Panasonic

Full-Frame Mirrorless Camera and Lens System

LUMIX S5

LUMIX S5 | LUMIX S 20-60mm F3.5-5.6 | 1/200 sec, F8, ISO100 | Adam Pretty

LUMIX S5 | LUMIX S PRO 24-70mm F2.8 | 1/400 sec, F2.8, ISO100 | Todd White

Moving Images Forward

LUMIX's unique approach to photographic expression combined with cinema-quality video performance.

The 24.2MP CMOS Sensor delivers high sensitivity and top image quality in both still photos and videos. Dual Native ISO technology further enhances video performance.

Responding to a wide range of needs, recording modes include 4K 60p 4:2:0 10-bit and 4K 30p 4:2:2 10-bit — plus 4K 8-bit with no limitation of video recording time.

V-Log and V-Gamut come preinstalled. With 14+ stops of dynamic range and a wide color spectrum, performance rivals that of a VariCam professional cinema camera.

Features high-speed, high-precision AF, and deep learning technology for recognition of human faces, eyes, heads, and bodies, as well as animals.

All in a full-frame mirrorless camera with a compact body.

LUMIX

Motion. Picture. Perfect.

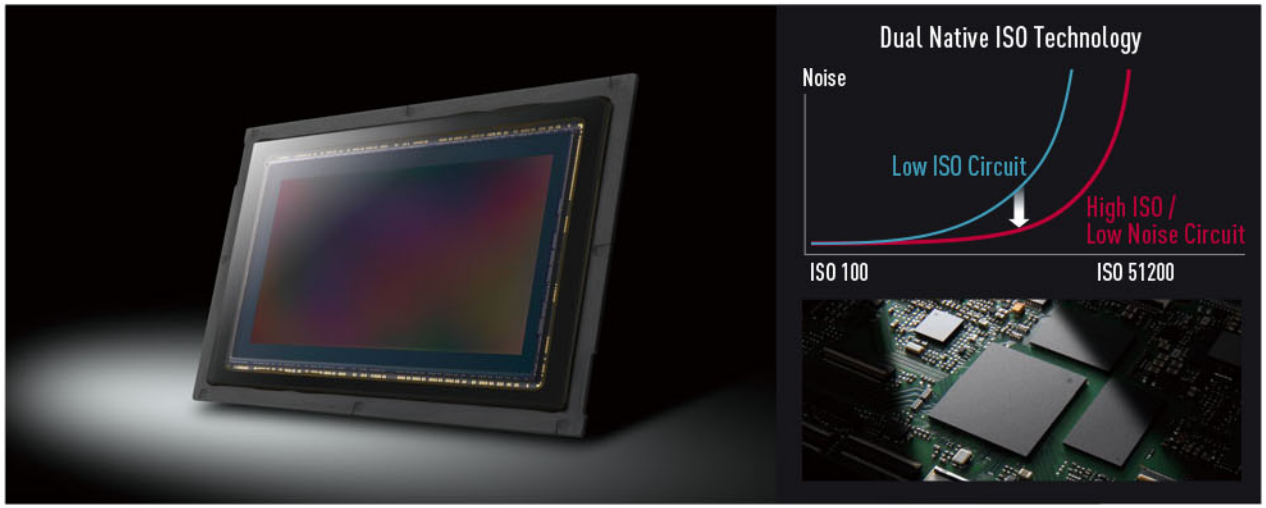
EXCEPTIONAL IMAGE QUALITY FOR PHOTO AND VIDEO

24.2MP Sensor with Dual Native ISO Technology

Whether you are taking stills or shooting video, the LUMIX S5 delivers uncompromising image quality. The image sensor features Dual Native ISO technology,* leveraging a dual-base ISO setting to minimize noise and maximize image quality from low to high sensitivity. This feature teams up with the Venus Engine to deliver maximum ISO 51200 / Extended ISO 204800 for minimal noise at high sensitivity and beautiful expression of dark areas in the frame. Whenever professional-level low-light shooting is required, the LUMIX S5 is ready for action. * Dual Native ISO operates automatically.

Newly Developed Shutter Unit

A new focal-plane shutter unit has been developed for the LUMIX S5. While highly compact, it achieves a shutter speed of 1/8000 second and the highest shutter functionality.



96MP High Resolution Mode with JPEG

In addition to RAW, the LUMIX S5 now supports JPEG file format during shooting, and RAW Processing during playback (RAW-to-JPEG conversion), for images that PC software simply can't match.

In High Resolution Mode, the camera automatically captures eight consecutive images while shifting the sensor using the Body I.S. (Image Stabilizer) mechanism. Then, the Venus Engine, which boasts high-speed signal processing, synthesizes the images into a 96-megapixel equivalent (12,000 x 8,000-pixel) RAW file. This mode is excellent for shooting ultra-detailed nature shots with a tripod, as well as other works of art that combine grandeur with precision.

