLE 2140lm, 63lm/W	NNNC72466CWLE 2780lm, 82lm/W	NNNC72566CWLE 2305lm, 68lm/W	NNNC72467CWLE 2990lm, 71lm/W	NNNC72567CWLE 2480lm, 59lm/W	NNNC72468CWLE 3180lm, 76lm/W	NNNC72568CWLE 2635lm, 63lm/W
Dimming	3000K	NNNC72415CWZ 2465lm, 73lm/W	NNNC72515CWZ 2045lm, 60lm/W	NNNC72416CWZ 2655lm, 78lm/W	NNNC72516CWZ 2205lm, 65lm/W	NNNC72417CWZ 2860lm, 68lm/W	NNNC72517CWZ 2375lm, 57lm/W	NNNC72418CWZ 3040lm, 72lm/W	NNNC72518CWZ 2525lm, 60lm/W
	4000K	NNNC72465CWZ 2580lm, 76lm/W	NNNC72565CWZ 2140lm, 63lm/W	NNNC72466CWZ 2780lm, 82lm/W	NNNC72566CWZ 2305lm, 68lm/W	NNNC72467CWZ 2990lm, 71lm/W	NNNC72567CWZ 2480lm, 59lm/W	NNNC72468CWZ 3180lm, 76lm/W	NNNC72568CWZ 2635lm, 63lm/W
Illuminance Distribution	25°		36°		25°		36°		
	Vertical Illuminance		Horizontal Illuminance		Vertical Illuminance		Horizontal Illuminance		

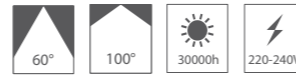
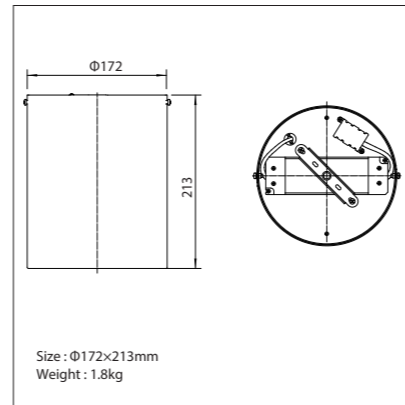
Ex-2G Series Surface Mounted Downlight

Specification

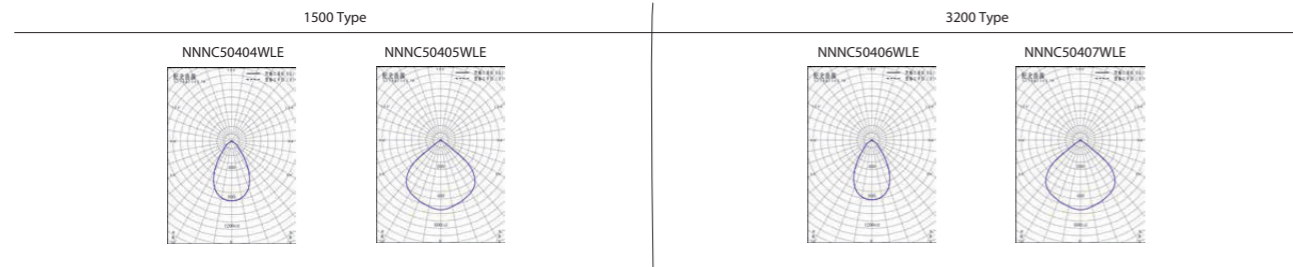
Voltage	220-240V
Frequency	50/60Hz
Lifetime	30,000 hours
CRI	85
Ambient Temperature	5°C~35°C
Power Factor	0.9
Materials	Body : Aluminum(White) Lens: PMMA Reflector: Aluminum
IP rate	20



Dimension



Ligh Distribution (reference)

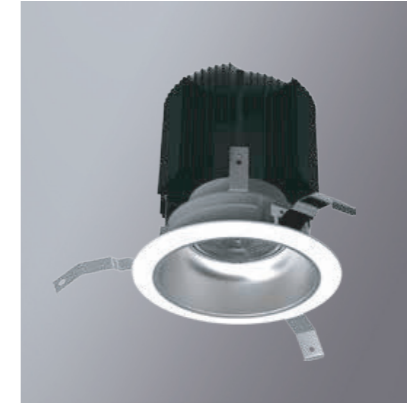


Type	1500 Type		3200 Type	
Wattage	22W		32W	
Beam Angle	60°	100°	60°	100°
Non Dimming	3000K ●	NNNC50404WLE 2630lm, 132lm/W	NNNC50405WLE 2000lm, 100lm/W	NNNC50406WLE 3880lm, 118lm/W
	4000K ○	NNNC50454WLE 2695lm, 135lm/W	NNNC50455WLE 2050lm, 103lm/W	NNNC50456WLE 3980lm, 121lm/W
	5000K ○	NNNC50504WLE 2730lm, 137lm/W	NNNC50505WLE 2075lm, 104lm/W	NNNC50506WLE 4030lm, 122lm/W
Horizontal Illuminance				

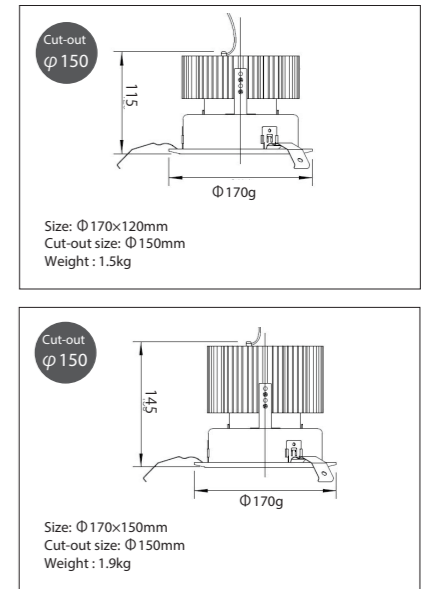
Ex-2G Series High Wattage Downlight

Specification

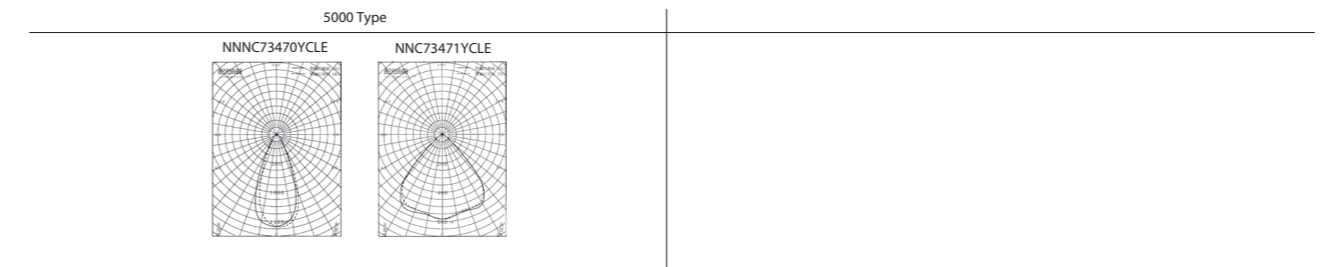
Voltage	220-240V
Frequency	50/60Hz
Lifetime	40,000 hours
CRI	85
Ambient Temperature	5°C~35°C
Power Factor	0.9
Materials	Body : Aluminum(White) Lens: PC Reflector: Aluminum(Black anodized)
IP rate	20



Dimension



Ligh Distribution (reference)



