

# LumiBright™ UV 6700B-300

The LumiBright UV XL is a broad area array illuminator providing extreme brightness and a highly uniform light distribution. Chip-on-Board LED technology with metallic PCB substrates offers excellent thermal performance.



The Model UV 6700B-300 has a 54 mm x 72 mm oval output aperture with 78 LED die (standard) delivering high optical power density.

### Benefits:

- Broad, uniform near field
- High optical power density
- Continuous high current or pulsed operation
- RoHS compliant - Environmentally friendly

### ULTRAVIOLET:

- $\lambda_p$  365 nm thru 405

### Features:

- 54 mm x 72 mm oval output aperture
- Long life, high temperature glass window
- High thermal conductivity metal core PCB
- COB array technology, 78 die standard

### Options:

- Multiples of 78 die available
- Heat sink and thermal pads
- Drivers and Controllers

### Typical Applications:

#### ULTRAVIOLET:

- UV curing
- Medical imaging
- Water and air purification
- Medical photodynamic therapy
- Machine vision
- Transilluminators
- Backlighting for military applications

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**SPECIFICATIONS**

The LumiBright UV 6700B-300 is a high optical power density engine using our standard 42 mil die. Peak ultraviolet wavelengths available are from 365 nm thru 405 nm for UV. The data below is provided as a general guideline for the 78 die configuration.

*Caution: Never connect your unit to an open circuit voltage that is more than 1 Volt above the recommended maximum voltage.*

Table 1

Assembly	Min. No. 42 mil Die	Index Matched	Numerical Aperture (NA)	Far Field Extent (Deg. FWHM)	Output Aperture Diameter (mm)
6700B-300	78	No	N/A	N/A	54 x 72 Oval

*Products are tested using a PGR thermal pad and mounted on a heatpipe.*

Maximum drive conditions for the LumiBright UV 6700B-300:

Bin	Current (Amps)	Voltage (V <sub>r</sub> )	Electrical Power (Watts)	Optical Power (mW)
A3				
UV ( $\lambda_p$ 360-365 nm)	10.0	4.4	44.2	1008
A4				
UV ( $\lambda_p$ 365-370 nm)	15	4.5	66.8	1268
A5				
UV ( $\lambda_p$ 370-375 nm)	15	4.2	62.6	2319
A9				
UV ( $\lambda_p$ 385-390 nm)	27	4.3	117.0	7654
B0				
UV ( $\lambda_p$ 395-400 nm)	27	3.98	107.4	10016
B1				
UV ( $\lambda_p$ 400-405 nm)	27	3.85	104.0	9579

Parameter	Nominal Drive Conditions		Comment
Available peak $\lambda$ 's	360 nm	420 nm	Not all $\lambda$ 's in stock (see Table 3)
Thermal impedance	-	<1.0 °C/W	Typical for 1 die
Available die size	11 mils	60 mils	Standard size 42 mil
Operating temperature	-40 °C	85 °C	Depending on drive conditions
Lifetime (Hours)	-	-	Depends on drive conditions