CINEMA-QUALITY VIDEO PERFORMANCE

4:2:2 10-bit Internal Recording / HDMI Output

Multiple recording modes address the needs of modern videography, including image quality, flexibility, and creative expression.
In addition to supporting 4K 60p/50p* 4:2:0 10-bit and 4K 30p/25p/24p 4:2:2 10-bit, the camera allows users to shoot in 4K 8-bit without limiting recording time. Moreover, the heat-dissipating structure developed for the LUMIX GH and SH series of cameras makes possible the combination of a full-frame sensor and a highly compact body.

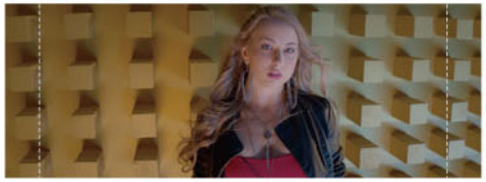
In the 10-bit setting, 4:2:2 10-bit HDMI output is supported along with simultaneous external drive / SD card recording.** Users enjoy high-end cinema camera quality with the convenience of a compact camera body. Image quality that leverages the power of the full-frame sensor takes video to the expressive limit.

* In APS-C or PIXEL/PIXEL settings.
** SD card recording not available during 4K 60p/50p 4:2:2 10-bit HDMI output.

Anamorphic Recording

4K anamorphic video can be shot in the 4:3 aspect ratio. Designed to accommodate anamorphic lenses in a wide range of magnification rates, including 1.3x, 1.33x, 1.5x, 1.8x, and 2.0x, the Anamorphic Desqueeze Display function makes possible shooting while confirming the cinemascope-size image in-camera.

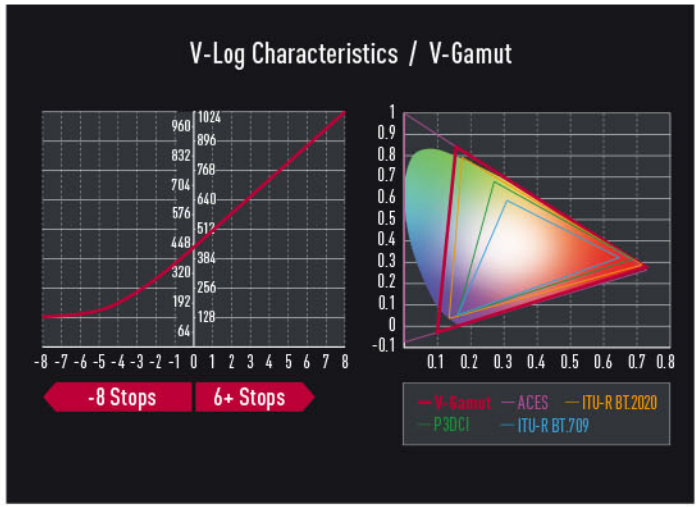
2.35:1 Aspect Ratio



14+ stops of V-Log and V-Gamut "VariCam Look"

Offering compatibility with Cinema VariCam Look, 14+ stops of dynamic range, and a very wide color spectrum, V-Log and V-Gamut come preinstalled. Users will enjoy impressively accurate color reproduction, subtle gradations from dark areas to highlights, and precise control of color data in post-production. The end result is more creative and satisfying color expression. Moreover, footage shot with the LUMIX S5 can be seamlessly edited with footage shot with VariCam cameras. As a further convenient touch, the LUT in use is displayed on the camera monitor.

The V-Log of the LUMIX S5 offers 14+ stops of dynamic range, which covers the PQ requirement of HDR, while V-Gamut covers the full HDR color spectrum, giving users access to HDR shooting wherever, whenever. In addition, HDR video in the HLG (Hybrid Log Gamma) format can be shot using Photo Style “Like2100.”



7.5x Slow Motion and 60x Quick Motion

Slow & Quick motion mode supports both overcranking and undercranking. Users have access to 2.5x slow (24p/60 fps) in 4K and 7.5x super-slow (24p/180 fps) in FHD.* This feature is highly useful in creating emotional slow-motion footage and capturing rapid movement imperceptible to the naked eye. It is also possible to create comically rapid footage of up to 60x normal speed (60p/1 fps).

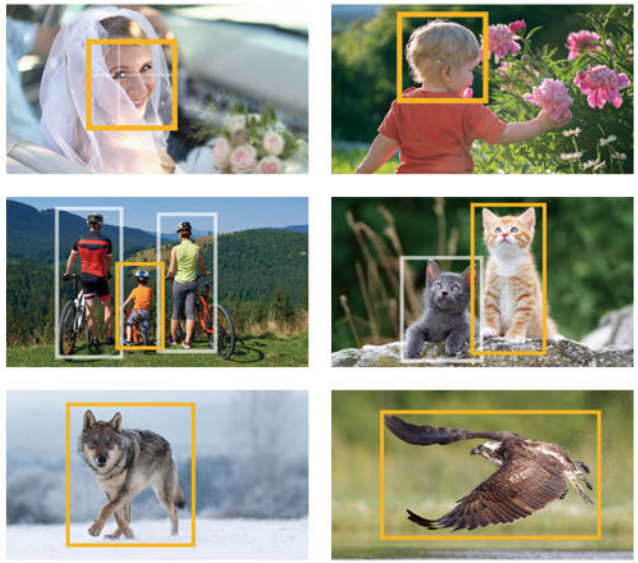
* The degree of effect varies depending on the recording format and frequency, and the angle of view narrows if a frame rate 180 fps is selected.