Type	5000 Type		7000 Type		9000 Type	
Wattage	60W		77W		84W	
Beam Angle	45°	85°	45°	85°	45°	85°
Non Dimming	3000K ●	NNNC73420YCLE 6700lm, 112lm/W	NNNC73421YCLE 6110lm, 102lm/W	NNNC73422YCLE 8590lm, 112lm/W	NNNC73423YCLE 7810lm, 101lm/W	NNNC73424YCLE 9780lm, 116lm/W
	4000K ○	NNNC73470YCLE 7030lm, 117lm/W	NNNC73471YCLE 6320lm, 105lm/W	NNNC73472YCLE 8990lm, 117lm/W	NNNC73473YCLE 8080lm, 105lm/W	NNNC73474YCLE 10240lm, 122lm/W
	5000K ○	NNNC73520YCLE 7340lm, 122lm/W	NNNC73521YCLE 6380lm, 106lm/W	NNNC73522YCLE 9390lm, 122lm/W	NNNC73523YCLE 8160lm, 106lm/W	NNNC73524YCLE 10700lm, 127lm/W

SP Downlight



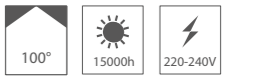
Specification

Voltage	220-240V
Frequency	50/60Hz
Lifetime	30,000 hours
CRI	80
Ambient Temperature	5°C~35°C
Power Factor	0.9
Materials	Body : PBT Reflector: PC
IP rate	20/44



Cut-out Size	Φ95mm	Φ110mm	Φ125mm	Φ150mm	Φ175mm	Φ175mm
Wattage	6W	9W	12W	15W	18W	24W
Beam Angle	100°	100°	100°	100°	100°	100°
IP20	3000K ○	NNNC7653088 600 lm, 100 lm/W	NNNC7653188 900 lm, 100 lm/W	NNNC7653288 1200 lm, 100 lm/W	NNNC7653388 1500 lm, 100 lm/W	NNNC7653488 1800 lm, 100 lm/W
	4000K ○	NNNC7654088 600 lm, 100 lm/W	NNNC7654188 900 lm, 100 lm/W	NNNC7654288 1200 lm, 100 lm/W	NNNC7654388 1500 lm, 100 lm/W	NNNC7654488 1800 lm, 100 lm/W
	6500K ●	NNNC7658088 600 lm, 100 lm/W	NNNC7658188 900 lm, 100 lm/W	NNNC7658288 1200 lm, 100 lm/W	NNNC7658388 1500 lm, 100 lm/W	NNNC7658488 1800 lm, 100 lm/W
IP44	3000K ○	NNNC7663088 600 lm, 100 lm/W	NNNC7663188 900 lm, 100 lm/W	NNNC7663288 1200 lm, 100 lm/W	—	—
	4000K ○	NNNC7664088 600 lm, 100 lm/W	NNNC7664188 900 lm, 100 lm/W	NNNC7664288 1200 lm, 100 lm/W	—	—
	6500K ●	NNNC7668088 600 lm, 100 lm/W	NNNC7668188 900 lm, 100 lm/W	NNNC7668288 1200 lm, 100 lm/W	—	—
Dimension & Weight	φ114×H50mm 0.08kg	φ127×50mm 0.10kg	φ144×50mm 0.12kg	φ169×55mm 0.18kg	φ194×55mm 0.26kg	φ194×55mm 0.33kg
Light Distribution						

DN Downlight



Specification

Voltage	220-240V
Frequency	50/60Hz
Lifetime	15,000 hours
CRI	80
Ambient Temperature	5°C~35°C
Power Factor	0.5
Materials	Body : PBT Reflector: PC
IP rate	20/44



The following 3 types are also available.

- CCT Type (9W/12W/15W)
- Sensor Type (9W/12W)
- 3 Step Dimming Type (9W/12W/15W/18W)

Cut-out Size	Φ75mm	Φ90mm	Φ95mm	Φ125mm	Φ150mm	Φ175mm
Wattage	3W	6W	9W	12W	15W	18W
Beam Angle	100°	100°	100°	100°	100°	100°
IP20	3000K ○	NNNC7581188 195 lm, 65.0 lm/W	NNNC7581388 450 lm, 75.0 lm/W	NNNC7581488 675 lm, 75.0 lm/W	NNNC7581588 900 lm, 75.0 lm/W	NNNC7581888 1125 lm, 75.0 lm/W
	4000K ○	NNNC7586188 195 lm, 65.0 lm/W	NNNC7586388 450 lm, 75.0 lm/W	NNNC7586488 675 lm, 75.0 lm/W	NNNC7586588 900 lm, 75.0 lm/W	NNNC7586888 1125 lm, 75.0 lm/W
	6500K ●	NNNC7596188 195 lm, 65.0 lm/W	NNNC7596388 450 lm, 75.0 lm/W	NNNC7596488 675 lm, 75.0 lm/W	NNNC7596588 900 lm, 75.0 lm/W	NNNC7596888 1125 lm, 75.0 lm/W
IP44	3000K ○	—	NNNC7642088 450 lm, 75.0 lm/W	NNNC7642188 675 lm, 75.0 lm/W	NNNC7642288 900 lm, 75.0 lm/W	—
	4000K ○	—	NNNC7647088 450 lm, 75.0 lm/W	NNNC7647188 675 lm, 75.0 lm/W	NNNC7647288 900 lm, 75.0 lm/W	—
	6500K ●	—	NNNC7643088 450 lm, 75.0 lm/W	NNNC7643188 675 lm, 75.0 lm/W	NNNC7643288 900 lm, 75.0 lm/W	—
Dimension & Weight	φ92×H50mm 0.08kg	φ109×50mm 0.10kg	φ114×50mm 0.12kg	φ144×55mm 0.18kg	φ169×55mm 0.26kg	φ194×55mm 0.33kg
Light Distribution						

EZ-M Panel Downlight



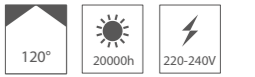
Specification

Voltage	220-240V
Frequency	50/60Hz
Lifetime	20,000 hours
CRI	80
Ambient Temperature	5°C~35°C
Power Factor	0.5
Materials	Frame : Aluminium Reflector: PC
IP rate	20



Cut-out Size	Φ90mm	Φ90mm	Φ110mm	Φ150mm	Φ175mm	
Wattage	6W	9W	12W	15W	18W	
Beam Angle	100°	100°	100°	100°	100°	
Non Dimming	3000K 	NNNC7650088 450 lm, 75.0 lm/W	NNNC7650188 675 lm, 75.0 lm/W	NNNC7650288 900 lm, 75.0 lm/W	NNNC7650388 1200 lm, 80 lm/W	NNNC7650488 1440 lm, 80 lm/W
	4000K 	NNNC7655088 450 lm, 75.0 lm/W	NNNC7655188 675 lm, 75.0 lm/W	NNNC7655288 900 lm, 75.0 lm/W	NNNC7655388 1200 lm, 80 lm/W	NNNC7655488 1440 lm, 80 lm/W
	6500K 	NNNC7651088 450 lm, 75.0 lm/W	NNNC7651188 675 lm, 75.0 lm/W	NNNC7651288 900 lm, 75.0 lm/W	NNNC7651388 1200lm, 80 lm/W	NNNC7651488 1440 lm, 80 lm/W
Dimension & Weight	φ109×50mm 0.10kg	φ114×50mm 0.12kg	φ144×55mm 0.18kg	φ169×55mm 0.26kg	φ194×55mm 0.33kg	

Slim Downlight



Specification

Voltage	220-240V
Frequency	50/60Hz
Lifetime	20,000 hours
CRI	80
Ambient Temperature	5°C~35°C
Power Factor	0.5
Materials	Frame : Aluminium Reflector: PC
IP rate	20



Shape	Round					
Wattage	6W	9W	12W	15W	18W	
Cut-out Size	Φ100mm	Φ100mm	Φ125mm	Φ150mm	Φ150mm	
Beam Angle	120°	120°	120°	120°	120°	
Non Dimming	3000K 	NNP71272 420m, 70 lm/W	NNP72272 630lm, 70 lm/W	NNP73472 900 lm, 75 lm/W	NNP74472 1130lm, 75 lm/W	NNP74572 1440lm, 80 lm/W
	4000K 	NNP71279 420m, 70 lm/W	NNP72279 630lm, 70 lm/W	NNP73479 900 lm, 75 lm/W	NNP74479 1130lm, 75 lm/W	NNP74579 1440lm, 80 lm/W
	6500K 	NNP71278 420m, 70 lm/W	NNP72278 630lm, 70 lm/W	NNP73478 900 lm, 75 lm/W	NNP74478 1130lm, 75 lm/W	NNP74578 1440lm, 80 lm/W
Dimension & Weight	φ121×H29mm 0.13kg	φ121×H29mm 0.13kg	φ146×H29mm 0.18kg	φ176×H29mm 0.24kg	φ176×H29mm 0.24kg	

