

MIURA CO., LTD.

Issued October 28, 2025

Mercury-free UV-LED Water Sterilization Equipment Achieves an Industry-leading Treated Water Flow Rate of 25 m³/h

Industrial boiler manufacturer MIURA CO., LTD. (Tokyo Head Office: Minato-ku, Tokyo; CEO: Tsuyoshi Yoneda; hereinafter referred to as “MIURA”) has successfully developed a new model of its mercury-free UV-LED water sterilization equipment using UV-LEDs^{*1} developed by NICHIA CORPORATION (Head Office: Anan City, Tokushima; President and CEO: Hiroyoshi Ogawa; hereinafter referred to as “NICHIA”) that achieves an industry-leading^{*2} maximum treated water flow rate of 25 m³/h, and is currently moving forward with commercialization to allow it to begin taking orders next spring.

In recent years, UV sterilization equipment has found widespread use as a way of maintaining water quality in the pure water systems used in manufacturing facilities in the cosmetics, pharmaceutical, beverage, chemical, machinery, and electronics industries. However, safety concerns with conventional mercury lamp-based UV sterilization equipment due to the risks of mercury leakage and environmental pollution mean that there is a need for technologies to address these issues.

This new model utilizes high-output UV-LEDs powered by new light source technologies from NICHIA to achieve 2.5 times the processing capacity of previous models (which had a maximum treated water flow rate of 10 m³/h). UV-LED water sterilization equipment is a technology that will contribute to achieving a mercury-free society through the use of an environmentally conscious design that does not use mercury. Based on the international convention on mercury, a policy was adopted in Japan at the Fifth Meeting of the Conference of the Parties to phase out the manufacture, import, and export of general-purpose fluorescent lamps by 2027. Against this background of regulatory strengthening, we anticipate that UV-LED water sterilization equipment will increasingly be used in more industries and work sites.

With a maximum treated water flow rate of 25 m³/h, this model is the first step to further widening the potential of UV-LED water sterilization technology. Going forward, MIURA will work to further increase the flow rate of mercury-free UV-LED water sterilization equipment and expand the scope for its use. MIURA and NICHIA will also continue to move forward with technical innovation aimed at bringing a sustainable society to reality, theming their efforts around the keywords of “mercury-free,” “energy-saving,” and “high performance.”

^{*1} 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.

^{*2} According to MIURA’s research

Reference

■See here for press releases from NICHIA CORPORATION

https://www.nichia.co.jp/en/newsroom/2025/2025_102801.html

■Issued July 1, 2025

Advancements in High-output UV-LED Technology Allow Mercury-free UV-LED Water Sterilization Equipment to Achieve an Industry-leading High Treated Water Flow Rate of 10 m³/h

https://www.miuraz.co.jp/news/2025/07/e0466a41fc8e20d02fa0469c0ac3f736beacc_e42.pdf

■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-output 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>

▼Inquiries

Corporate Communications Department, MIURA CO., LTD.

Tel: (+81) 089 979 7019

Email: info_miuraz@miuraz.co.jp

URL: <https://www.miuraz.co.jp>