

MIURA CO., LTD.

Issued July 1, 2025

Advancements in High-power UV-LED Technology Allow Mercury-free UV-LED Water Sterilization Equipment to Achieve an Industry-leading High Treated Water Flow Rate^{*1} of 10 m³/h

Industrial boiler manufacturer MIURA CO., LTD. (Tokyo Head Office: Minato-ku, Tokyo; President and CEO: Tsuyoshi Yoneda; hereinafter referred to as “MIURA”) began sales of mercury-free UV-LED water sterilization equipment using UV-LEDs^{*2} developed by NICHIA CORPORATION (Head Office: Anan City, Tokushima, President & CEO: Hiroyoshi Ogawa; hereinafter referred to as “NICHIA”) in August 2024, and has received numerous orders from customers across various industries in the cosmetics, chemical, machinery and electronics. NICHIA’s high-power UV-LEDs have taken another step forward, achieving an industry-leading wall-plug efficiency of 7.4%^{*3}. This has allowed a 25% increase in the maximum treated water flow rate offered by MIURA’s UV-LED water sterilization equipment over previous models, achieving an industry-leading high flow rate of 10 m³/h, while simultaneously reducing power consumption by up to 7.6%.

Such technological innovations are anticipated to broaden the scope for mercury-free UV-LED water sterilization equipment use, further improving energy efficiency and lowering the environmental impact. MIURA will work to develop products with broader applications capable of processing higher volumes of water for treatment, and will continue to pursue the realization of a mercury-free society.

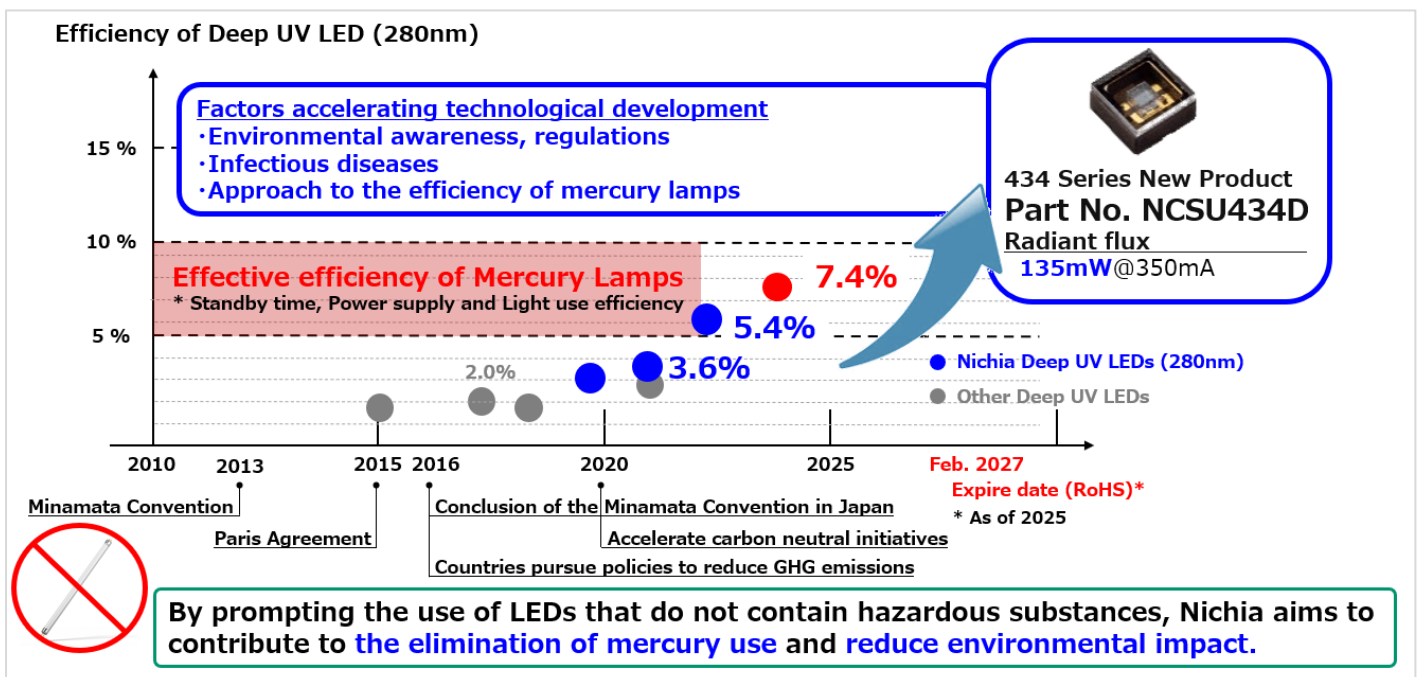
[Specifications]

Model	WV-5AF	WV-10AF
Maximum treated water flow rate	5 m ³ /h 	10 m ³ /h 
Rated power consumption	85 W 	145 W 
Sterilization performance (<i>Bacillus subtilis</i> spores)	99.9% or more	
UV light source type	UV-LED (mercury-free)	
UV wavelength	280 nm	



Product image WV-10AF

- *1 According to MIURA's research
- *2 UV-LED: An LED that emits ultraviolet (UV) light. UV is a type of electromagnetic wave with wavelengths ranging from 100 to 400 nm. UV is divided into the three categories of UV-C, UV-B, and UV-A according to wavelength. MIURA's water sterilization equipment utilizes UV-C LEDs with powerful sterilization capabilities.
- *3 According to NICHIA's research. Wall-plug efficiency of a single LED at rated LED power. Refer to the following for information on efficiency improvements to date.



UV-LED wall-plug efficiency road map

(Provided by NICHIA)

References

■See here for press releases from Nichia Corporation

https://www.nichia.co.jp/en/newsroom/2025/2025_012901.html

■Issued April 24, 2025

Operation of Mercury-free UV-LED Water Sterilization Equipment Begins

- Sterilization of Raw Water for Cosmetics and Non-prescription Medications at MAX Co., Ltd. -

<https://www.miuraz.co.jp/news/newsrelease/2025/1799.php>

■Issued April 23, 2024

Combining Nichia's High-power UV-LEDs with MIURA's Water Treatment Technology

- Successful Development of Mercury-free UV-LED Water Sterilization Equipment with a High Flow Rate -

<https://www.miuraz.co.jp/news/newsrelease/2024/1538.php>

■Issued March 18, 2020

Began Sales of New Energy-, Water-, and Space-saving Water Purification Units

<https://www.miuraz.co.jp/news/newsrelease/2020/904.php>

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