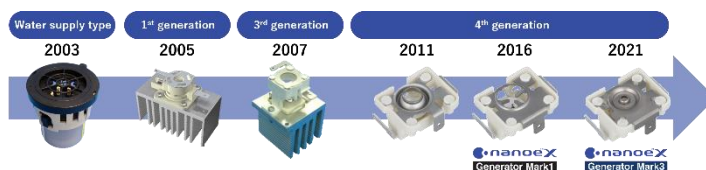


September 9, 2024

Cumulative Global Shipments of nanoe™ Devices Exceed 100 Million Units

- nanoe™ is Panasonic's proprietary technology, with seven effects demonstrated by external organisations both inside and outside Japan



The banner in the photo reads, "Celebrating the milestone of 100 million units shipped."

Osaka, Japan – [Panasonic Corporation](#) (hereinafter “Panasonic”) announced that the total shipment of nanoe™*1 devices manufactured and sold by the company in Japan and overseas markets has exceeded 100 million units*2.

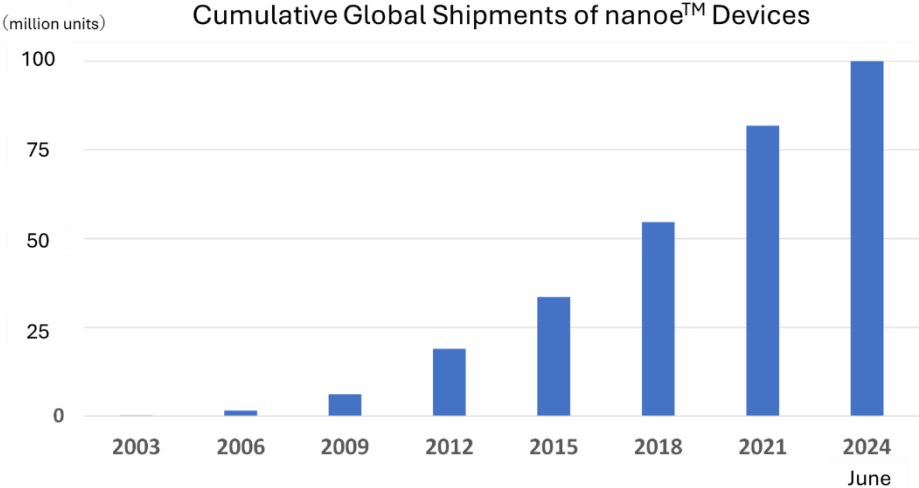
In the 1990s, air pollution became an issue in living environments. In response, nanoe™ originated in 1997 when Matsushita Electric Works, Ltd. (at the time) began research and development focused on purifying the air in living environments, utilising water's properties to dissolve odour components. In 2001, with the cooperation of Dr. Kikuo Okuyama (currently Professor Emeritus at Hiroshima University), full-scale technological development began. This gave birth to nanoe™, nano-sized particulate ions contained in water, generated by applying high voltage to moisture.

Following the completion of a nanoe™ device, in 2003, Matsushita Electric Works launched the world's first nanoe™-equipped air purifier “Air Refresh”. In 2005, Panasonic launched the nanoe™-equipped hair dryer, ionity nanocare Windpress, highlighting the features of nanoe™, which has more than 1,000 times the moisture content compared to negative ions and a long lifespan. Since then, nanoe™ devices have continued to evolve according to their applications and effects, and the range of products incorporating them has expanded. These products include white goods such as residential air conditioners, refrigerators, and washing machines equipped with nanoe™ devices to increase the amount of Hydroxyl (OH) radicals generated, as well as beauty and grooming appliances such as hair dryers and facial steamers equipped with nanoe™ devices to increase the amount of moisture generated.

In addition, against the backdrop of the recent growing global demand for improved air quality, annual shipments of nanoe™ devices exceeded 10 million units in the fiscal year ending in March 2022. Currently, nanoe™ devices are used not only in Panasonic products, but also in facilities and public spaces around the world, including Japanese domestic railroads (16 companies), Japanese domestic and foreign automobiles (115 car models from 9 companies), schools, hospitals, hotels, offices, and commercial facilities, with expansion to 107 countries worldwide*3.

