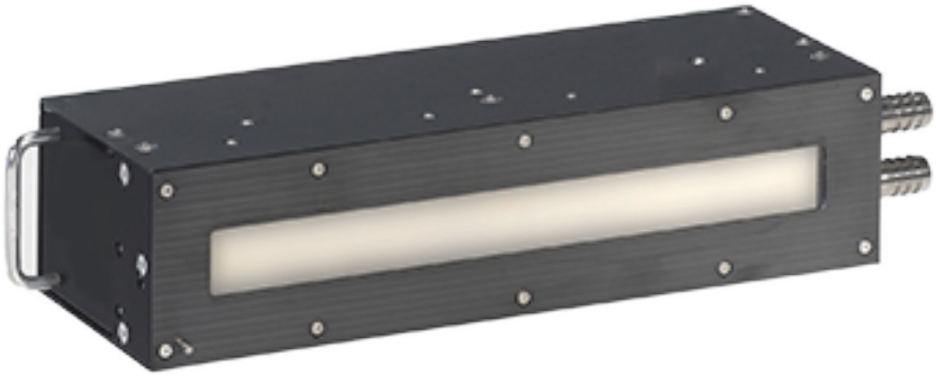
USHIO Applying Light to Life

UV LED UniJet AHD-Series

Water-Cooled Modules for performance & precision

High-Power, Water-Cooled UV LED Module for Final Curing

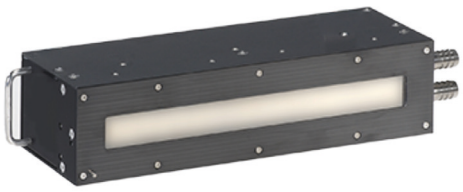
The UniJet AHD modules are compact water-cooled UV LED modules delivering exceptional curing performance.



Key Features

- High irradiance of 24 W/cm² (at a working distance = 5 mm) – ensures powerful, efficient final curing
- Up to 210 % higher UV dosage than the standard A-Series, supporting a wider ink range and higher printing speeds
- Compact design – smaller and lighter than conventional UV lamp systems
- Modular flexibility – optional units can expand the window width up to 80 mm
- Split irradiation – enables targeted curing zones for process optimization
- Adjustable output (10 – 100 %) for precise control
- Replaceable UV LED boards – simplifies maintenance and reduces downtime

Water-cooled UV LED modules are high-intensity curing systems where heat generated by the LEDs is removed through a closed-loop liquid cooling circuit. The water (or glycol mix) circulates through a heat exchanger or chiller, keeping LED junction temperatures low and ensuring stable light output and long lifetime — critical in industrial printing processes like inkjet, flexographic, and screen printing.



AHD series		A360HD	A450HD	A540HD
Cooling method		Water-cooling		
Window Size (mm)		362×48	451×48	539×48
Width (mm)		410	500	590
Length (mm)		120		
Height (mm)		120		
Peak Irradiance (W / cm^2)	395nm	24.8（WD=0mm） 23.4（WD=5 mm）*1		

*1 WD = working distance; Reference value based on measurements by Ushio

Advantages over Air-Cooled Modules

- **Higher Power Density:** Water cooling allows compact designs with higher UV intensity, enabling faster curing at higher printing speeds
- **Thermal Stability:** Consistent cooling ensures uniform UV output, maintaining color and gloss consistency across wide webs or large print formats
- **Quiet & Clean Operation:** No fans mean less airborne contamination and lower noise — ideal for clean production environments
- **Longer LED Lifetime:** Reduced thermal stress extends LED lifetime and minimizes maintenance

Most Suitable Applications

Water-cooled UV LED modules are ideal for:

- High-speed inkjet and flexographic printing (wide-web, label, packaging lines)
- Industrial coating and 3D printing where high UV output is needed
- Environments with limited airflow or strict cleanliness standards

Developing Solutions Together

Ushio is a partner that listens to your ideas and requirements. Let us optimise your processes according to your specifications and expectations. Use our expertise to develop a tailor-made solution that matches your needs.

USHIO

USHIO EUROPE B.V.
The Netherlands | +31 20 446 9333
sales@ushio.eu | www.ushio.eu

USHIO U.K., LTD.
United Kingdom | +44 1296 339988
sales@ushio.eu | www.ushio.eu

USHIO GERMANY GmbH
Germany | +49 8094 906 0
sales@ushio.de | www.ushio.de

USHIO FRANCE S.A.R.L.
France | +33 134 64 94 94
sales@ushio.eu | www.ushio.eu

Intended use: Specifically designed and exclusively approved for use in industrial applications that require a particularly high UV output

Version: 2025-F-UnijetAHD-EN