

LumiBright™ UV 2910A-100 Focusable Projector

LumiBright UV 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 UV 2910A-100 is a focusable unit producing a square illuminated area. There are options for 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

ULTRAVIOLET:

- λ_p 365 nm thru 405

Features:

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

Options:

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

Typical Applications:

ULTRAVIOLET:

- UV curing
- Medical fluorescence imaging
- Water and air purification
- Medical phototherapy
- Machine vision
- General fluorescence excitation
- High uniformity UV spot light
- Mercury lamp replacement

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SPECIFICATIONS

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Parameter	Specification	Comment
Number of LED die	16	Connected in parallel, chip-on-board
Drive current	30A Maximum	Continuous operation
*Forward voltage	Turn on: 3.0V Limit: 4.8V	Requires constant current operation
UV optical power	11.5 Watts	At max current
UV optical power density	6.6 W/cm ²	At exit aperture, max current
Clear aperture (CA ₀)	14.0 mm	At exit aperture
Far field angle	20°	-
Numerical aperture (NA ₀)	0.34	-
Electrical connector	1 row, 8 pin	Surface mount, high current
Overall size (mm)	30 x 39 x 40.5	W x L x H
PCB Thermal impedance	0.45° C/W	-
Thermistor B _{25/85}	3574 to 3646	For 10 kΩ
Thermistor impedance	10 kΩ	At 25° C
Operating temperature	15° C to 45° C	<85% RH, non-condensing
Minimum working distance	150mm	
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 2910A-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 2910A-100 circuit board features an attached thermal pad for heat sink contact, no thermal grease is needed. Every 2910A-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 60° C.