TOP-LEVEL BASIC PERFORMANCE

Autofocus Featuring Advanced AI Technology

Panasonic's advanced control technology encompasses sensor, engine, and lens to realize top-level focusing performance in every environment. To combine speed with precision, the sensor and lens communicate at a rapid 480fps, while DFD (Depth From Defocus) technology helps realize ultra-fast autofocus of approximately 0.08 sec.*

* 11EV, at wide-end with S-R24105 (CIPA) in LVF120 fps setting.



Deep learning technology makes possible the recognition of human faces, eyes, heads, and bodies, as well as common animals (canidae, felidae and birds). Moreover, human head recognition is performed with a new and improved subject recognition algorithm. Whether the user is shooting stills or video, the camera performs like an expert in recognizing and following human heads, even when they are tilted, small in the frame, or in motion. Those exceptional shots are now even easier to get.

6.5-stop Dual I.S. 2 (Image Stabilizer)

It's difficult to handhold a camera at the best of times, but don't fret: with the 5-axis Dual I.S. 2 (Image Stabilizer),* intelligent compensation comes to your aid. This is the equivalent to 6.5 doublings of exposure duration, meaning you can use a 6.5-stop slower shutter speed up to tele-end.** The LUMIX S5 eliminates shake in both body and lens even at the telephoto setting. It also works in both photo and video recording, including 4K video. The astonishing power of the 5-axis Body I.S. with 5-stop compensation power*** corrects shake for all lenses, even those not equipped with O.I.S.

* 5-axis Dual I.S.2 can be used with the lens S-R24105, S-E70200 and S-R70200 as of September 2, 2020.
** Based on the CIPA standard (Yaw/Pitch direction: focusing distance f=200mm when S-E70200 is used.
*** Based on the CIPA standard (Yaw/Pitch direction: focusing distance f=60mm when S-R2060 is used.

Dust and Splash-resistant

The tough body is ready to take on a variety of challenging shooting environments. The magnesium alloy full die-cast frame is highly durable, while sealing helps protect seam, dial, and button. The camera as a whole is dust- and splash-resistant.* In combination, these features help make shooting both productive and enjoyable in a wide range of weather conditions.

* Splash Resistant works in conjunction with the lenses that were specifically designed to support this feature. Dust and Splash Resistant does not guarantee that damage will not occur if this camera is subjected to direct contact with dust and water.

Double SD Card Slot

The camera features a Double SD Card Slot. Relay Recording mode relays recording to the other card slot after the first card runs out of free space during recording.* Backup Recording mode records the same data to the two cards at the same time.* Allocation Record mode allows you to specify the card slot to be used for recording still photographs and video.

* Cannot be used with AVCHD format. • SDXC Logo is a trademark of SD-3C, LLC.

1,840k-dot Free-angle LCD

The LUMIX S5 features approximately 1,840k-dot 3.0-inch LCD. With outstanding brightness and a wide color gamut, it offers high visibility for outdoor shoots. Its free-angle touch screen makes it easy to compose high- and low-angle shots, further adding to the convenience and flexibility of the camera.

2,360k-dot 0.74x OLED LVF

With approximately 2,360k dots resolution and 0.74x magnification, the OLED live viewfinder presents the subject with fine gradations and high clarity throughout. OLED displays are favored for their excellent responsiveness. The LVF of the LUMIX S5 is therefore able to offer an ultra-fast display speed of 120fps* with a time lag of only 0.005 sec., helping users keep quick-moving subjects in view.

* The display speed may be freely switched between 120fps and 60fps.

Wi-Fi 5GHz / Bluetooth

Using Wi-Fi 5GHz (IEEE802.11ac) and Bluetooth 4.2 (Low Energy), this feature allows you to connect your camera to a smartphone or tablet, send photos to these devices, and control your LUMIX S5 remotely. With Panasonic's LUMIX Sync app (Android / iOS), you can remotely control the shutter of your camera and access a wide range of photographic settings. You can even use LUMIX Sync to copy settings from one camera to another,* which is useful when managing multiple cameras in a shoot.

* Copying must done between cameras of the same model.

Live View Composite

The camera takes multiple images, creating composite images from only those areas that vary in brightness. This feature is convenient for taking images of the night sky that show the light trails of stars or fireworks. Each time the shutter is operated, a composite image is displayed, allowing users to shoot while confirming the results in real time.

Bulb Shooting

Live View Composite

HLG Photo Mode

HLG Photo mode* supports a new style of photographic enjoyment on the screen of HDR-compatible devices — one in which the rendering of bright light is especially impressive. HSP files,** which compress a high degree of brightness, are displayed as images with breathtaking reproduction of dynamic range and extremely fine gradations of light and dark.