**ORDERING INFORMATION**

**PART NUMBER**

Table 2

Assembly	Number of Die	Wavelength
6700B-300	78 +	See Table 3
		A3 thru B1

**EXAMPLE:** 6700B-300-78-B1

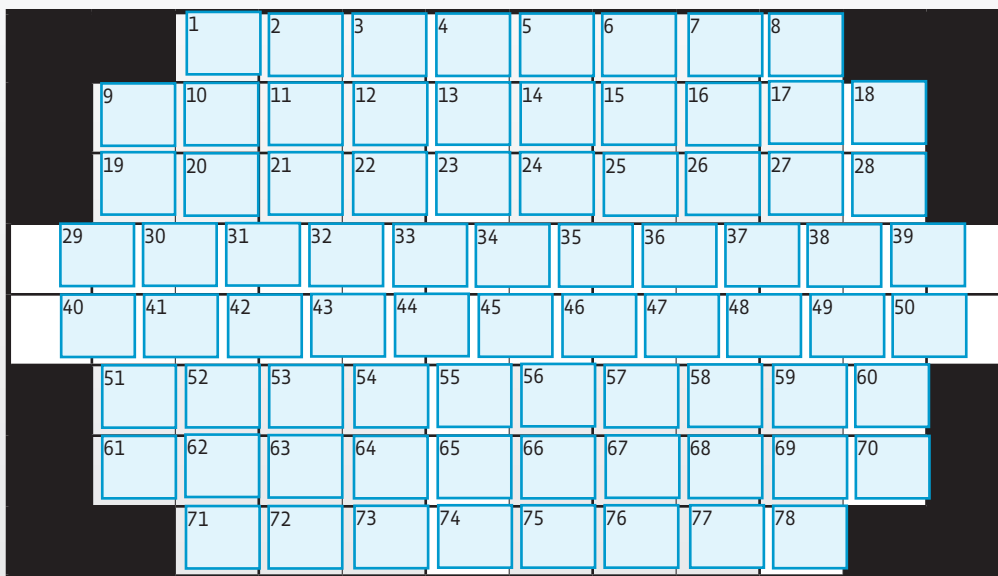
**PLACEMENT CHART**

Chart 1

**DIRECTIONS:**

Refer to the wavelength chart on the following page and place the desired bin codes in the appropriate positions on the chart below. The dashed numbers are for reference in communication.

**78 DIE**



\* Other configurations available upon request

## WAVELENGTH DATA

Table 3

The following table displays our standard LED wavelengths.

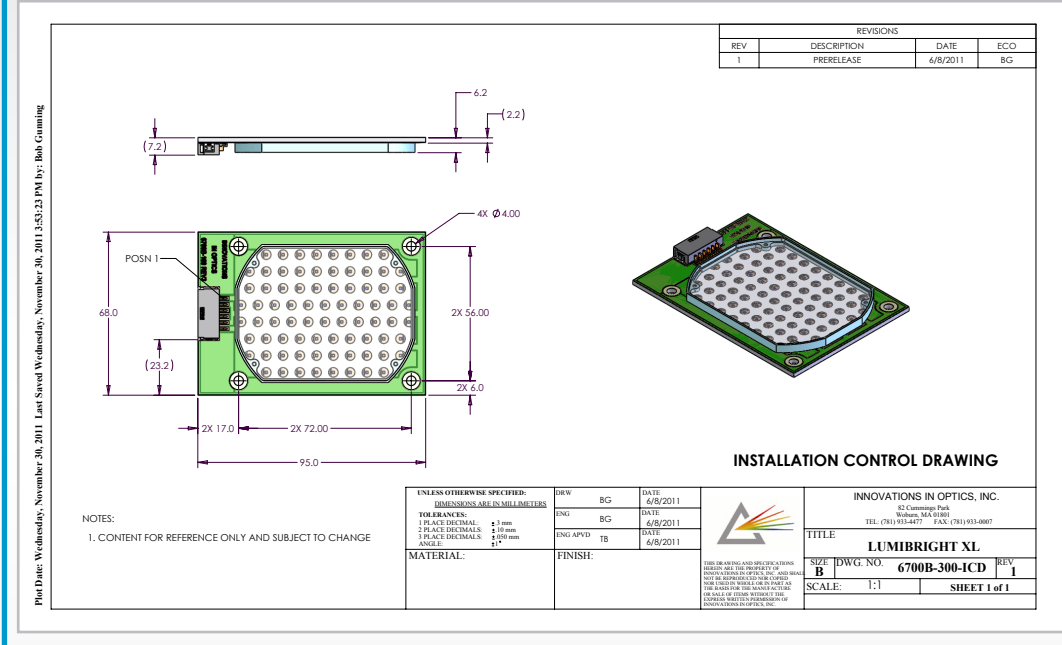
- Data is for single die, in air
- All die are nominally 1.07  $\mu\text{m}$  on a side (42 mil)
- Board temperature for all die is 25°C
- Optical power and Lumens are measured at 350 mA
- Wavelength tolerance is +/- 2nm