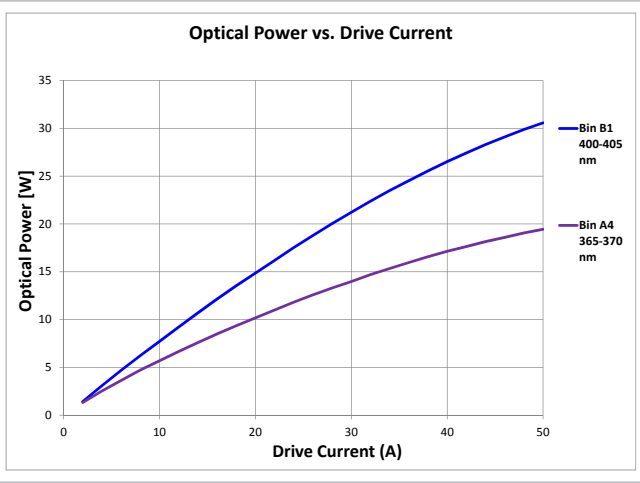


Figure 1

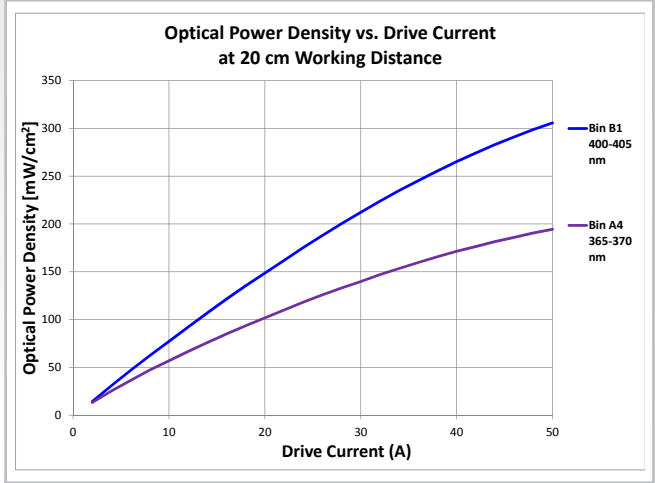


Figure 2

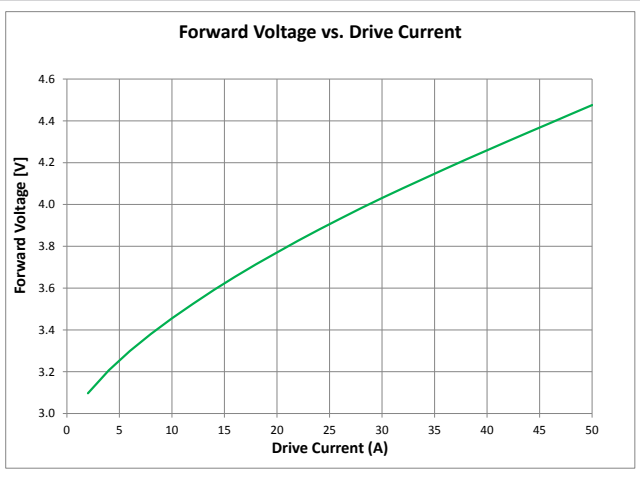


Figure 3

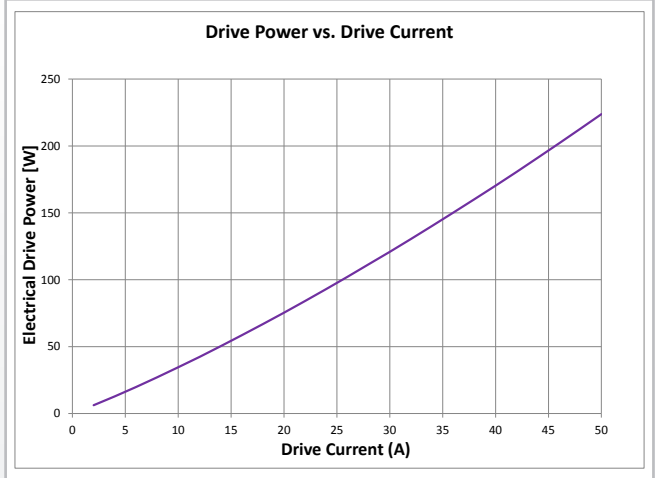


Figure 4

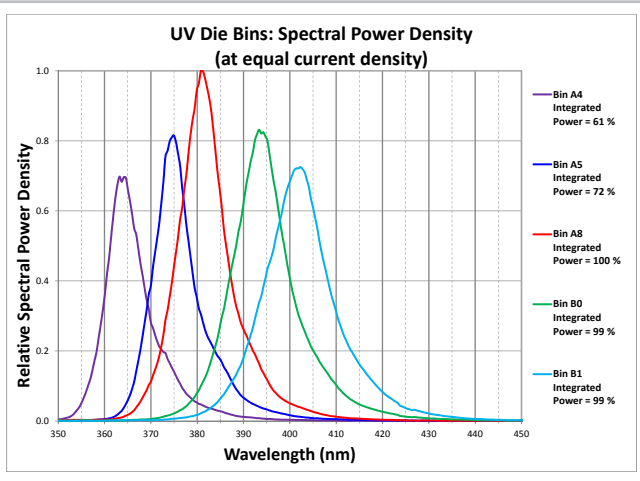


Figure 5

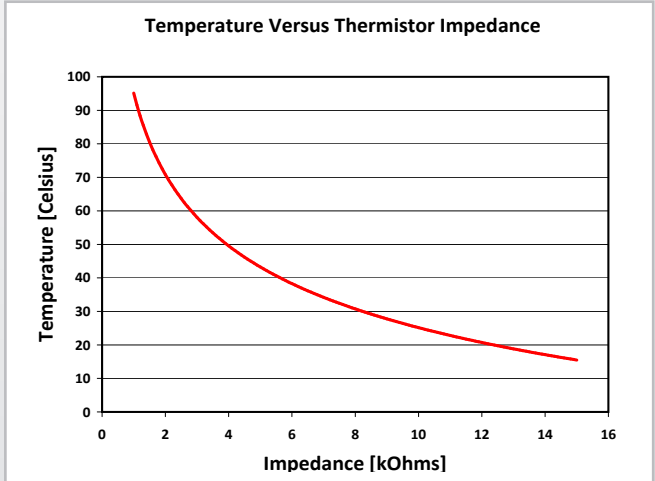


Figure 6

INSTALLATION CONTROL DRAWING

CONN POSN	DEVICE
1	INTERFACER & PHOTO SENSOR CHC
2	INTERFACER
3	PCB
4	PHOTOSENSOR
5	CARRIER
6	CARRIER
7	CARRIER
8	WIRE HARNESS

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NOTES:
 1. CONTENT FOR REFERENCE ONLY AND SUBJECT TO CHANGE
 2. IF EQUIPPED

REV	DATE	BY	APP
1	6/8/2011	BIG	
2	6/8/2011	BIG	
3	6/8/2011	BIG	

INSTALLATION CONTROL DRAWING

ILLUMINATOR ASSY WITH FOCUS	REV	DATE	BY	APP
C	1	6/8/2011	BIG	

ILLUMINATOR ASSY WITH FOCUS
 2910A-100-KC-D
 SCALE: 1:1
 SHEET 1 of 1

ACCESSORIES

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

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