Shape	Square		
Wattage	6W	9W	
Cut-out Size	□100mm	□100mm	
Beam Angle	120°	120°	
Non Dimming	3000K 	NNP71254 420m, 70 lm/W	NNP72254 630lm, 70 lm/W
	6500K 	NNP71255 420m, 70 lm/W	NNP72255 630lm, 70 lm/W
Dimension & Weight	□121×H29mm 0.15kg	□121×H29mm 0.15kg	

OUTDOOR



Street Light

- S3 Series
- Evo Series
- SP Street Light



Pedestrian

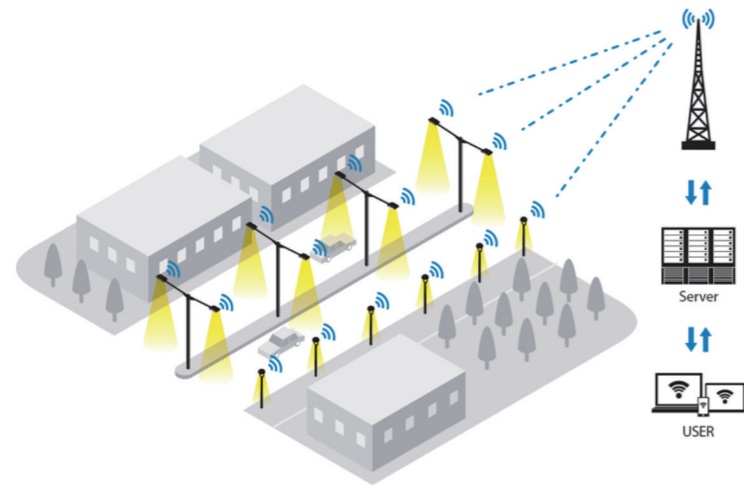


Floodt Light

- Ex Flood Light
- SP Flood Light
- Mini Flood Light
- Flood Light

"SMART LED" SYSTEM

Image of Smart system



Connected fixtures with control system through server

Our smart LED system can be built by connecting various kinds of lighting fixtures with the system, and this system realizes "efficient", "effective" and "economy" for users.



Network communication can be selected from three systems

GSM	Network communication via GSM card (GPRS) enable data queue in the same times.
RF	Network communication via wireless concentrator - Control luminaires by external/internal controller - Data transmission by Mesh network
PLC	Communication system via power wiring realize reliable system

Function of control system

Remote Control	Monitoring	Report
Remote control can make it possible to turn On/Off and to adjust illuminance by dimming. It is also possible to set up timer and auto dimming.	System can detect a condition of each of individual fixture. If any error or trouble happens, user can find it easily.	System records amount of consumption for all over the system. That can enable user to make a report of consumption and also make a comparison.

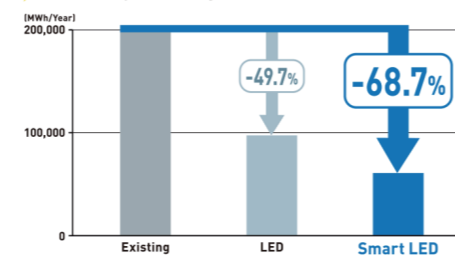
Job Reference @Jakarta, Indonesia

The City of Jakarta converted streetlights to Panasonic "Smart LED". Flexible lighting control realized drastic energy saving.

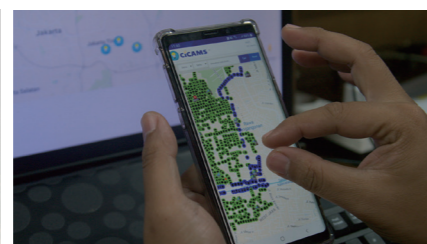
Panasonic delivered a total of about 30,000 LED lighting fixtures between street light, pedestrian light and other products for public streets and sidewalks in Indonesia. LED lighting fixtures consume about half of what HBS fixtures do, but this time spot LED lighting systems were adopted, so because the lighting fixture can be controlled via network communications, energy consumption was reduced an amazing 68.7% (estimated) compared to HBS on the same capacity.

Panasonic keeps providing better lighting solutions to make the city more comfortable and sustainable.

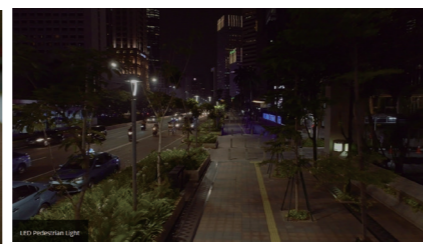
Electricity Consumption (Estimated by Panasonic)



LED Street Light



Controlled by Smart devices



LED Pedestrian Light

Caution

- Please be noted and check points as below before you propose and plan.
- Please kindly check laws and regulations related to smart system in each country.
- There are possibilities that some network methods are prohibited in some countries.

Street Light S3 Series



Specification

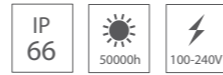
Voltage	10W/20W/30W/40W: 120-240V 60W/90W/120W/150W: 100-240V
Frequency	50/60Hz
Lifetime	50,000 hours
CRI	70
Ambient Temperature	5°C~35°C
Power Factor	0.9
Materials	Body: ADC
IP rate	Luminaire: 66 Driver: 67
Surge Protection	15kV
IK	08



Wattage	10W	20W	30W	40W
Dimming	Dimming	Dimming	Dimming	Dimming
5000K ○	NNP10940GLT 1400lm,140lm/W	NNP10941GLT 2800lm,140lm/W	NNP10942GLT 4200lm,140lm/W	NNP10950GLT 6000lm,150lm/W
Size	535 x 201 x 110mm	535 x 201 x 110mm	535 x 201 x 110mm	591 x 230 x 149mm
Weight	3.5 kg	3.6 kg	3.7 kg	5.9 kg

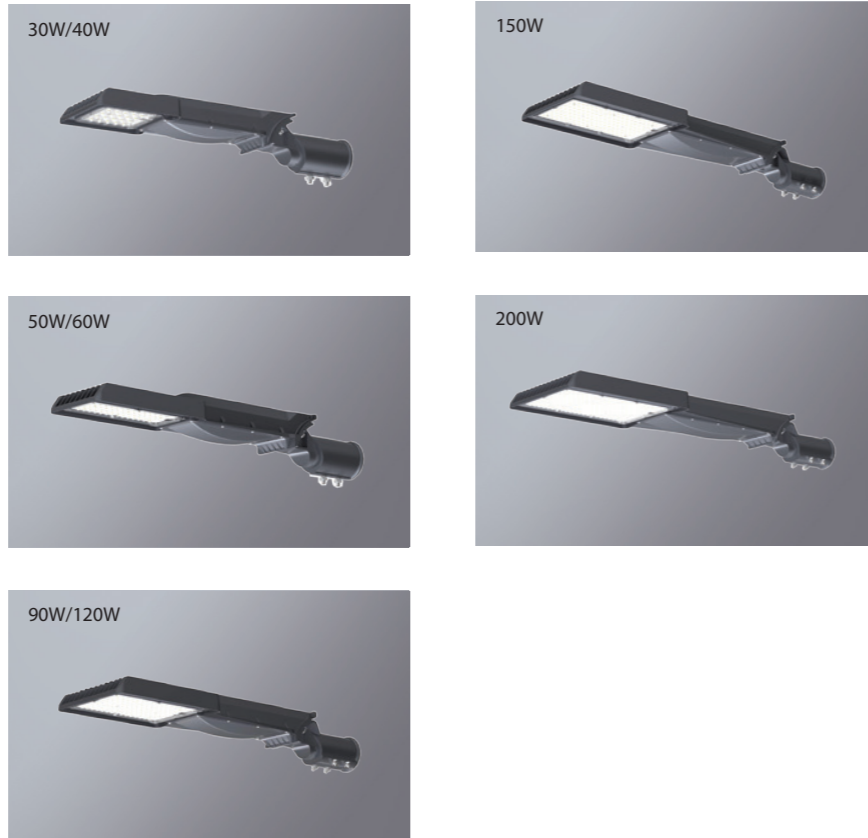
Wattage	60W	90W	120W	150W
Dimming	Dimming	Dimming	Dimming	Dimming
5000K ○	NNP11940GLT 8400lm,140lm/W	NNP11941GLT 12600lm,140lm/W	NNP13950GLT 18000lm,150lm/W	NNP14950GLT 22500lm,150lm/W
Size	535 x 201 x 110mm	588 x 235 x 110mm	710 x 288 x 156mm	710 x 288 x 156mm
Weight	4.0 kg	5.2 kg	8.6 kg	8.6 kg