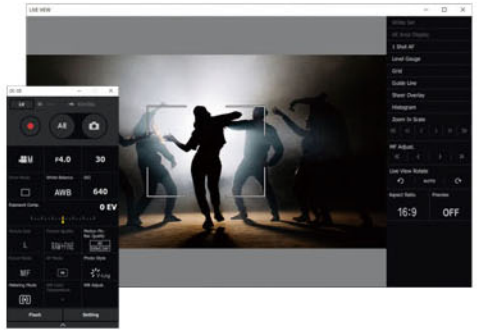
* "HLG (Hybrid Log Gamma)" is an international standard (ITU-R BT.2100) HDR format.
** "HSP" is an HDR picture format using HLG format video technology.

SDR Photo HLG Photo

PC Software "LUMIX Tether" Camera Control

The LUMIX S Series allows tethered shooting via USB with "LUMIX Tether" PC software. It enables camera control and shooting while checking the image on a large PC screen.

LUMIX Tether for Streaming (Beta) is available for streaming.

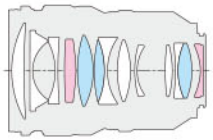


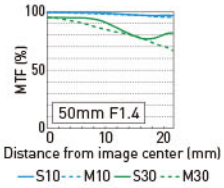
S SERIES LENSES DESIGNED FOR ALL CREATORS

L MOUNT

S-X50 LUMIX S PRO 50mm F1.4

LUMIX S PRO
Certified by LEICA





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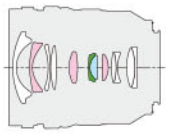
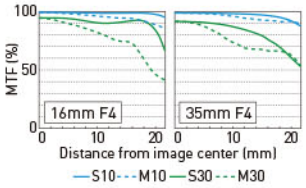
S-R1635 LUMIX S PRO 16-35mm F4

LUMIX S PRO
Certified by LEICA





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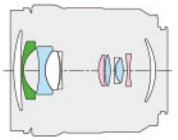
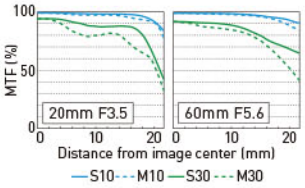
S-R2060 LUMIX S 20-60mm F3.5-5.6





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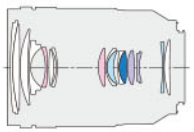
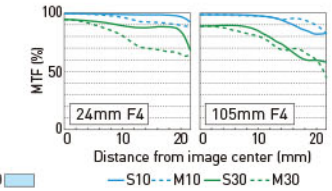
S-R24105 LUMIX S 24-105mm F4 MACRO O.I.S.





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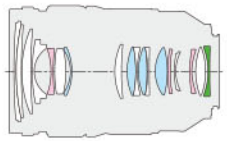
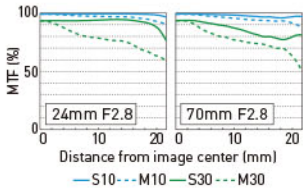
S-E2470 LUMIX S PRO 24-70mm F2.8

LUMIX S PRO
Certified by LEICA





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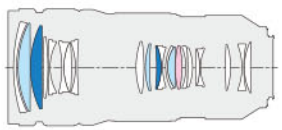
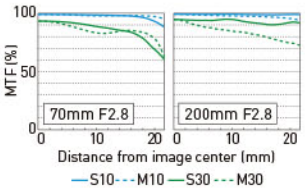
S-E70200 LUMIX S PRO 70-200mm F2.8 O.I.S.

LUMIX S PRO
Certified by LEICA





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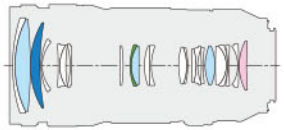
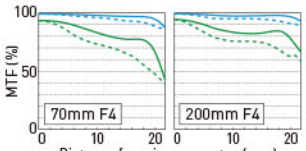
• For lenses that are capable of compensating distortion, the horizontal axis of the MTF shows the distance from the center of the corrected image

S-R70200 LUMIX S PRO 70-200mm F4 O.I.S.

