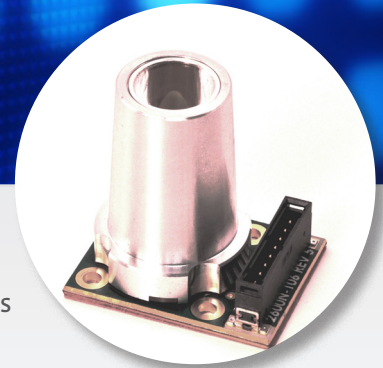


# LumiBright™ UV 2600N-705

LumiBright Ultraviolet 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 specialized glass primary optic is ideal for high power UV light. It is a non-imaging concentrator that delivers high collection efficiency and a homogeneous beam.



The Model LE 2600N-705 produces a 20-degree half angle beam from a 15.3-mm diameter aperture with options for 14 LED die in single or multi-wavelength configurations. An on-board thermistor (included) allows real-time monitoring of temperature for closed-loop control.

## Benefits:

- Uniform near and far fields
- Fused Silica optics for UV, high power, and high temperature operations
- Continuous high current or pulsed operation
- RoHS compliant - Environmentally friendly
- $\lambda_p$  365nm thru 405nm

## Features:

- 20 degree half angle far field
- 15.3 mm output diameter
- High thermal conductivity metal core PCB
- COB array technology, 14 Die
- Patent-pending non-imaging optics

## Options:

- Single or or multi-wavelength configurations
- Heat sink and thermal pads
- Drivers and Controllers

## Typical Applications:

- UV Curing
- High speed printing
- Document verification
- Water and air purification
- Medical phototherapy
- Fluorescence excitation
- Mercury lamp replacement
- Machine vision

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## SPECIFICATIONS

| Parameter  | Specification                | Comment                                       |
|--|------------------------------|---|
| Number of LED die  | 14                           | Connected in parallel, chip-on-board          |
| Drive current  | 30A Maximum                  | Continuous operation                          |
| *Forward voltage   | Turn on: 3.0V<br>Limit: 4.8V | Requires constant current operation           |
| UV optical power   | 30 Watts                     | At max current                                |
| UV optical power density   | 20 W/cm <sup>2</sup>         | At exit aperture, max current                 |
| Clear aperture (CA <sub>0</sub> )  | 14.0 mm                      | At exit aperture                              |
| Far field angle  | 20°                          | -   |
| Numerical aperture (NA <sub>0</sub> )  | 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 <sub>25/85</sub>  | 3574 to 3646                 | For 10 kΩ                                     |
| Thermistor impedance   | 10 kΩ                        | At 25° C                                      |
| Operating temperature  | 15° C to 45° C               | <85% RH, non-condensing                       |
| Lifetime (hours)   | -                            | Depending on drive conditions and temperature |
| *Note: Drive circuits must prevent exceeding the maximum recommended open circuit voltage for any LED die. |                              |   |

## NOTES

## Notes on Thermal Management

The 2600N-705 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 2600N-705 circuit board features an attached thermal pad for heat sink contact, no thermal grease is needed. Every 2600N-705 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.

