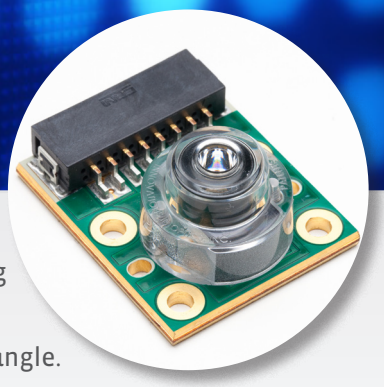
LumiBright™ LE 2400B-300



LumiBright LE Light Engines provide extreme brightness and a highly uniform light distribution. Chip-on-Board LED technology with metallic PCB substrates offers excellent thermal performance. The patented primary optic is a non-imaging concentrator that delivers high collection efficiency and a homogeneous beam requiring no additional optics. Optional holographic diffusers can spread the beam angle.

The Model LE 2400B-300 produces a 37-degree half angle beam from a 5.1-mm diameter aperture with options for 1, 4, or 7 LED die in single or multi-wavelength configurations. An on-board thermistor (included) allows for real-time monitoring of temperature for closed-loop control.

Benefits:

- λ_p 470 nm thru near IR
- Uniform near and far fields
- Long life, high temperature polymer optic
- Continuous high current or pulsed operation
- RoHS compliant - Environmentally friendly

Features:

- 37 degree half angle far field
- 5.1 mm output diameter
- High thermal conductivity metal core PCB
- COB array technology, 1 - 7 Die
- Patented and patent pending non-imaging optics

Options:

- Single or multi-wavelength configurations
- Symmetric or elliptical beam shaping holographic diffusers to modify far field
- Heat sink and thermal pads
- Drivers and Controllers

Typical Applications:

- Endoscope and microscope Illumination
- Fiber optic coupling
- Machine vision
- Fluorescence excitation
- High uniformity spot light

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DS-2400B-300-170406

SPECIFICATIONS

The LumiBright LE 2400B-300 is a multi-configurable light engine with a choice of a single or multi-wavelength PCB using our standard 42 mil die. Peak wavelengths available are from 470 nm to near IR with up to three independent wavelength combinations allowing for flexibility and customization. The data below is provided as a general guideline for the 7 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	Max. No. 42 mil Die	Index Matched	Numerical Aperture (NA)	Far Field Extent (Deg. FWHM)	Output Aperture Diameter (mm)
2400B-300	7	No	0.60	37	5.1

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

Maximum drive conditions for the LumiBright LE 2400B-300:

Bin	Current (Amps)	Voltage (V_f)	Electrical Power (Watts)	Optical Power (mW)
F6				
RED (λ_p 629 nm)	-	-	-	-
D6				
GREEN (λ_p 527nm)	-	-	-	-
C4				
BLUE (λ_p 470 nm)	-	-	-	-

Parameter	Nominal Drive Conditions		Comment
Available peak λ's	470 nm	1720 nm	Not all λ's in stock (Contact Sales Engineer)
Thermal impedance	–	<1.0 °C/W	Typical for 1 die
Thermistor $B_{25/85}$	3574	3646	For 10 kΩ
Thermistor impedence	–	10 kΩ	Others available upon request
Available die size	11 mils	60 mils	Standard size 42 mil
Operating temperature	-40 °C	85 °C	Depending on drive conditions
Maximum optic temperature	-	120 °C	At input aperture
Optic T_g	-	144 °C	Low optical absorption polycarbonate
Diffuser angular spreading	+1° FWHM	+60° FWHM	Standard diffuser adds 5° (FWHM)
Lifetime (Hours)	–	–	Depends on drive conditions

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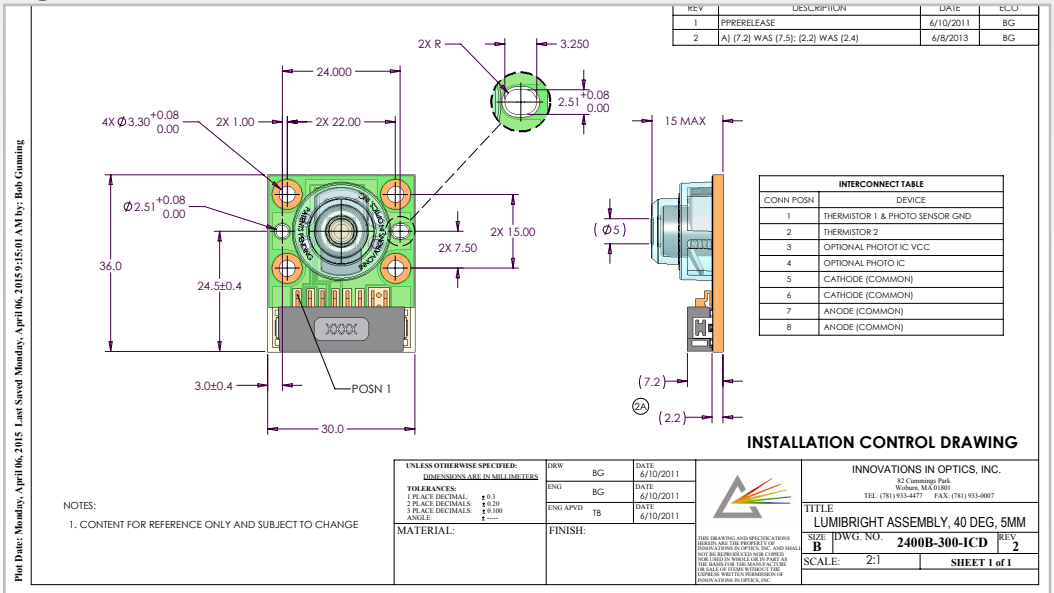
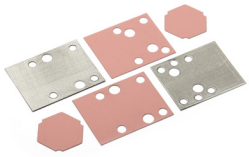
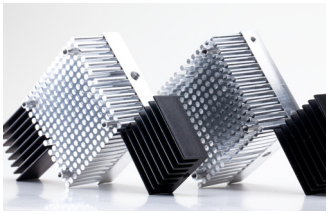
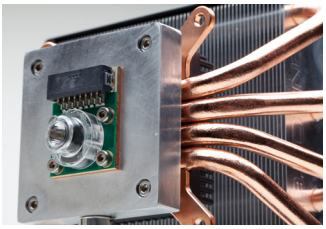
INSTALLATION CONTROL DRAWING

Figure 1



ACCESSORIES

Figure 2

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

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