

LumiBright™ XL 6700B-300

The LumiBright 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 XL 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

VISIBLE AND IR:

- λ_p 445 nm thru near IR or white (5700K+/-400)

Typical Applications:

VISIBLE AND IR:

- Medical imaging
- Medical photodynamic therapy
- Machine vision
- Transilluminators
- Backlighting for military applications

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

Table of Contents

Product Specifications.....2

Ordering Information.....3

Wavelength Chart.....4

Installation Control Drawing.....5

Accessories.....5

SPECIFICATIONS

The LumiBright XL 6700B-300 is a high optical power density engine using our standard 42 mil die. Peak wavelengths available are from 445 nm to near IR and white. 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 XL 6700B-300:

Bin	Current (Amps)	Voltage (V _r)	Electrical Power (Watts)	Optical Power (mW)
F6				
RED (λ_p 629 nm)	-	-	-	-
D6				
GREEN (λ_p 527nm)	-	-	-	-
C4				
BLUE (λ_p 470 nm)	-	-	-	-
WH				
WHITE (5700K)	-	-	-	-

Parameter	Nominal Drive Conditions		Comment
Available peak λ 's	445 nm	1720 nm	Not all λ '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
		C0 thru WH

EXAMPLE: 6700B-300-78-F6

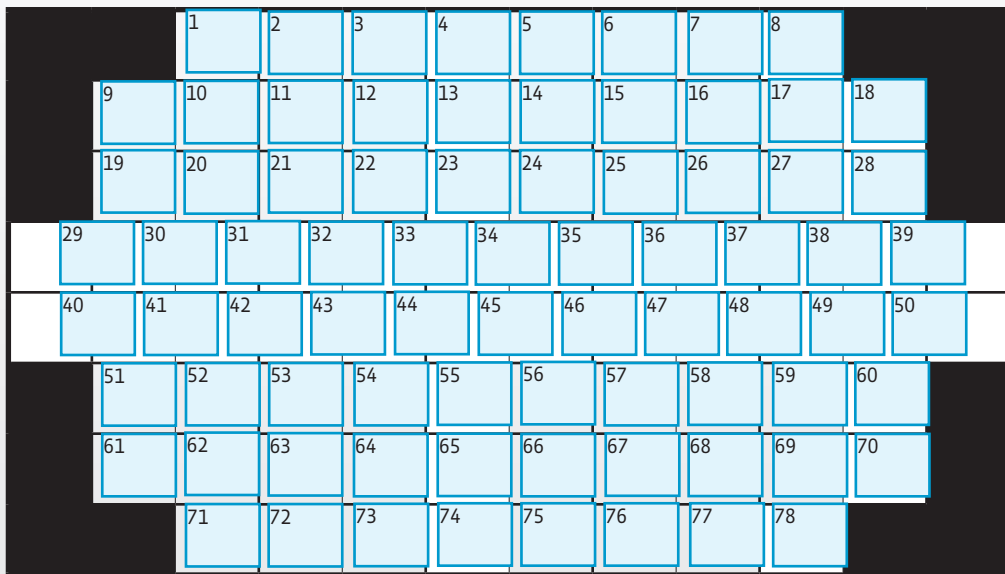
PLACEMENT CHART

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.

