

USHIO

UV LED modules

New high power UniJet-Series



Designed for highest performance

USHIO's varied, custom designs, in the forms of the A, E and i-Series, are developed around the unique functions of the numerous applications in the commercial and industrial UV curing and printing industries. With features such as water-cooling, air-cooling and dimming, each user can be sure that their specific needs are met.

UV LED UniJet modules have distinct advantages over mercury based lamps for the curing and printing industry. They are safe to operate and their efficient design offers generous energy savings. The superior performance of this series also allows for high peak irradiance, stability and consistent uniformity. The UniJet-Series compact design and operating life exceeding than 10,000 hours offers the user convenience and ease of operation.

Main applications:

- Roll-in print
- UV ink jet printers
- UV ink drying
- 3D printing
- Edge curing
- Spot curing
- Image processing
- Wafer production

Features:

- Mercury free
- Ozone free
- Energy efficient
- High peak irradiance in a compact design
- Long life > 10,000 hours
- Water-cooling, air-cooling
- 365, 385, 395 and 405 nm wavelengths

UniJet E-Series (Air-cooling)

USHIO offers 3 distinct types of UV LED UniJet E-Series modules for inkjet print and 3D printing. All three types are available in different configurations.

HD (High Dose) type

High accumulated irradiance (dose amount) along the short axis is most suitable for inkjet printers or other applications where quick drying is required. Scalable daisy chain design up to 3 modules for E-Series and 2 modules for E II-Series.



HC (High Condensing) type

High peak irradiance is achieved by focusing the light using an integrated rod. The High Condensing (HC) type is most suitable for UV curing or other side emitting applications. Scalable daisy chain design up to 2 modules E-Series and 2 modules for E II-Series.



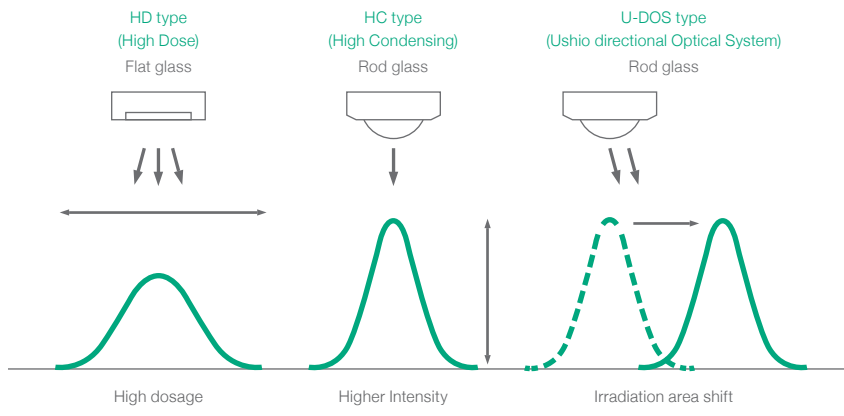
U-DOS (Directional Optical System) type

State-of-the-art USHIO optical technology provides the angle for the irradiance distribution and focuses the light very effectively. The technology prevents the print head from ink clogging by the UV reflection. Scalable daisy chain up to 3 modules for E-Series and 2 modules for E II-Series.



Three types of intensity distributions are available using Ushio unique optical technology. Also, you can choose the most suitable one to your needs from the combination of the intensity, wavelength, irradiation distribution.

E-Series features



Module Type	E110 HD (High Dose)	E110 HC (High Condensing)	E110 U-DOS (Ushio Directional Optical System)
Cooling Type	Air cooling		
Size of the window (mm)	109 × 10	110 × Rod lens	110 × Rod lens
Peak Irradiance (W/cm ²)	3 (Window) at 385/395/405nm, 1.8 (Window) at 365nm	3 (W.D10mm) at 385/395/405nm	1.5 (W.D5mm) at 385/395/405nm
Dimming range (%)	10 to 100		

Module Type	E075II HD, E110II HD (High Dose)	E075II HC, E110II HC (High Condensing)	E075II U-DOS, E110II U-DOS (Ushio Directional Optical System)
Cooling Type	Air cooling		
Size of the window (mm)	75 × 10, 109 × 10	76 × Rod lens, 110 × Rod lens	76 × Rod lens, 110 × Rod lens
Peak Irradiance (W/cm ²)	7 (Window) at 385/395/405nm, 4.2 (Window) at 365nm	4 (W.D10mm) at 385/395/405nm	3 (W.D10mm) at 385/395/405nm
Dimming range (%)	10 to 100		

Module Type	E075Z HD, E110Z HD (High Dose)	E075Z HC, E110Z HC (High Condensing)	E075Z U-DOS, E110Z U-DOS (Ushio Directional Optical System)
Cooling Type	Air cooling		
Size of the window (mm)	75 × 14, 112.5 × 14	76 × Rod lens, 113.5 × Rod lens	76 × Rod lens, 1103.5 × Rod lens
Peak Irradiance (W/cm ²)	7 (Window) at 385/395/405nm, 4.2 (Window) at 365nm	5.5 (W.D5mm) at 385/395/405nm	4.5 (W.D5mm) at 385/395/405nm
Dimming range (%)	10 to 100		

Module Type	E075III HC, E110III HC (High Condensing)	E075III U-DOS, E110III U-DOS (Ushio Directional Optical System)
Cooling Type	Air cooling	
Size of the window (mm)	75 × Rod lens, 110 × Rod lens	76 × Rod lens, 110 × Rod lens
Peak Irradiance (W/cm ²)	7 (W.D10mm) at 385/395/405nm	4.5 (W.D10mm) at 385/395/405nm
Dimming range (%)	10 to 100	

UniJet A-Series (Water-cooling)

- Super high power density up to 24 W/cm²
- Operates on 100-240 VAC 50/60Hz



A-Series

Module Type	A90	A180	A270	A360	A450	A540
Cooling Type	Water cooling					
Size of the window (mm)	90	180	270	360	450	540
Peak Irradiance (W/cm ²)	16 at 365nm, 24 at 385-405nm					
Dimming range (%)	10 ~ 100					

UniJet i-Series (Air-cooling)

- High power density up to 18 W/cm²
- Multidivisional dimming from 10-100%
- Scalable end-to-end with edgeless module
- Integrated driver
- U-VIT (Ushio Variable Illumination Technology):
 - partial dimming - On /Off function can offer optimized light
 - distribution which can contribute to energy saving
 - fine tuned curing process



i-II-Series

Module Type	i60II	i120II	i185II	i245II	i310II	i370II	i430II	i495II
Cooling Type	Air Cooling							
Size of the window (mm)	60x25	120x25	185x25	245x25	310x25	370x25	430x25	495x25
Peak Irradiance (W/cm ²)	8 at 365 nm, 16 at 385-405 nm							
Dimming range (%)	10 to 100							

i-III-Series

Module Type	i075III	i150III	i225III	i300III	i375III	i450III	i525III
Cooling Type	Air Cooling						
Size of the window (mm)	75 x 40	150 x 40	225 x 40	300 x 40	375 x 40	450 x 40	525 x 40
Peak Wavelength (nm)	365/385/395/405						
Peak Irradiance (W/cm ²) at 5 mm distance	11.6/15.0/16.3/16.7						
Dimming range (%)	10 to 100						

Develop together with USHIO

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

USHIO

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