

LumiBright™ PR 2910A-100 Focusable Projector

LumiBright Projectors combine efficient, non-imaging, homogenizing optics with a precision re-imaging lens system to achieve highly uniform illumination fields. The glass lenses are a superior solution for all high-power wavelengths. Chip-on-Board LED technology with metallic PCB substrates offers excellent thermal performance.



The Model PR 2910A-100 is a focusable unit producing a rectangular, square or round illuminated area. There are options for up to 16 LED die in single or multi-wavelength (independently addressable) configurations. An onboard thermistor is included allowing real-time monitoring of temperature for closed-loop control.

Benefits:

- Uniform far field and illumination plane
- Continuous high current or pulsed operation
- RoHS compliant - Environmentally friendly

VISIBLE AND IR:

- λ_p 435 nm thru near IR or white (5700K+/-400)

Features:

- Focusable illumination field
- Long life, high temperature glass optics
- High thermal conductivity metal core PCB
- COB array technology, 1 - 16 Die
- Independently addressable wavelengths
- Patent-pending technology

Options:

- Integrated filter
- Single or multi-wavelength configurations
- Heat sink and thermal pads
- Drivers and controllers

Typical Applications:

VISIBLE AND IR:

- Medical fluorescence imaging
- Spot curing
- Algae growth
- Medical phototherapy
- Machine vision
- General fluorescence excitation
- High uniformity spot light

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SPECIFICATIONS

The LumiBright PR 2910A-100 is a multi-configurable projector with a choice of a single or multi-wavelength PCB using our standard 42 mil die. Peak wavelengths available are from 435 nm thru near IR or white with up to three independent wavelength combinations allowing for flexibility and customization. The data below is provided as a general guideline for the 16 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	Output Shape	Numerical Aperture (NA)	Far Field Extent (Deg. FWHM)	Illumination Field (mm)
2910A-100	16	Square	N/A	14° X 14°	100X100 @ 20cm (Variable)

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

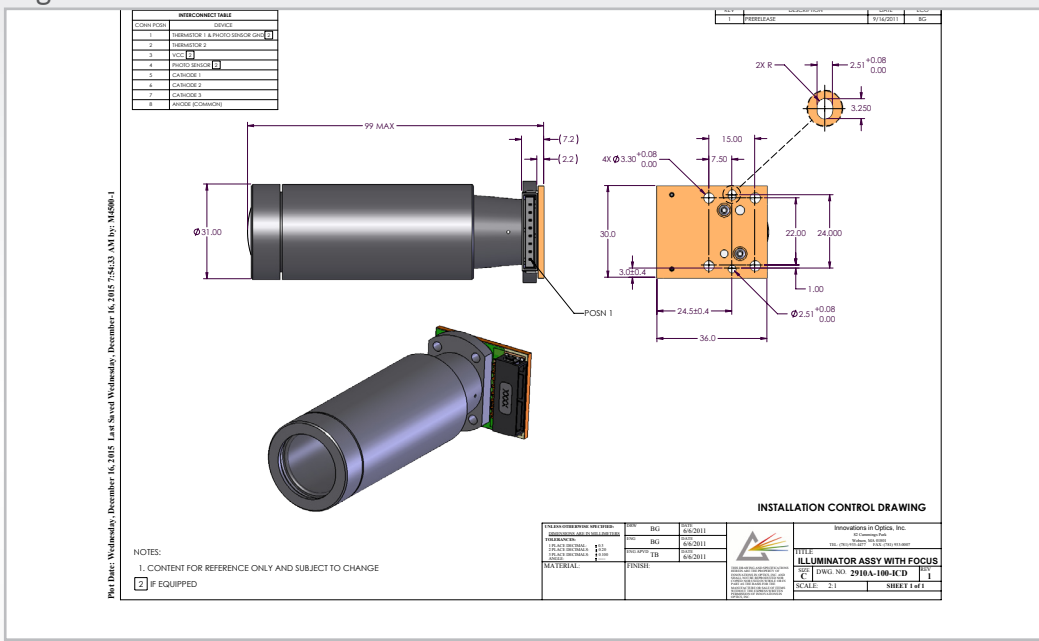
Maximum drive conditions for the LumiBright PR 2910A-100:

	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	435 nm	1720 nm	Not all λ 's in stock (Contact Sales Engineer)
Thermal impedance	-	<1.0 °C/W	Typical for 4 die
Thermistor B _{25/85}	3574	3646	For 10 k Ω
Thermistor impedance	-	10 k Ω	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
Minimum working distance	150mm		
Lifetime (Hours)	-	-	Depending on drive conditions

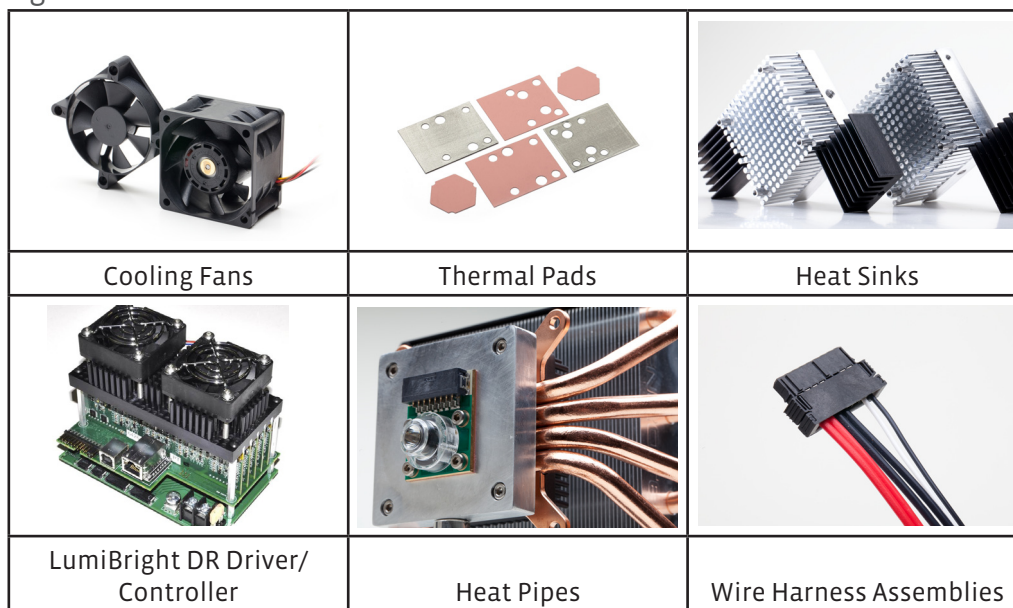
INSTALLATION CONTROL DRAWING

Figure 1



ACCESSORIES

Figure 2



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