Street Light Evo Series



Specification

Voltage	100-240V
Frequency	50/60Hz
Lifetime	50,000 hours
CRI	70
Ambient Temperature	5°C~35°C
Power Factor	0.95
Materials	Body: ADC LENS: PC
IP rate	66
Surge Protection	15kV
IK	08



Wattage	30W	40W	50W	60W
Dimming	Non Dimming	Non Dimming	Non Dimming	Non Dimming
5000K ○	NNP11739GLT 3900lm,130lm/W	NNP11740GLT 5200lm,130lm/W	NNP11741GLT 6500lm,130lm/W	NNP11742GLT 7800lm,130lm/W
Size	564 x 157 x 101mm	564 x 157 x 101mm	674 x 142 x 105 mm	674 x 142 x 105 mm
Weight	2.5 kg	2.5 kg	3.0 kg	3.0 kg

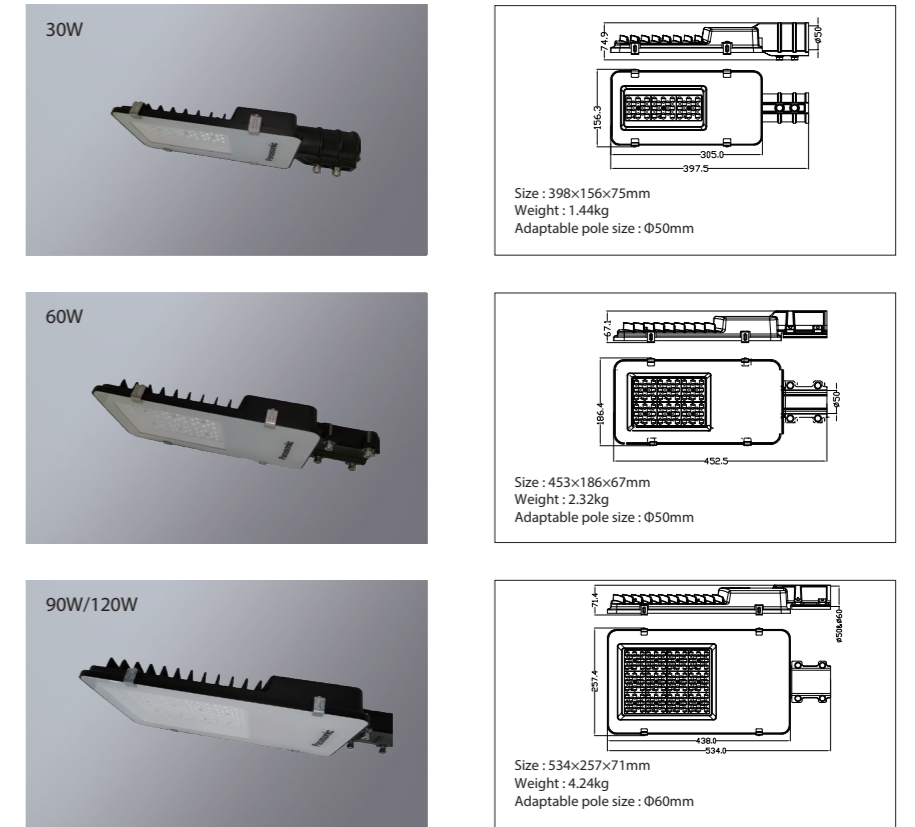
Wattage	90W	120W	150W	200W
Dimming	Non Dimming	Non Dimming	Non Dimming	Non Dimming
5000K ○	NNP11742GLT 11700lm,130lm/W	NNP11744GLT 15600lm,130lm/W	NNP11745GLT 19500lm,130lm/W	NNP11746GLT 26000lm,130lm/W
Size	723 x 212 x 109mm	723 x 212 x 109mm	814 x 218 x 108 mm	850 x 254 x 110 mm
Weight	4.0 kg	4.0 kg	5.0 kg	6.0 kg

SP Street Light

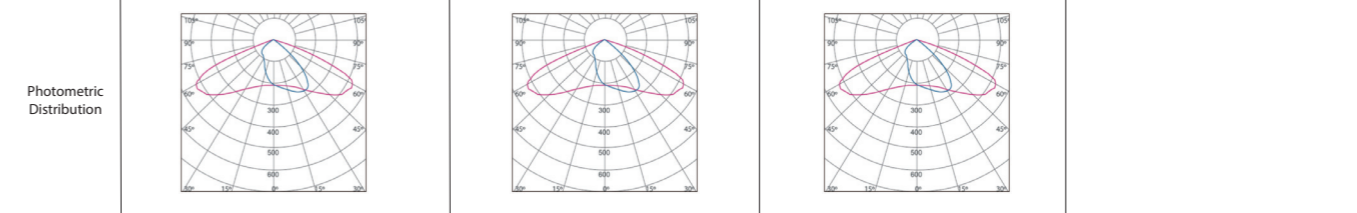


Specification

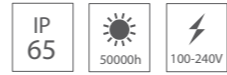
Voltage	220-240V
Frequency	50/60Hz
Lifetime	50,000 hours
CRI	70
Ambient Temperature	5°C~45°C
Power Factor	0.9
Materials	Body: ADC12(Gray) Panel: Glass
IP rate	65
Surge Protection	1KV



Wattage	30W	60W	90W	120W
Dimming	Non Dimming	Non Dimming	Non Dimming	Non Dimming
4000K ●	NNYC2001188 3600lm,120m/W	NNYC2001288 7200lm,120m/W	NNYC2001388 10800lm,120m/W	NNYC2001488 14400lm,120m/W
5700K ○	NNYC2006188 3750lm,125m/W	NNYC2006288 7500lm,125m/W	NNYC2006388 11250lm,125m/W	NNYC2006488 15000lm,125m/W



Pedestrian



Specification

Voltage	100-240V
Frequency	50/60Hz
Lifetime	50,000 hours
CRI	80
Ambient Temperature	5°C~35°C
Power Factor	0.9
Materials	Body: ADC
IP rate	65
Surge Protection	15kV



Type	PDS		PRK	
Wattage	45W	85W	40W	80W
Dimming	Auto Dimming	Auto Dimming	Auto Dimming	Auto Dimming
4000K ○	NNP44937NGHLGLT 5400lm,120lm/W	NNP44939NGHLGLT 10200lm,120lm/W	NNP44918NGHLGLT 4800lm,120lm/W	NNP44920NGHLGLT 9600lm,101lm/W
Dimension	520 x 520 x 320mm	520 x 520 x 320mm	520 x 520 x 627mm	520 x 520 x 627mm
Weight	10.6 kg	10.6 kg	11.6 kg	11.6 kg