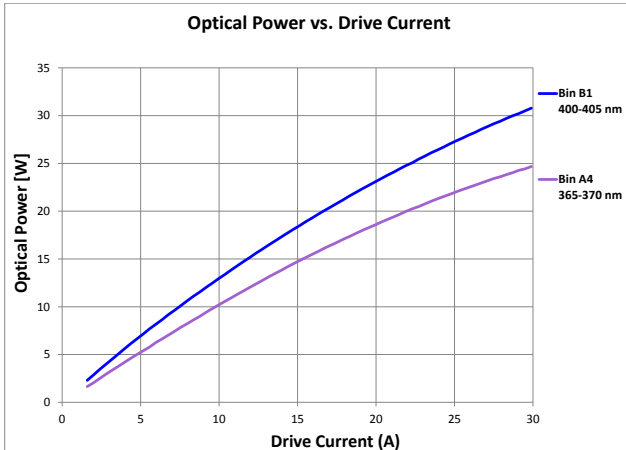


Figure 1

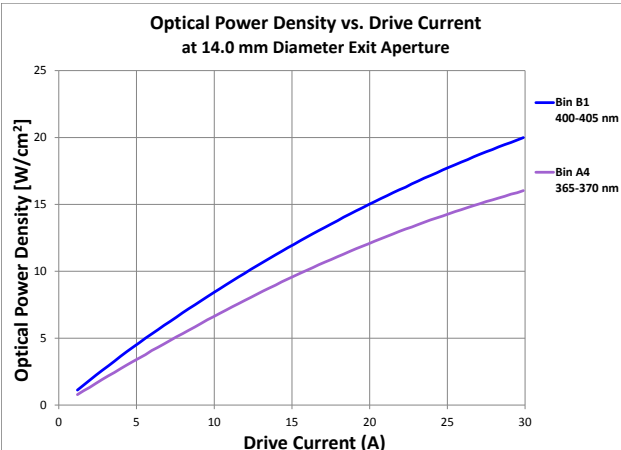


Figure 2

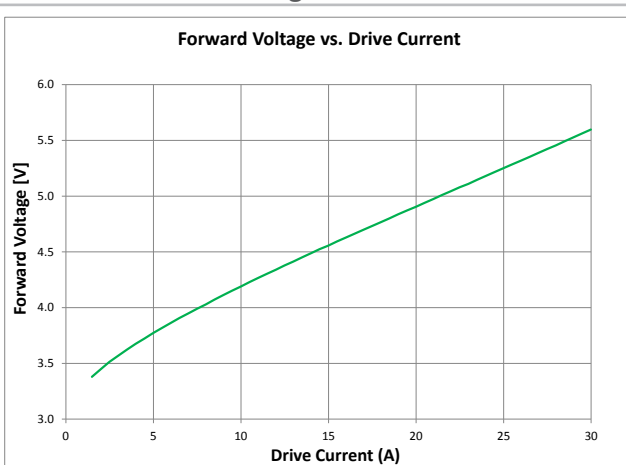


Figure 3

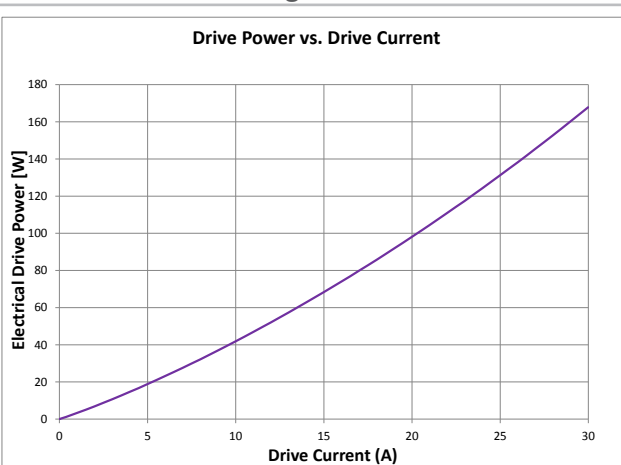


Figure 4

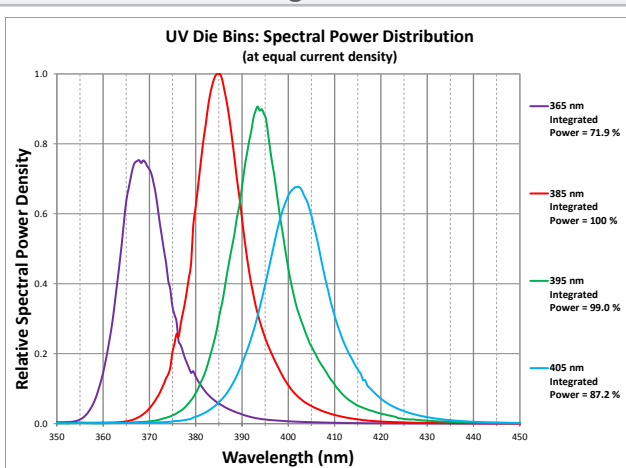


Figure 5

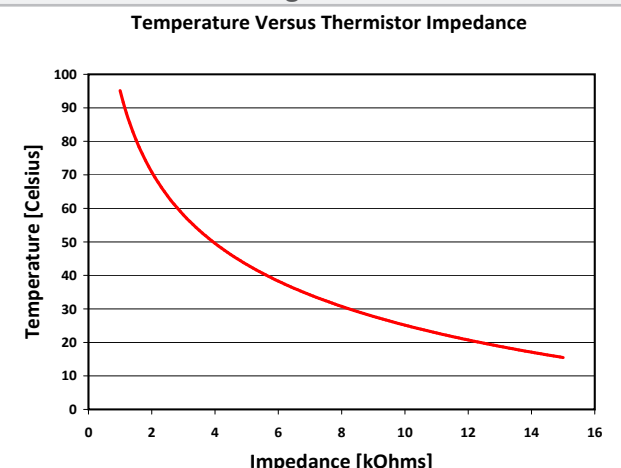
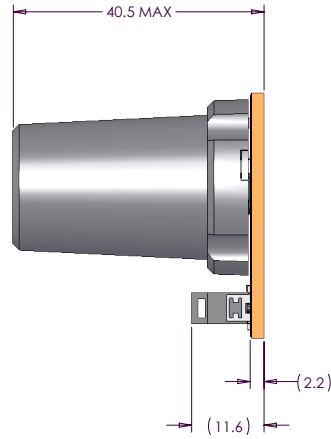
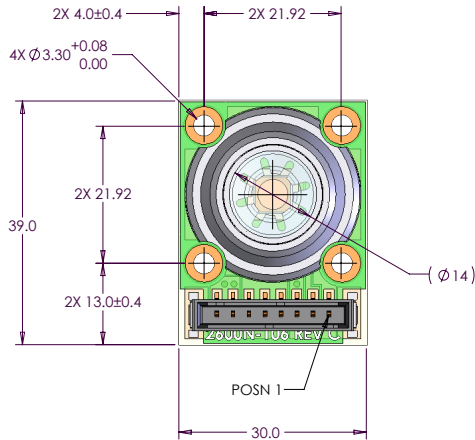


Figure 6

## INSTALLATION CONTROL DRAWING




| REVISIONS |        |             |            |     |
|-----------|--------|-------------|------------|-----|
| REV       | ECN NO | DESCRIPTION | DATE       | ENG |
| 1         | N/A    | PRERELEASE  | 11/22/2016 | BG  |

| INTERCONNECT TABLE |                  |
|--------------------|------------------|
| CONN POSN          | DEVICE           |
| 1                  | THERMISTOR       |
| 2                  | THERMISTOR       |
| 3                  | VACANT           |
| 4                  | VACANT           |
| 5                  | CATHODE (COMMON) |
| 6                  | CATHODE (COMMON) |
| 7                  | ANODE (COMMON)   |
| 8                  | ANODE (COMMON)   |

## NOTES:

1. CONTENT FOR REFERENCE ONLY AND SUBJECT TO CHANGE

|  |           |         |   |            |
|--|-----------|---------|---|------------|