Panasonic will continue to explore and advance the possibilities of nanoe™ technology to provide clean and comfortable spaces in various aspects of people's lives and society, such as in the field of home appliances, mobility, housing, facilities, and public spaces, thereby helping every individual become the person they want to be.

[Shipment trends of nanoe™ devices]



[History of nanoe™ (partial)]

Year	R&D/device evolution	Products/fields
1997	Started research focused on water's properties to dissolve odour components, with the theme of purifying the air in living environments.	
2001	Started the development of nanoe™-generating technology with the cooperation of Dr. Kikuo Okuyama (currently Professor Emeritus at Hiroshima University).	
2003	Completed a nanoe™ device (water supply type).	Launched the world's first nanoe™-equipped air purifier Air Refresh.
2005	Developed a Peltier-type nanoe™ device using moisture in the air.	Launched the nanoe™-equipped hair dryer, ionicity nanocare Windpress.

2007		First installed in refrigerators and automobiles.
2008		First installed in air conditioners, drum-type washer-dryers, and facial steamers.
2013		First installed in railroad cars.
2016	Birth of nanoe™ X, which generates 10 times* ⁴ the amount of OH radicals compared to nanoe™.	First installed in commercial air conditioning equipment.
2018	Successfully generated 20 times* ⁵ the amount of OH radicals compared to nanoe™.	
2019	Birth of highly penetrating nanoe™, which generates 18 times* ⁶ the amount of moisture compared to nanoe™.	
2020		First installed in refrigerating display cases.
2021	Birth of new nanoe™ X, which generates approximately 100 times* ⁷ the amount of OH radicals compared to nanoe™.	
2022		First installed on cruise ships.
2024	Birth of highly penetrating nanoe™ (2nd generation), which generates up to 10 times* ⁸ the amount of moisture compared to conventional highly penetrating nanoe™.	

1: nanoe™ ions spread over a wide area as they have approximately six times the lifespan of ordinary ions. Their moisture content is more than about 1,000 times** (by volume) that of air ions, and they are gentle on skin and hair because they are weakly acidic.

nanoe™ and the nanoe™ mark are trademarks of Panasonic Holdings Corporation. (About nanoe™ <http://panasonic.jp/nanoe/>)

* Comparison with air ions: Lifetime of general air ions: Several tens of seconds to 100 seconds, Lifetime of nanoe™: Approximately 600 seconds (surveyed by Panasonic)

** Based on a comparison between general air ions (typical particle size: 1.3 nm) and nanoe™ (typical particle size: 13 nm)

*2: Cumulative global shipments of nanoe™ and nanoe™ X devices from September 2003 to July 2024

*3: As of August 2, 2024

*4: Comparison between the nanoe™ device (480 billion OH radicals/second) and the nanoe™ X device (4.8 trillion OH radicals/second). The amount of hydroxyl radicals immediately after being produced by the generator was measured using the ESR method (surveyed by Panasonic)

*5: Comparison between the nanoe™ device (480 billion OH radicals/second) and the nanoe™ X device (9.6 trillion OH radicals/second). The amount of hydroxyl radicals immediately after being produced by the generator was measured using the ESR method (surveyed by Panasonic)

*6: Comparison between nanoe™ and highly penetrating nanoe™ (Panasonic data)

*7: Comparison between the nanoe™ device (480 billion OH radicals/second) and the new nanoe™ X device (48 trillion OH radicals/second). The amount of hydroxyl radicals immediately after being produced by the generator was measured using the ESR method (surveyed by Panasonic)

*8: Comparison between conventional highly penetrating nanoe™ and 2nd generation highly penetrating nanoe™ (surveyed by Panasonic)

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Findings relate to specific and distinctive assessment. No presumptive representation is made on untested matters.

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Panasonic Malaysia Sdn Bhd is a sales, service and marketing company for the Panasonic brand of electrical and electronic products ranging from audio visuals, home appliances, air conditioners, indoor air quality, solar business, digital & video cameras, professional broadcasting equipment, system solutions, telecommunications, health & beauty care, batteries and lightings. All Panasonic products are available through our authorised dealers nationwide. For more information on Panasonic brand and products, visit our website at www.panasonic.com.my or call our Customer Care Centre at 03-7953 7600.

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About Panasonic Corporation

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