Type	POT		PDS01	
Wattage	40W	80W	40W	80W
Dimming	Auto Dimming	Auto Dimming	Auto Dimming	Auto Dimming
4000K ○	NNP44960NGGLT 4800lm,120lm/W	NNP44961NGGLT 9600lm,120lm/W	NNP40330NGGLT 4800lm,120lm/W	NNP41332NGGLT 9600lm,101lm/W
Dimension	790 x 520 x 653mm	790 x 520 x 653mm	482 x 482 x 471mm	482 x 482 x 471mm
Weight	13.4 kg	13.4 kg	9.4 kg	9.4 kg

Pedestrian



Specification

Voltage	100-240V
Frequency	50/60Hz
Lifetime	50,000 hours
CRI	80
Ambient Temperature	5°C~35°C
Power Factor	0.9
Materials	Body: ADC12
IP rate	65



Type	PRK01		PRK02	
Wattage	40W	80W	40W	80W
Dimming	Auto Dimming	Auto Dimming	Auto Dimming	Auto Dimming
4000K ○	NNP40130NGGLT 4800lm,120lm/W	NNP41132NGGLT 9600lm,120lm/W	NNP40230NGGLT 4800lm,120lm/W	NNP41232NGGLT 9600lm,120lm/W
Dimension	482 x 482 x 618mm	482 x 482 x 618mm	482 x 482 x 363mm	482 x 482 x 363mm
Weight	10.5 kg	10.5 kg	9.8 kg	9.8 kg

Type	PRK03		PRK04	
Wattage	40W	80W	40W	80W
Dimming	Auto Dimming	Auto Dimming	Auto Dimming	Auto Dimming
4000K ○	NNP40430NGGLT 4800lm,120lm/W	NNP41432NGGLT 9600lm,120lm/W	NNP40530NGGLT 4800lm,120lm/W	NNP41532NGGLT 9600lm,120lm/W
Dimension	650 x 650 x 674mm	650 x 650 x 674mm	400 x 400 x 820mm	400 x 400 x 820mm
Weight	11.3 kg	11.3 kg	8.5 kg	8.5 kg

Ex Flood Light

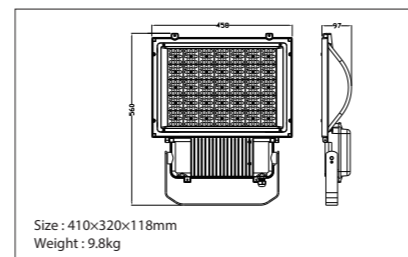
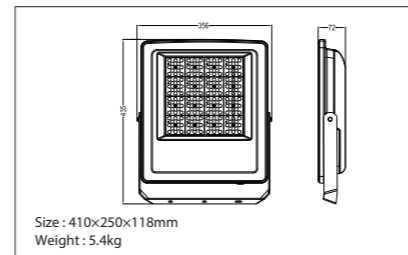
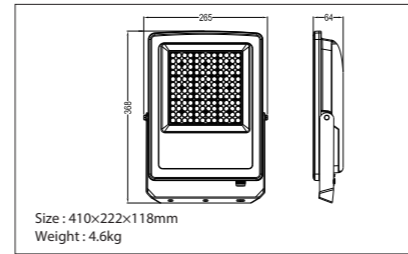


Specification

Voltage	220-240V
Frequency	50/60Hz
Lifetime	50,000 hours
CRI	70
Ambient Temperature	-40°C~50°C
Power Factor	0.9
Materials	Body: ADC
IP rate	66



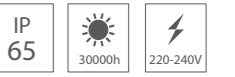
Dimension



Wattage	100W				150W			
	30°	60°	90°	110°	30°	60°	90°	110°
3000K ●	NNYC2021188 13000lm,130lm/W	NNYC2026188 13000lm,130lm/W	NNYC2031188 13000lm,130lm/W	NNYC2036188 13000lm,130lm/W	NNYC2021288 19500lm,130lm/W	NNYC2026288 19500lm,130lm/W	NNYC2031288 19500lm,130lm/W	NNYC2036288 19500lm,130lm/W
5700K ○	NNYC2023188 13000lm,130lm/W	NNYC2028188 13000lm,130lm/W	NNYC2033188 13000lm,130lm/W	NNYC2038188 13000lm,130lm/W	NNYC2023288 19500lm,130lm/W	NNYC2028288 19500lm,130lm/W	NNYC2033288 19500lm,130lm/W	NNYC2038288 19500lm,130lm/W

Wattage	200W				360W			
	30°	60°	90°	110°	30°	60°	90°	115°
3000K ●	NNYC2021388 26000lm,130lm/W	NNYC2026388 26000lm,130lm/W	NNYC2031388 26000lm,130lm/W	NNYC2036388 26000lm,130lm/W	NNYC2021488 46800lm,130lm/W	NNYC2026488 46800lm,130lm/W	NNYC2031488 46800lm,130lm/W	NNYC2036488 46800lm,130lm/W
5700K ○	NNYC2023388 26000lm,130lm/W	NNYC2028388 26000lm,130lm/W	NNYC2033388 26000lm,130lm/W	NNYC2038388 26000lm,130lm/W	NNYC2023488 46800lm,130lm/W	NNYC2028488 46800lm,130lm/W	NNYC2033488 46800lm,130lm/W	NNYC2038488 46800lm,130lm/W

SP Flood Light

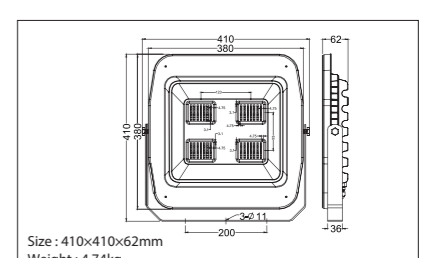
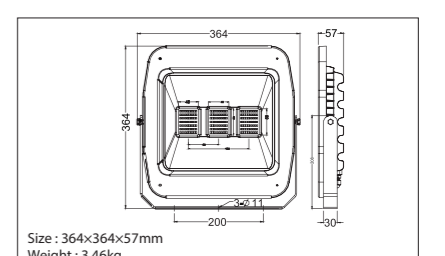
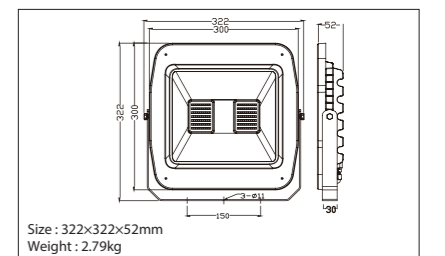
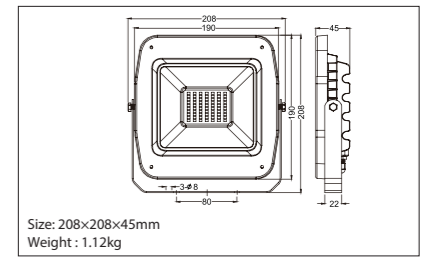
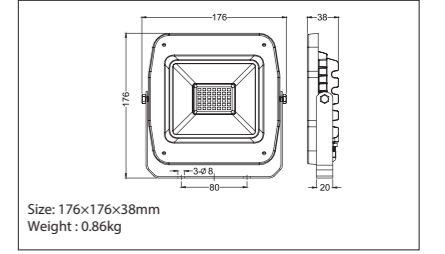


Specification

Voltage	220-240V
Frequency	50/60Hz
Lifetime	30,000 hours
CRI	70
Ambient Temperature	5°C~45°C
Power Factor	0.9
Materials	Body: ADC12(Gray) Panel: Glass
IP rate	65



Dimension

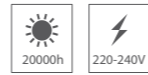


Wattage	30W	50W	100W	150W	200W
Dimming	Non Dimming	Non Dimming	Non Dimming	Non Dimming	Non Dimming
4000K ●	NNYC2002588 2700lm,90lm/W	NNYC2002688 4500lm,90lm/W	NNYC2002788 9000lm,90lm/W	NNYC2002888 15500lm,90lm/W	NNYC2002988 18000lm,90lm/W
5700K ○	NNYC2007588 3000lm,100lm/W	NNYC2007688 5000lm,100lm/W	NNYC2007788 10000lm,100lm/W	NNYC2007888 15000lm,100lm/W	NNYC2007988 20000lm,100lm/W