LUMIX S PRO
Certified by LEICA





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TELECONVERTER

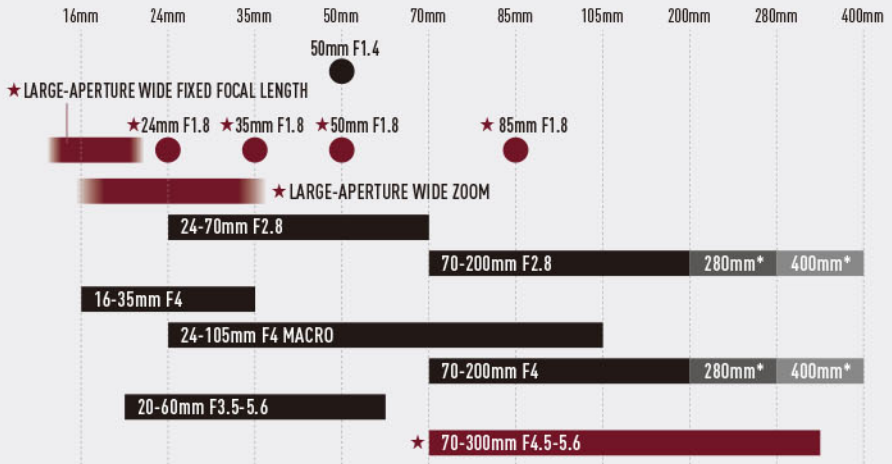
Compatible with S-E70200 / S-R70200

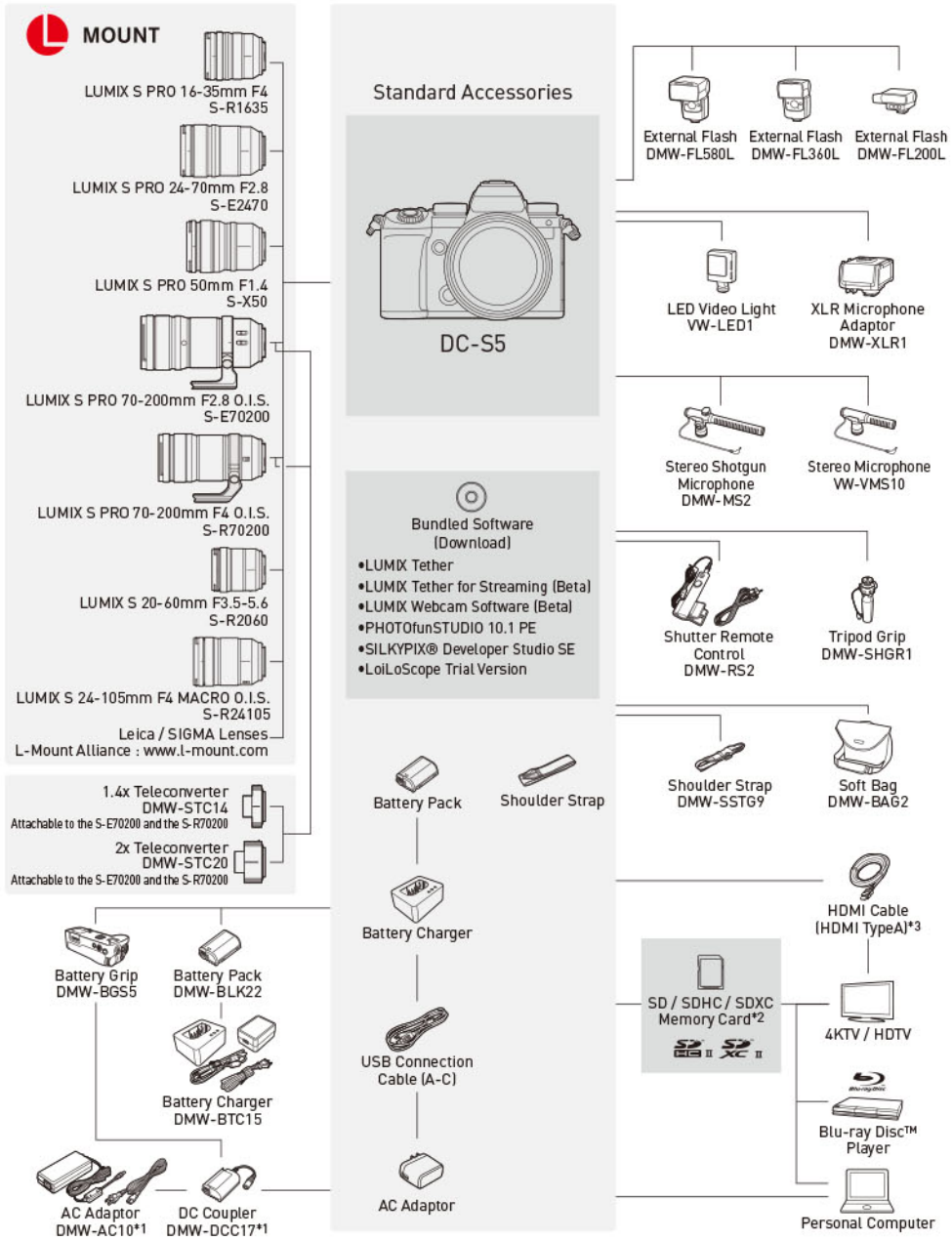
DMW-STC14

DMW-STC20

LUMIX S Series Lens Roadmap

★To be released in the future (as of September 2020).
* When the teleconverter is attached.





*1 The AC Adaptor DMW-AC10 requires the DC coupler DMW-DCC17. The DC coupler DMW-DCC17 requires the AC Adaptor DMW-AC10. *2 "SDXC/SDHC Memory Card compatible with UHS Speed Class 3 (U3)" must be used when recording motion pictures with MP4 in 4K, MOV, S&Q, 6K PHOTO or 4K PHOTO in camera. *3 For 4K video output, use an HDMI cable that has the HDMI logo on it, and that is described as "4K compatible". •The L-Mount Logo mark is a trademark or registered trademark of Leica Camera AG. •The SDXC/SDHC Memory Card can be used only if their logos are indicated on the equipment or in the operation manual. It cannot be used with equipment that supports only the SD Memory Card. •Confirm the operation information of compatible lenses at Customer Support http://panasonic.jp/support/global/cs/dsc (English). •Batteries made by other companies which have been certified by Panasonic may be used with these units, but we offer no guarantee as to the quality, performance or safety of such batteries. •Exercise care when purchasing batteries. Many fake or imitation batteries have been found among those sold at unusually low prices and those which customers cannot check for themselves before purchasing. •Please confirm the latest information about batteries on the following website. http://panasonic.jp/support/global/cs/info/battery.html (English).