| UNLESS OTHERWISE SPECIFIED:<br>DIMENSIONS ARE IN MILLIMETERS | DRW       | BG      | DATE  | 11/22/2016 |
|  | ENG       | BG      | DATE  | 11/22/2016 |
|  | ENG APVD  | TB      | DATE  | 11/22/2016 |
|  | MATERIAL: | FINISH: |  <p>THIS DRAWING AND SPECIFICATIONS<br/>HEREIN ARE THE PROPERTY OF<br/>INNOVATIONS IN OPTICS, INC. AND SHALL<br/>NOT BE REPRODUCED, COPIED,<br/>NOT USED IN WHOLE OR IN PART AS<br/>THE BASIS FOR THE MANUFACTURE<br/>OR SALE OF ITEMS WITHOUT THE<br/>EXPRESS WRITTEN PERMISSION OF<br/>INNOVATIONS IN OPTICS, INC.</p> |            |

## INSTALLATION CONTROL DRAWING


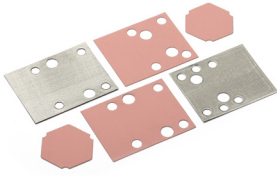
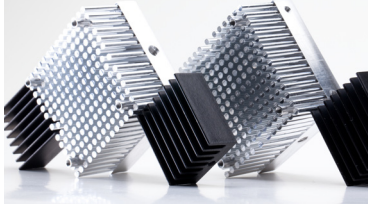

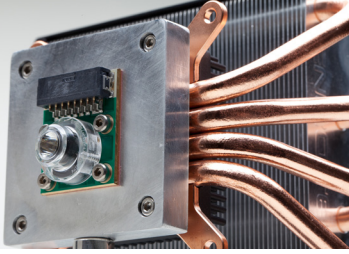

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LUMIBRIGHT ASSY, 20 DEG, 14.2MM (SILICA)SIZE B DWG. NO. 2600N-705-ICD REV 1  
SCALE: 2:1 SHEET 1 of 1

## ORDERING INFORMATION

| Nominal Wavelength | Part Number   | Notes                                       |
|--------------------|---------------|---|
| 365nm              | 2600N-705-002 | Wavelength bins are<br>+/- 5nm from nominal |
| 385nm              | 2600N-705-003 |   |
| 395nm              | 2400B-705-004 |   |
| 405nm              | 2400B-705-005 |   |

**ACCESSORIES**

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

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