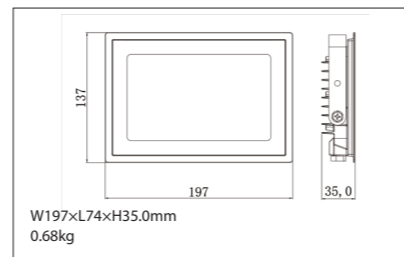
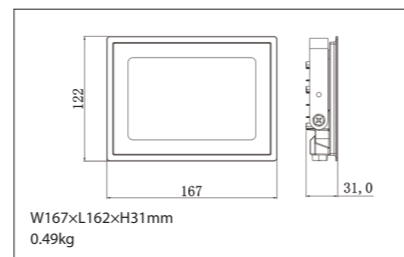
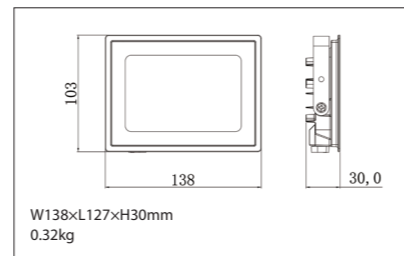
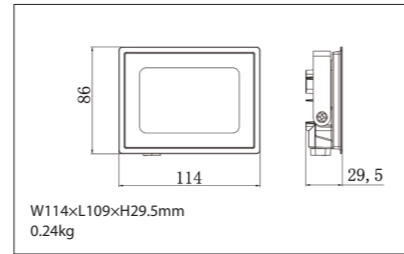
LED Mini Flood light

Specification

Voltage	AC220-240V
Frequency	50/60Hz
Lifetime	25000h
CRI	80
Materials	Body: ADC12(Black) Panel: Glass(Transparent)
IP rate	65
Surge Protection	1kV



Dimension



Wattage	10W	20W	30W	50W
Non Dimming	3000K ○	NNYC2011153 900 lm, 90.0 lm/W	NNYC2011253 1800 lm, 90.0 lm/W	NNYC2011353 2700 lm, 90.0 lm/W
	4000K ○	NNYC2012153 900 lm, 90.0 lm/W	NNYC2012253 1800 lm, 90.0 lm/W	NNYC2012353 2700 lm, 90.0 lm/W
	6500K ●	NNYC2016153 900 lm, 90.0 lm/W	NNYC2016253 1800 lm, 90.0 lm/W	NNYC2016353 2700 lm, 90.0 lm/W

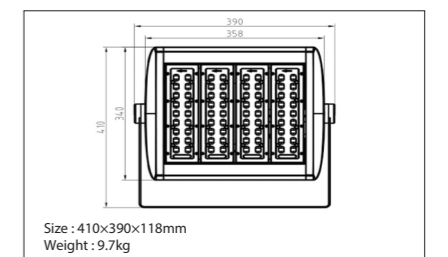
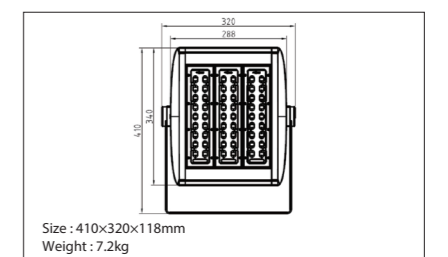
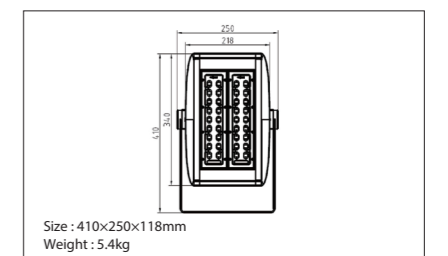
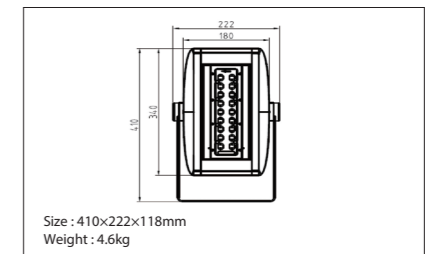
Flood Light

Specification

Voltage	100-240V
Frequency	50/60Hz
Lifetime	50,000 hours
CRI	70
Power Factor	0.9
Materials	Body: ADC
IP rate	65



Dimension



Wattage	60W	120W	180W	240W
Dimming	Dimming	Dimming	Dimming	Dimming
3000K ●	NNP31910K 7200lm, 120lm/W	NNP33912K 14400lm, 120lm/W	NNP34915K 21600lm, 120lm/W	NNP35919K 28800lm, 120lm/W
4000K ○	NNP31940K 7200lm, 120lm/W	NNP33942K 14400lm, 120lm/W	NNP34945K 21600lm, 120lm/W	NNP35949K 28800lm, 120lm/W
5000K ○	NNP31930K 7200lm, 120lm/W	NNP33932K 14400lm, 120lm/W	NNP34935K 21600lm, 120lm/W	NNP35939K 28800lm, 120lm/W
Photometric Distribution				

Panasonic Lighting WEB Site Update



Product search is enhanced

You can explore products by many ways

New

Introducing solutions with Panasonic lighting design job references

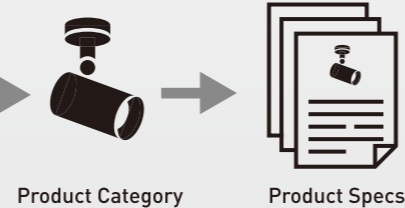
Direct product link from each individual job reference.

New

Product search by country

Available for the following countries: Singapore, Indonesia, Malaysia, Thailand, Vietnam, Philippines and India.

Find the item that suits you.



Start to explore with your device now



» <https://panasonic.net/lifesolutions/lighting/>

Solutions

Select the lighting space of interest from our job references and select the fixtures used by clicking our direct links provided.

Job references



Get ideas from a variety of Panasonic job references.

Refer to a wide range of case studies when designing your lighting.