Bin	Peak Wavelength		FWHM (Radiometric) [nm]	Dominant Wavelength (Photometric) $\lambda_d$ [nm]	Nominal Optical Power [mW]	Nominal Lumens [lm]	Index Match Factor	$V_f$ Avg. [Volts]	
	$\lambda_p$ min	$\lambda_p$ max							
A3	360	365	-	-	-	-	-	-	
A4	365	370	9.8	-	54	-	-	3.85	
A5	370	375	10.2	-	79	-	-	3.76	
A8	385	390	10.3	-	202	-	-	3.65	
B0	395	400	11.5	-	256	-	-	3.31	
B1	400	405	12.6	-	236	-	-	3.34	
C0	445	450	16.6	445	305	5.7	-	3.24	
C1	450	455	20.6	454	350	10.8	-	3.23	
C2	455	460	27	456	305	10.9	-	3.1	
C4	465	470	21.4	466	327	20.4	-	3.0	
C5	470	475	22.4	472	289	24.8	-	2.99	
D2	505	510	34	505	105	34.3	-	3.11	
D6	525	530	These wavelengths not available for this product					-	3.32
E9	590	600						-	-
F3	610	615	-	-	-	-	-	2.18	
F5	620	625	15.2	620	172	37.3	-	2.07	
F6	625	630	18	629	-	-	-	-	
G3	660	665	16	660	216.4	14.6	-	2.19	
G5	670	675	22	670	22	0.6	-	1.95	
G9	690	695	24	690	25	0.02	-	2.1	
H7	730	735	23	731	118	0.2	-	2.05	
I5	770	775	27	770	50	0.02	-	1.75	
J3	810	815	30	810	58	0.01	-	1.45	
K1	850	855	24	854	62.1	0.01	-	1.49	
M5	970	975	35	-	28	-	-	1.25	
WH	-	-	White	CCT 5700K +/-400	145	75	-	3.3	

The LED wavelengths above are representative of our stock wavelengths. Bins and specifications may change. Should a specific wavelength or white CCT other than those listed be required, IOI will attempt to obtain it for you for which there may be an additional fee.

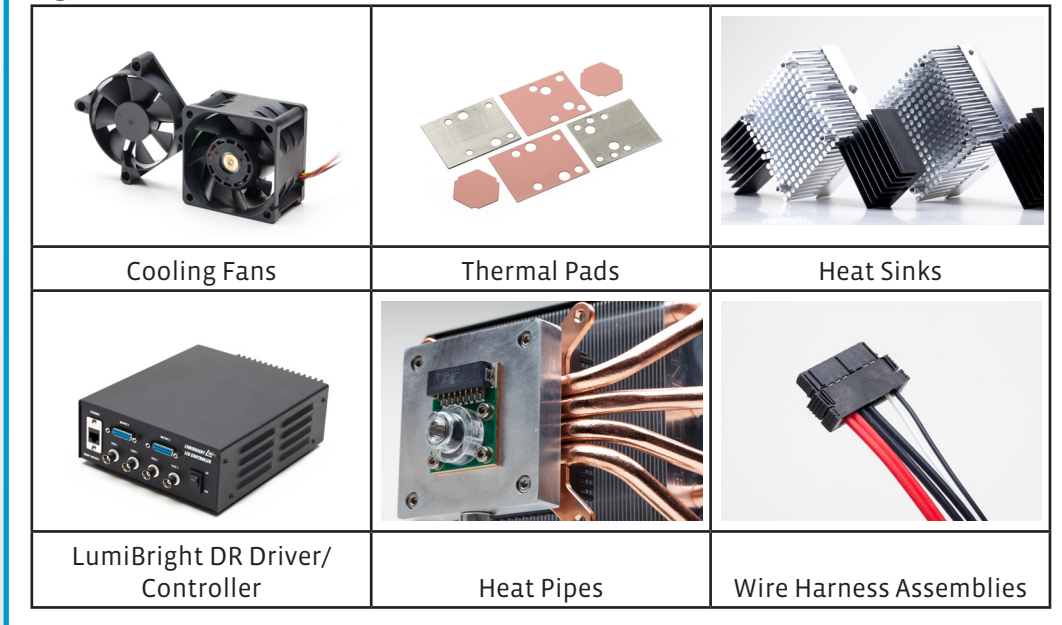
**INSTALLATION CONTROL DRAWING**

Figure 1



**ACCESSORIES**

Figure 2



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