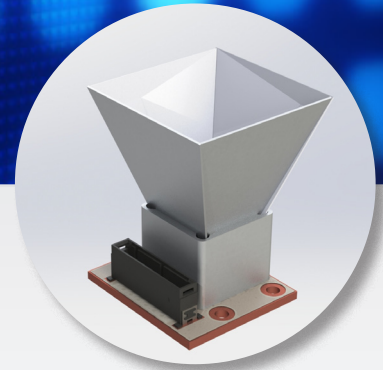


# LumiBright™ UV 2990B Series

LumiBright Ultraviolet Light Engines provide extreme brightness and a highly uniform light distribution. Chip-on-Board LED technology with metallic PCB substrates offers excellent thermal performance. An integral non-imaging optic delivers high collection efficiency and homogeneous light distribution requiring no additional optics.



The Model 2990B Series is designed for UV flood curing systems to cure large parts or many small parts simultaneously. The light engine can be used alone or placed in tiled arrays to provide large area coverage.

The 2990B Series uses a 9 UV LED die array with three choices of peak wavelength ranging from 365nm to 405 nm. An on-board thermistor allows real-time monitoring of operating temperature for closed-loop control.

### Benefits:

- Highly uniform irradiance field
- Reflective metal optics for UV, high power, and high temperature operations
- Continuous high current or pulsed operation
- RoHS compliant - Environmentally friendly

### Features:

- Uniformly irradiates 50 x 50 mm area at 27 mm working distance
- High thermal conductivity metal core PCB
- COB array technology

### Options:

- Choose from 3 UV-LED wavelengths
- Heat sinks and thermal pads
- Driver/Controllers

### Typical Applications:

- UV curing
- Document verification
- Medical phototherapy
- Machine vision

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**SPECIFICATIONS**

Parameter	Specification	Comment
Number of LED die	9	Connected in parallel, chip-on-board
Drive current	18A Maximum	Continuous operation
*Forward voltage	Turn on: 3.0V Limit: 5.6V	Requires constant current operation; PCB temperature at high current operation should not exceed 65°C
UV irradiance	> 475 mW/cm <sup>2</sup>	For >380nm die
Field of irradiance	50 X 50mm	At 27 mm working distance
Electrical connector	1 row, 8 pin	Surface mount, high current
Overall size (mm)	38.8 x 40.3 x 50.0	W x L x H
PCB Thermal impedance	0.45 °C/W	-
Thermistor B <sub>25/50</sub>	3380	10K NTC Thermistor
Thermistor impedance	10 kΩ	At 25 °C
Operating ambient temperature	15 °C to 45 °C	<85% RH, non-condensing
Lifetime (hours)	-	Depending on drive conditions and temperature
<i>*Note: Drive circuits must prevent exceeding the maximum recommended open circuit voltage for any LED die.</i>		

**NOTES****Notes on Thermal Management**

The 2990B-100 uses a metal core circuit board for high thermal conductivity that allows heat to dissipate in all directions. An external heat sink or heat pipe is required to dissipate the heat generated at full drive power. Adding the feature of forced air convection across the heat sink or heat pipe fins removes heat faster and more efficiently. The 2990B-100 circuit board features an attached thermal pad for heat sink contact, no thermal grease is needed. Every 2990B-100 circuit board has a built-in thermistor for temperature monitoring. Lifetime of the LEDs will be compromised if the temperature of the circuit board exceeds 65°C.

**MODEL NUMBERS**

Number	Wavelength
2990B-100-001	365-370nm
2990B-100-002	380-385nm
2990B-100-003	400-405nm