>Office & Industry



>Commercial Facility



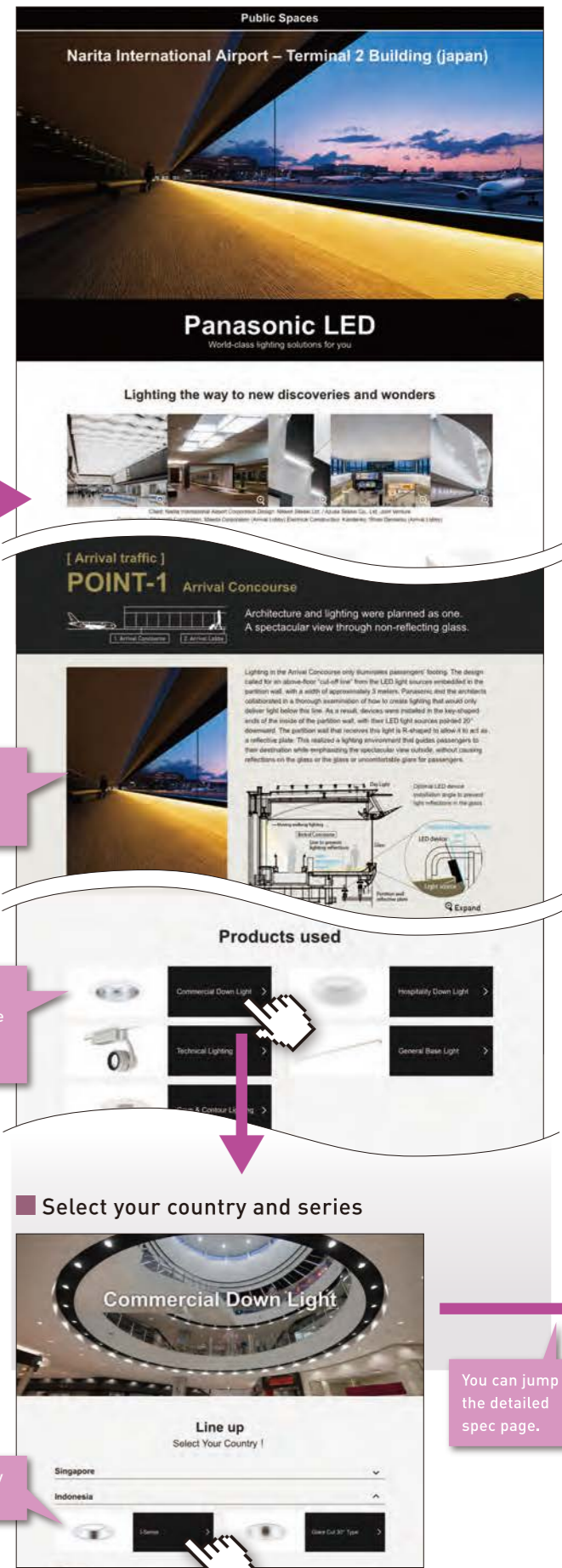
>Public Spaces



>Home



Details



Design know-how Introduction of Panasonic unique design technology.

Products used You can directly jump to the products used in each job reference.

Select your country and series

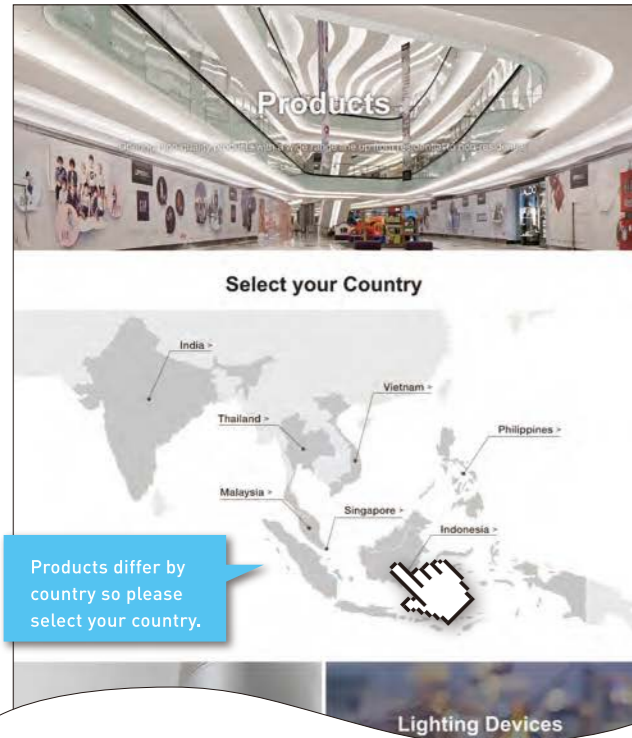
A product series by country of your choice.

You can jump to the detailed spec page.

Above are examples.

Select the type of lighting and check the detailed specs.

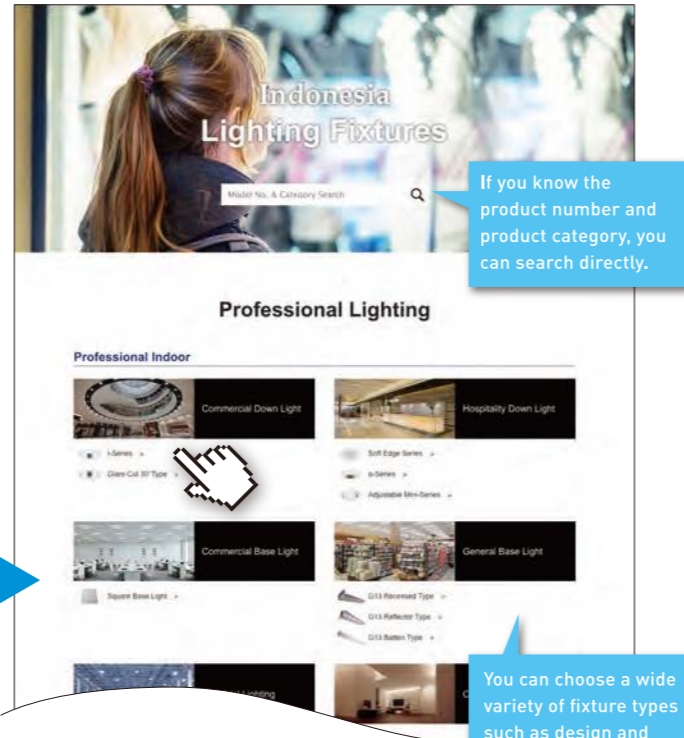
Select your country



Products differ by country so please select your country.

Available countries: Singapore, Indonesia, Malaysia, Thailand, Vietnam, Philippines and India.

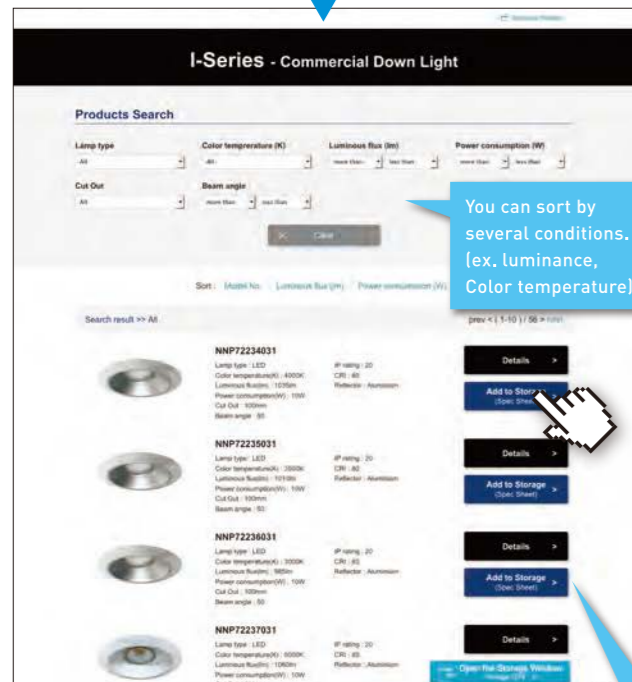
Select country by category



If you know the product number and product category, you can search directly.

You can choose a wide variety of fixture types such as design and light distribution design.

Refine search

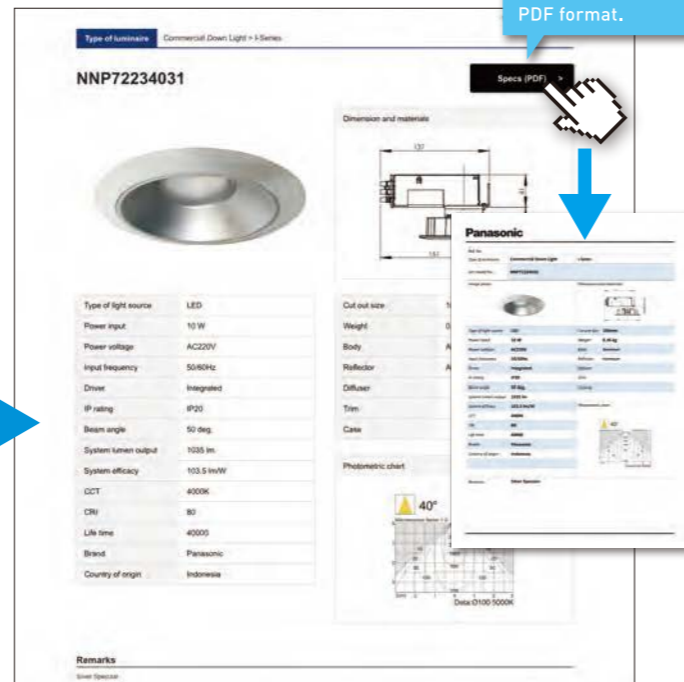


You can sort by several conditions. (ex, luminance, Color temperature)

You can narrow down products in your search by selecting various search conditions. This will allow you to have a refined search with a shorter list making it easier to find the fixture you are looking for.