Specifications

TYPE	
Type	Digital Single Lens Mirrorless camera
Lens mount	L-Mount
Image sensor	35mm full-frame (35.6mm x 23.8mm) CMOS sensor
Camera effective pixels / Total pixels	24.20 megapixels / 25.28 megapixels
STILL IMAGE	
Recording file format	JPEG (DCF, Exif 2.31), RAW, HLG Photo (CTA-2072) 6K PHOTO**: MP4 (H.265/HEVC, Audio format: AAC (2ch)) *Extracted still images: JPEG (DCF, Exif 2.31) 4K PHOTO**: MP4 (H.264/MPEG-4 AVC, Audio format: AAC (2ch)) *Extracted still images: JPEG (DCF, Exif 2.31)
Aspect ratio	4:3 / 3:2 / 16:9 / 1:1 / 65:24 / 2:1
File size (pixels) in 3:2 when using full-frame lenses	6000x4000 (L), 4272x2848 (M), 3024x2016 (S), High Resolution Mode: 12000x8000 (XL), 8496x5664 (LL) 6K PHOTO: 5184x3456 / 4K PHOTO: 3504x2336, HLG PHOTO: 5984x4000 (Full-Res.), 3232x2160 (4K-Res.)
MOTION PICTURE	
Latitude	14+ stops (V-Log)
Recording file format	MOV: H.264/MPEG-4 AVC, H.265/HEVC (Audio format: LPCM (2ch 48kHz/16-bit)) MP4: H.264/MPEG-4 AVC, H.265/HEVC (Audio format: AAC (2ch))
Switch NTSC / PAL	Yes (NTSC (59.94Hz) / PAL (50.00Hz))
Slow & Quick	4K (APS-C, PIXEL/PIXEL): 1, 2, 5, 10, 15, 30, 60 fps, FHD (Full-frame): 1, 2, 5, 10, 15, 30, 60, 100, 120, 150*, 180* fps *Angle of view narrows if you select a frame rate with a number of frames 180. The AF mode switches to MF when the frame rate is set to of 150 fps or more.

							HLG	S&Q	NTSC (59.94Hz)	PAL (50.00Hz)
MOV**	FULL	4K 3840x2160	4:2:2 10-bit	LongGOP	H.264	150Mbps	Yes	—	29.97p / 23.98p	25.00p
			4:2:0 8-bit	LongGOP	H.264	100Mbps	—	—	29.97p / 23.98p	25.00p
		FHD 1920x1080	4:2:2 10-bit	LongGOP	H.264	100Mbps	Yes	—	59.94p / 29.97p / 23.98p	50.00p / 25.00p
			4:2:0 8-bit	LongGOP	H.264	100Mbps	—	—	59.94p / 29.97p / 23.98p	50.00p / 25.00p
	APS-C PIXEL/PIXEL	4K 3840x2160	4:2:0 10-bit	LongGOP	HEVC	200Mbps	Yes	—	59.94p	50.00p
			4:2:2 10-bit	LongGOP	H.264	150Mbps	Yes	—	29.97p / 23.98p	25.00p
			4:2:0 8-bit	LongGOP	H.264	150Mbps	—	—	59.94p	50.00p
			4:2:0 8-bit	LongGOP	H.264	100Mbps	—	—	29.97p / 23.98p	25.00p
		Anamorphic 4K (4:3) 3328x2496	4:2:0 10-bit	LongGOP	HEVC	200Mbps	Yes	—	—	50.00p
			4:2:2 10-bit	LongGOP	H.264	150Mbps	Yes	—	29.97p / 23.98p	25.00p
			4:2:0 8-bit	LongGOP	H.264	150Mbps	—	—	—	50.00p
			4:2:0 8-bit	LongGOP	H.264	100Mbps	—	—	29.97p / 23.98p	25.00p
		FHD 1920x1080	4:2:2 10-bit	LongGOP	H.264	100Mbps	Yes	—	59.94p / 29.97p / 23.98p	50.00p / 25.00p
			4:2:0 8-bit	LongGOP	H.264	100Mbps	—	—	59.94p / 29.97p / 23.98p	50.00p / 25.00p
MP4**	FULL	4K 3840x2160	4:2:0 10-bit	LongGOP	HEVC	72Mbps	Yes	—	29.97p / 23.98p	25.00p
			4:2:0 8-bit	LongGOP	H.264	100Mbps	—	—	29.97p / 23.98p	25.00p
		FHD 1920x1080	4:2:0 8-bit	LongGOP	H.264	28Mbps	—	Yes	59.94p	50.00p
			4:2:0 8-bit	LongGOP	H.264	20Mbps	—	Yes	29.97p	25.00p
			4:2:0 8-bit	LongGOP	H.264	24Mbps	—	Yes	23.98p	—
	APS-C PIXEL/PIXEL	4K 3840x2160	4:2:0 10-bit	LongGOP	HEVC	100Mbps	Yes	—	59.94p	50.00p
			4:2:0 10-bit	LongGOP	HEVC	72Mbps	Yes	—	29.97p / 23.98p	25.00p
			4:2:0 8-bit	LongGOP	H.264	100Mbps	—	Yes	29.97p / 23.98p	25.00p
		FHD 1920x1080	4:2:0 8-bit	LongGOP	H.264	28Mbps	—	—	59.94p	50.00p
			4:2:0 8-bit	LongGOP	H.264	20Mbps	—	—	29.97p	25.00p
			4:2:0 8-bit	LongGOP	H.264	24Mbps	—	—	23.98p	—