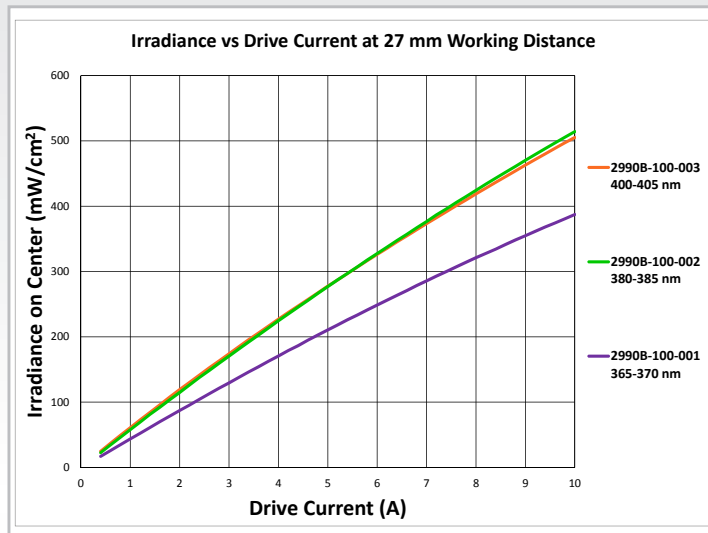


Figure 1

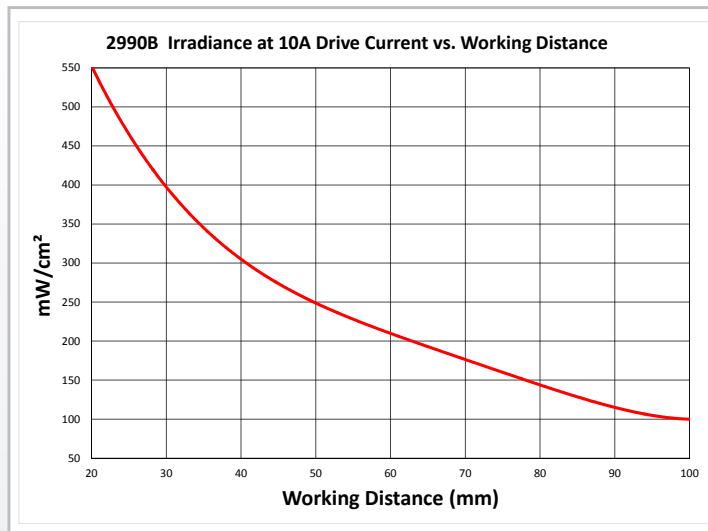


Figure 2

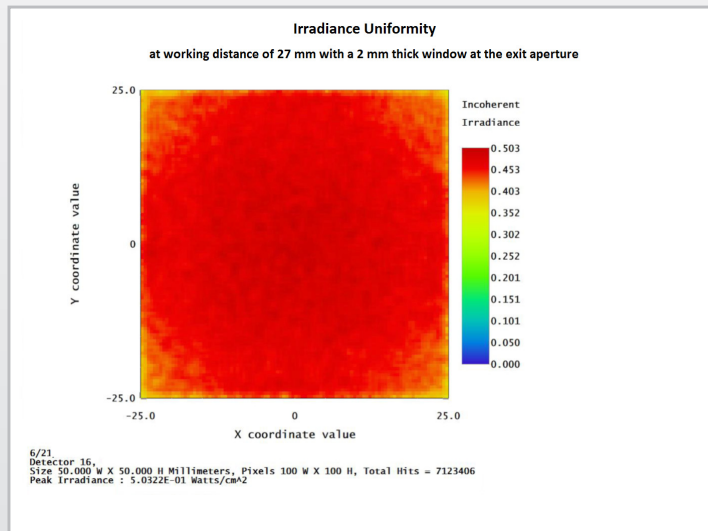
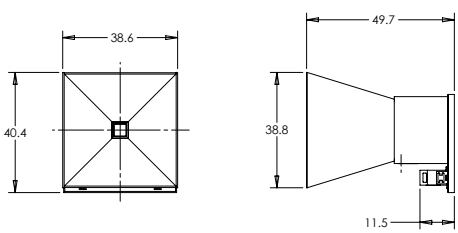
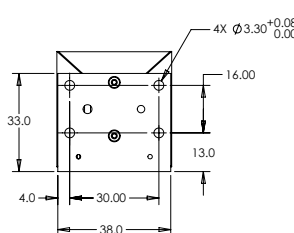
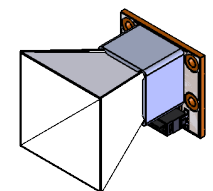


Figure 3

**INSTALLATION CONTROL DRAWING**

REVISIONS				
REV	ECO NO	DESCRIPTION	DATE	ENG
1	N/A	PRERELEASE	11/8/2017	SFS






**INSTALLATION CONTROL DRAWING**

<p>UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS</p> <p>TOLERANCES: 1 PLACE DECIMAL: ± 0.3 2 PLACE DECIMALS: ± 0.20 3 PLACE DECIMALS: ± 0.10 ANGLE: ± 0.1°</p> <p>MATERIAL:</p>	DRW	SFS	DATE	11/8/2017
	ENG	SFS	DATE	11/8/2017
	ENG APVD	TB	DATE	11/8/2017
	FINISH:			

NOTES:

- CONTENT FOR REFERENCE ONLY AND SUBJECT TO CHANGE



INNOVATIONS IN OPTICS, INC.  
82 Cummings Park  
Woburn, MA 01801  
TEL: (781) 933-4477 FAX: (781) 933-0007


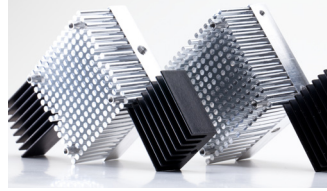

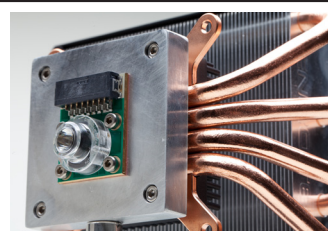
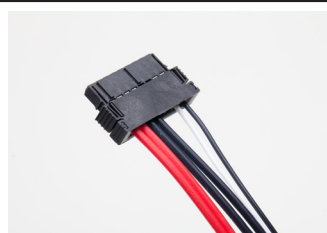
TITLE: **ILLUMINATOR ASSY**

SIZE: **B** DWG. NO. **2990B-100-ICD** REV **1**

SCALE: 1:1 SHEET 1 of 1

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**ACCESSORIES**

	
Cooling Fans	Heat Sinks
	
LumiBright Driver/ Controller	Heat Pipes
	
Wire Harness Assemblies	

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