Storage Function
Multiple items can be stored. From the button displayed at the bottom of the screen you can check and delete, the listed spec sheets. This will allow you to download all the spec sheets at once.

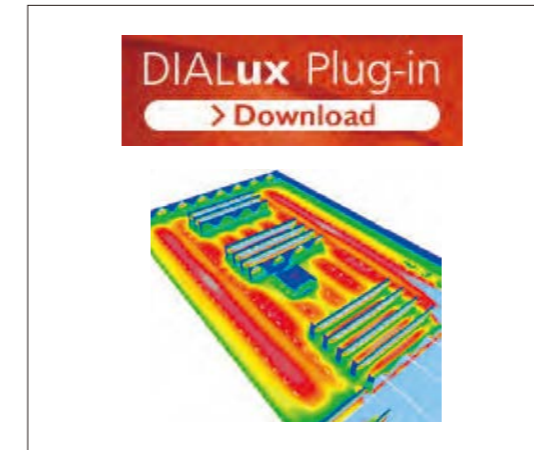
Spec Details Browse / Download



Spec sheets can be downloaded in PDF format.

Detailed specs can be viewed. You can use it for lighting designs, such as mounting drawings and light distribution charts. We also support downloading in PDF format so that it can be used for preparing proposals.

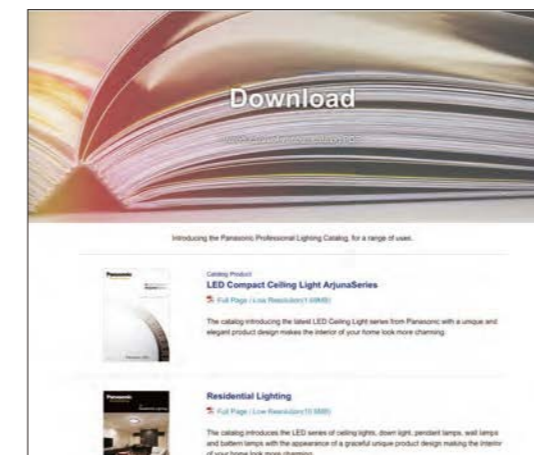
Various lighting information contents available.



DIALux Plug-in

You can download the DIALux Plug-in with Panasonic model numbers. This can make it easier for you to simulate your lighting design.

<https://www2.panasonic.biz/is/cec/dialux-plugin/>



Download

With various PDF catalogs available online, you can see Panasonic advanced lighting technology and product information.

Concept

These are the Panasonic Lighting core values for providing value to society.

>MORE BEAUTY

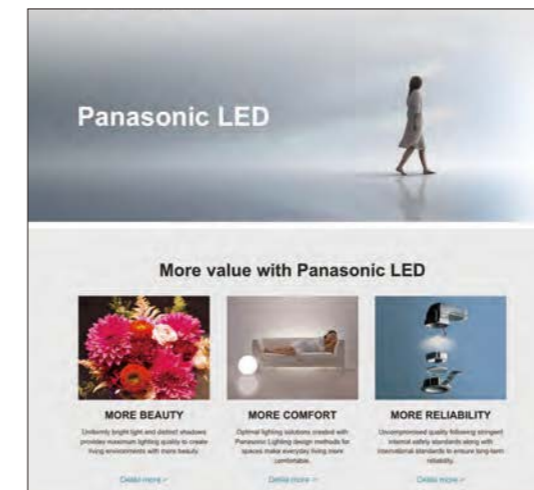
Uniformly bright light and distinct shadows provides maximum lighting quality to create living environments with more beauty.

>MORE COMFORT

Optimal lighting solutions created with Panasonic Lighting design methods for spaces make everyday living more comfortable.

>MORE RELIABILITY

Uncompromised quality following stringent internal safety standards along with international standards to ensure long-term reliability.



Screen is image only. The design or the content may change without prior notice.

Note

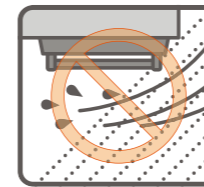
Precautions on Using LED Base Lighting

⚠ Safety Warnings

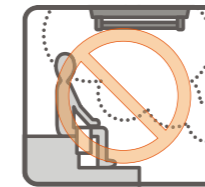
- Lighting fixtures have a limited service life. Even if there are no changes to the appearance, after 10 years has passed from installation, the interior parts are deteriorating. Please inspect and replace your lighting fixtures.
- Before using, read the "Instruction Manual" carefully, or use the lighting fixtures carefully following consultation with the retailer or a construction specialist.
- Some products come with a warning seal affixed for how to use the product safely. Please use the product correctly after checking this seal.
- Please use Panasonic LED lamps for the straight tube LED lamp mounted base light.

* Please follow the guidelines below concerning prohibited installation locations and construction details. Improper use may result in the fixtures falling, electric shock, or fire. There are also individual warnings for the lighting fixtures, so please check these with the approval diagram or the like.

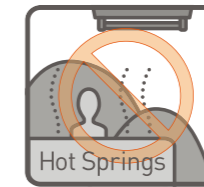
Prohibited Installation Areas for LED Indoor Use Fixtures



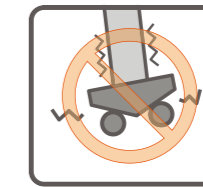
» Locations where rain falls. Locations below the rainfall depth line or where rain may fall.



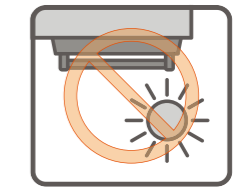
» In commercial baths, saunas, or any locations that constantly have high temperature and high humidity (35°C or higher, 85% humidity or higher).



» Locations where corrosive gases are generated, such as hot springs.



» Locations that are subject to vibration or frequent shocks.



» Locations where sunlight directly strikes the fixtures.

» These are indoor-only fixtures.

» If there are instructions regarding the direction of mounting, please be certain to mount the lighting in the direction instructed.

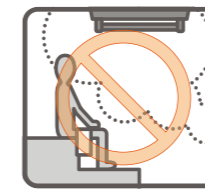
Warnings During Construction of LED Indoor Lighting

» Depending on the number of LEDs installed or the fixture configuration, some LED fixtures may experience more current leakage than conventional fluorescent light fixtures. Fixtures such as these have a limit for number of sets installed written in the approval diagram, so please check this in advance.

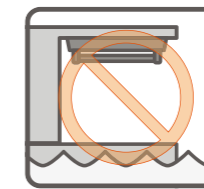
Prohibited Installation Areas for LED Water-proof Fixtures



» Roofs of buildings with no windbreaks, mountain ridges, bridges, and other very windy places.



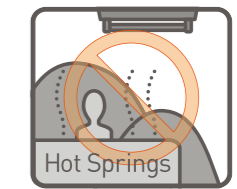
» In commercial baths, saunas, or anywhere that constantly has high temperature and high humidity (35°C or higher, 85% humidity or higher).



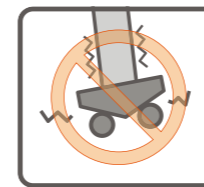
» Locations that suffer salt damage from ocean breezes, such as coastal areas.



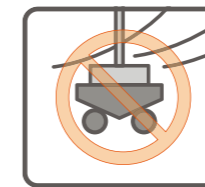
» Locations exposed to chlorine gas, such as swimming pools.



» Locations where corrosive gases are generated, such as hot springs.



» Locations that are subject to vibration or frequent shocks.



» Locations subject to wind and rain from behind, due to channel mounting or similar. (Fuji type, wall lights, ceiling lights, brackets, etc.)

» If there are instructions regarding the direction of mounting, please be certain to mount the lighting in the direction instructed.