OTHER BASIC PERFORMANCE	
Viewfinder	Approx. 2.36 million dots OLED Live View Finder, Approx. 100% of field of view Magnification: Approx. 0.74x with 50 mm lens at infinity; -1.0 m^{-1}, when the aspect ratio is set to 3:2 Eye point / Diopter adjustment: Approx. 20 mm at infinity; -1.0 m^{-1} / -4.0 - +4.0 (dpt)
Rear monitor	Approx. 1.84 million dots TFT LCD monitor, Free-angle, 3.0-inch (7.5cm), 3:2 aspect, Static touch control

Focus	Type	Contrast AF system with DFD technology
	AF mode	Auto Detection (Face, Eye, Body, Animal) / Tracking / 225-Area / Zone (Vertical/Horizontal) / Zone (Square) / Zone (Oval) / 1-Area+ / 1-Area / Pinpoint / Custom 1, 2, 3 (Full area touch is available) (Scalable AF frame size and flexible AF position)
	AF detective range	EV -6 - 20 (F1.4, ISO100 equivalent, AFS)
Standard output ISO sensitivity		Auto / 50* / 100 / 200 / 400 / 800 / 1600 / 3200 / 6400 / 12800 / 25600 / 51200 / 102400* / 204800* (Changeable to 1/3 EV step) *Extended ISO
Dual Native ISO		[Normal] Native ISO: 100/ 640, Auto: Auto / 50* / 100-51200 / 102400* / 204800* *Extended ISO [V-Log] Native ISO: 640 / 4000, Auto: Auto / 320* / 640-51200 *Extended ISO [HLG] Native ISO: 400 / 2500, Auto: Auto / 400-51200 / 102400* / 204800* *Extended ISO [Cinelike D2 / Cinelike V2] Native ISO: 200 / 1250, Auto: Auto / 100* / 200-51200 / 102400* / 204800* *Extended ISO
Image stabilization system		Image sensor shift type (5-axis / 5.0-stop*) *Based on the CIPA standard [Yaw/Pitch direction: focusing distance f=60mm when S-R2060 is used.] Dual I.S. (6.5-stop* Dual I.S. 2 compatible) *Based on the CIPA standard [Yaw/Pitch direction: focusing distance f=200mm when S-E70200 is used.]
Shutter	Type	Focal-plane shutter
	Shutter speed	Still image: Bulb (Max. 30 minutes), 1/8,000 - 60 Motion picture: 1/16,000 - 1/25 Electronic front curtain shutter: Bulb (Max. 30 minutes), 1/2,000 - 60 Creative Video M mode / MF mode: 1/16,000 - 1/2 Electronic shutter: Bulb (Max. 60 sec), 1/8,000 - 60
Burst shooting		AFS/MF: H: 7 frames/sec, M: 5 frames/sec (with Live View), L: 2 frames/sec (with Live View) AFC: H: 5 frames/sec (with Live View), M: 5 frames/sec (with Live View), L: 2 frames/sec (with Live View) 6K PHOTO: 30 frames/sec, 4K PHOTO: 60 frames/sec, 30 frames/sec
Motion picture function		Luminance Level, Wave Form Monitor, LUT View Assist (Monitor / HDMI), Time Code, Knee Control (in Like709 mode)
INTERFACE / DIMENSIONS / WEIGHT		
USB		SuperSpeed USB 3.1 Gen1 Type-C
HDMI***		microHDMI TypeD
	Monitor-through	When a mode other than [4K/60p]/[4K/50p] is selected for [Picture Quality]: 4:2:2 10-bit, 4:2:2 8-bit, 4:2:0 8-bit When [4K/60p]/[4K/50p] mode is selected in [Rec Quality]: 4:2:2 10-bit*, 4:2:0 8-bit *When 4:2:2 10-bit mode is selected, it is not possible to record motion picture or still picture on the memory card in the camera unit. Info Display: ON / OFF (selectable), HLG View Assist (HDMI): AUTO / MODE1 / MODE2 / OFF (selectable)
Remote input		φ2.5mm
External microphone / External audio device input		φ3.5mm for external microphone / external audio device, MIC (Plug-in Power) / MIC / LINE is selectable. Stereo/Lens Auto/Shotgun/Super Shotgun/Manual is selectable when attaching DMW-MS2 (sold separately).
Headphone output		φ3.5mm
Microphone		Stereo, Wind Noise Canceller: OFF / Low* / Standard / High *When attaching DMW-MS2 (sold separately).
SD card slot compatibility		SD Memory Card, SDHC Memory Card, SDXC Memory Card Slot 1: UHS-I/II UHS Speed Class 3 standard SDHC/SDXC Memory Cards / UHS-II Video Speed Class 90 standard SDXC Memory Cards Slot 2: UHS-I UHS Speed Class 3 standard SDHC/SDXC Memory Cards
Wi-Fi		2.4GHz (STA/AP) (IEEE802.11b/g/n), 5GHz (STA) (IEEE 802.11a/n/ac) *5GHz Wi-Fi is not available in some countries.
Bluetooth		Bluetooth® v4.2 (Bluetooth Low Energy (BLE))
Dust and splash resistant*		Yes. *Dust and Splash Resistant does not guarantee that damage will not occur if this camera is subjected to direct contact with dust and water.
Battery		Li-ion Battery Pack (7.2V, 2200mAh, 16Wh) (bundled), USB power supply, USB power charging
Battery life (CIPA standard)		Approx. 440 images (rear monitor), 470 images (LVF), 1,500 images (Power Save LVF mode*) with S-R2060 *Under the test conditions specified by Panasonic based on CIPA standard. When the time to get in the sleep mode is set to 1 sec.
Recordable time**	Continuous time	MP4 [4K/60p]: Approx. 110 min (LVF), 110 min (rear monitor) MOV [4K/60p/4:2:0 10-bit/LongGOP]: Approx. 100 min (LVF), 110 min (rear monitor)
	Actual time	MP4 [4K/60p]: Approx. 55 min (LVF), 55 min (rear monitor) MOV [4K/60p/4:2:0 10-bit/LongGOP]: Approx. 50 min (LVF), 55 min (rear monitor)
		*When setting APS-C or PIXEL/PIXEL. When using S-R2060. When the battery is fully charged.
Dimensions (W x H x D)		Approx. 132.6 x 97.1 x 81.9 mm / 5.22 x 3.82 x 3.22 inch (excluding protrusions)
Weight		Approx. 714g / 1.58 lb (SD Memory Card x 1, Battery, Body), Approx. 630g / 1.39 lb (Body only)
Operating temperature / humidity		0°C to 40°C (32°F to 104°F) / 10%RH to 80%RH
Bundled software (download)		LUMIX Tether, PHOTOfunSTUDIO 10.0 PE, SILKYPIX® Developer Studio SE
Bundled accessories		Body Cap, Hot Shoe Cover, Cover for the Battery Grip Connector, Shoulder Strap, Battery Pack, Battery Charger, AC Adaptor, USB Connection Cable (A-C), Lens Cap (K kit), Lens Hood (K kit), Lens Rear Cap (K kit)