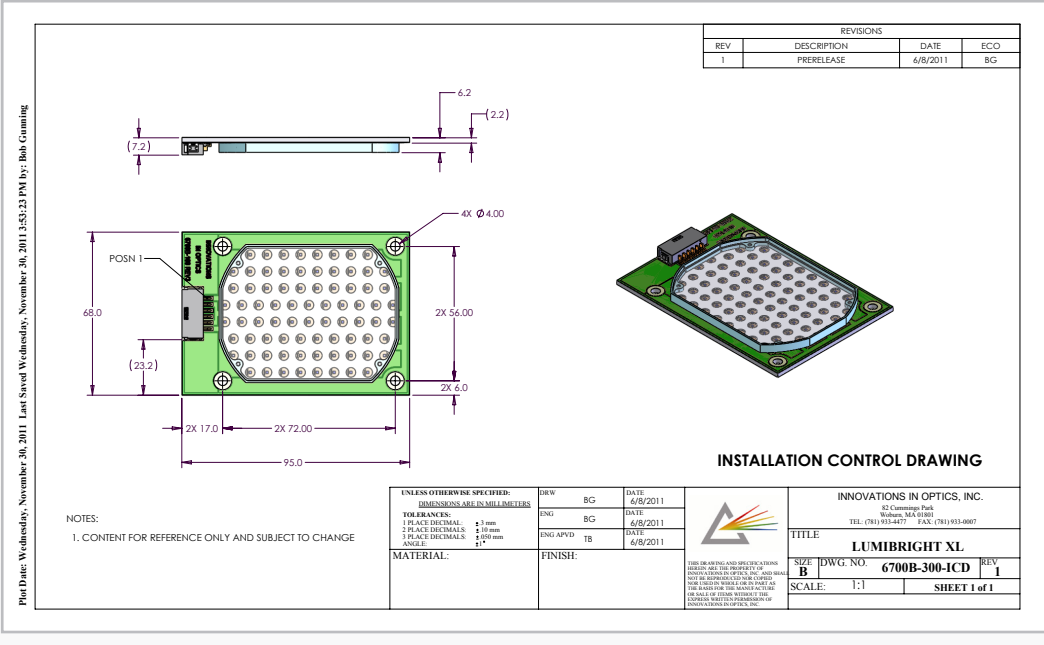
- Data is for single die, in air
- All die are nominally 1.07 μm on a side (42 mil)
- Board temperature for all die is 25°C
- Optical power and Lumens are measured at 350 mA
- Wavelength tolerance is +/- 2nm

Bin	Peak Wavelength		FWHM (Radiometric)	Dominant Wavelength (Photometric)	Nominal Optical Power	Nominal Lumens	Index Match Factor	V_f Avg.
	λ_p min	λ_p max	[nm]	λ_d [nm]	[mW]	[lm]		[Volts]
A3	360	365	-	-	-	-	-	-
A4	365	370	9.8	-	54	-	-	3.85
A5	370	375	-	-	-	-	-	3.76
A8	385	390	-	-	-	-	-	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	35.8	525	122	56.9	-	3.32
E9	590	600	14.3	592	64.5	31.4	-	2.06
F3	610	615	15.4	613	161.3	47	-	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.

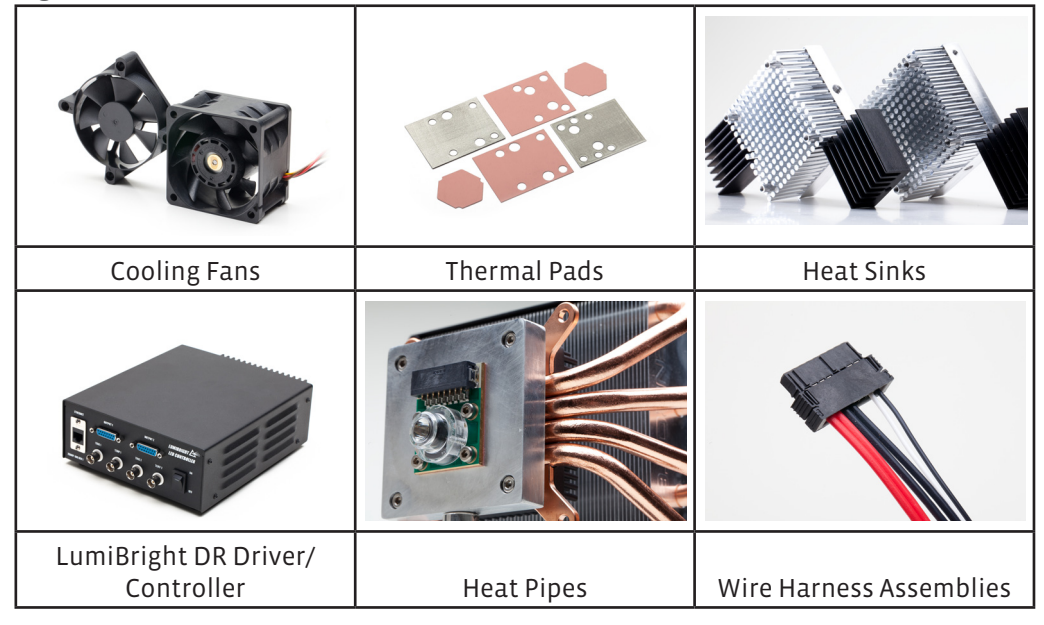
INSTALLATION CONTROL DRAWING

Figure 1



ACCESSORIES

Figure 2



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