** 6K PHOTO is a high speed burst shooting function that cuts a still image out of a 4:3 or 3:2 video footage with approx. 18-megapixel (approx. 6000 x 3000 effective pixel count) that the 6K image manages. Use a card with SD Speed Class with "Class 4" or higher when recording motion pictures in [MP4 (under 28Mbps)]. Use a card with SD Speed Class with "UHS-I / UHS-II UHS Speed Class 3 (U3)" when recording motion pictures with [MP4] in [4K], [MOV], [S&Q], [6K PHOTO] or [4K PHOTO]. SD speed class is the speed standard regarding continuous writing. Recording stops when the continuous recording time exceeds 30 minutes in [4K/60p] [4K/50p] [4K-A/50p] [4K/4:2:2 10-bit] [4K-A/4:2:2 10-bit] [4K/4:2:0 10-bit] [4K-A/4:2:0 10-bit] [S&Q]. Recording stops when the continuous recording time exceeds 15 minutes in [6K PHOTO] [4K PHOTO]. MP4 motion pictures with [MP4] in [4K]: When using an SDHC memory card: You can continue recording without interruption even if the file size exceeds 4 GB or 30 minutes, but the motion picture file will be divided and recorded/played back separately. When using an SDXC memory card: You can continue recording without interruption even if the file size exceeds 96 GB or 3 hours 4 minutes in length, but the motion picture file will be divided and recorded/played back separately. MP4 motion pictures with [MP4] in [FHD]: You can continue recording without interruption even if the file size exceeds 4 GB or 30 minutes in length, but the motion picture file will be divided and recorded/played back separately. MOV motion picture with [MOV]: When using an SDHC memory card: You can continue recording without interruption even if the file size exceeds 4 GB or 30 minutes, but the motion picture file will be divided and recorded/played back separately. When using an SDXC memory card: You can continue recording without interruption even if the file size exceeds 96 GB or 3 hours 4 minutes in length, but the motion picture file will be divided and recorded/played back separately. 4:2:2 10-bit recording is a recording mode for film production and the video needs to be processed on PC. The original video cannot be played on standard TV, Blu-ray Disc™ recorder and Blu-ray Disc™ player. It may cause problems such as freezing when played on these devices. When the ambient temperature is high or continuous recording is performed, the camera may stop the recording to protect itself. Wait until the camera cools down. *** For [4K/60p] [4K/50p] video output, use an HDMI2.0 cable that has the HDMI logo on it, and that is described as "4K compatible".