

## Unmounted Single-Color LED, 3400 nm

LED3400W



### Description

The LED3400W emits light with a spectral output centered around 3400 nm. This LED is encased in a TO-18 package with a glass cover.

### Specifications

Specification	Value
Color	MIR
Nominal Wavelength	3400 nm
LED Type	TO-18 with Round Glass Cover
Maximum Current (qCW Mode) <sup>a, b, c</sup>	200 mA
Maximum Current (Pulsed Mode) <sup>a, d</sup>	1000 mA
Test Forward Current	150 mA
Full Viewing Angle <sup>a</sup>	31°
Operating Temperature (Non-Condensing)	0 to 50 °C
Storage Temperature	0 to 50 °C
Typical Lifetime <sup>a, b</sup>	>80 000 h

	Symbol	Min	Typical	Max
Peak Wavelength <sup>a, b, e</sup>	$\lambda_p$	3300 nm	-	3440nm
Average Optical Power (qCW Mode) <sup>a, b, f</sup>	$P_{out}$	100 $\mu$ W	300 $\mu$ W	-
Peak Optical Power (Pulsed Mode) <sup>a, d, g</sup>	$P_{out}$	700 $\mu$ W	2000 $\mu$ W	-
Forward Voltage <sup>a, b, f</sup>	$V_F$	0.2 V	-	1.3 V
Bandwidth (FWHM) <sup>a, b, e</sup>		300 nm	-	500 nm

a. Measured at 25 °C

b. Repetition Rate: 0.5 kHz, Pulse Duration: 1 ms, and Duty Cycle: 50%

c. For Long-Time Operation

d. Repetition Rate: 0.5 kHz, Pulse Duration: 20  $\mu$ s, and Duty Cycle: 1%

e. Measured at Test Current

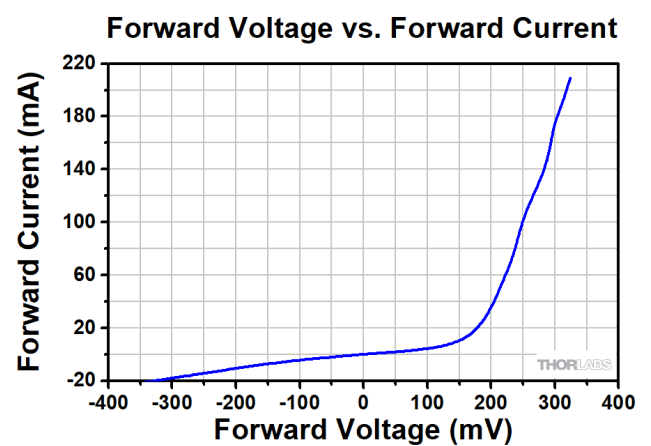
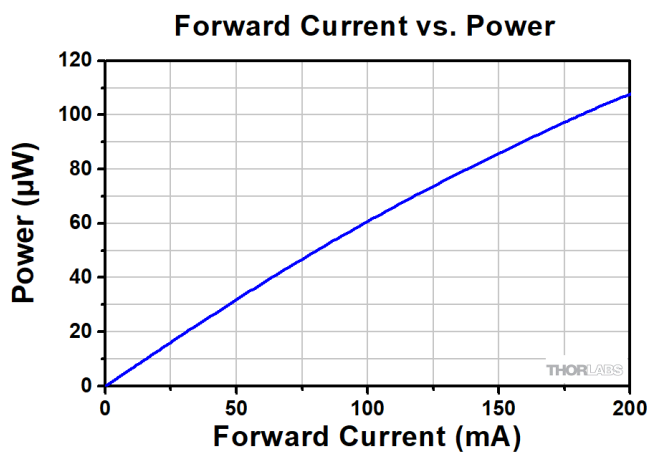
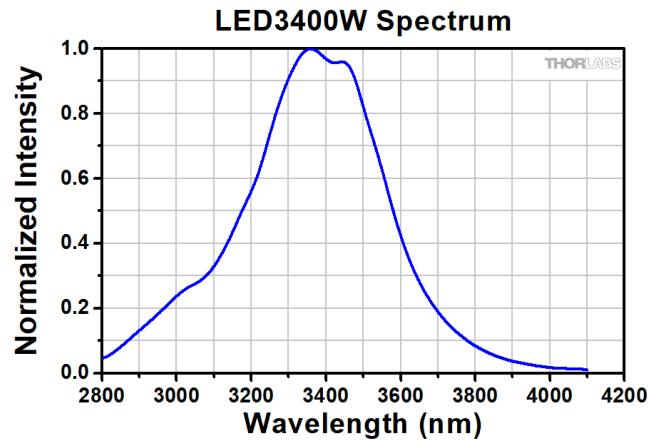
f. Measured at 200 mA

g. Measured at 1 A

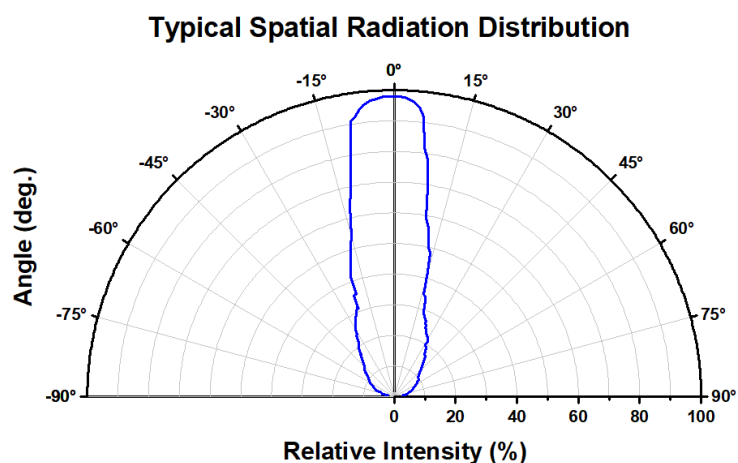
### Soldering Specifications

Soldering Temperature	$T_{SOL}$	180 °C (Within 3 Sec), 3 mm From Case
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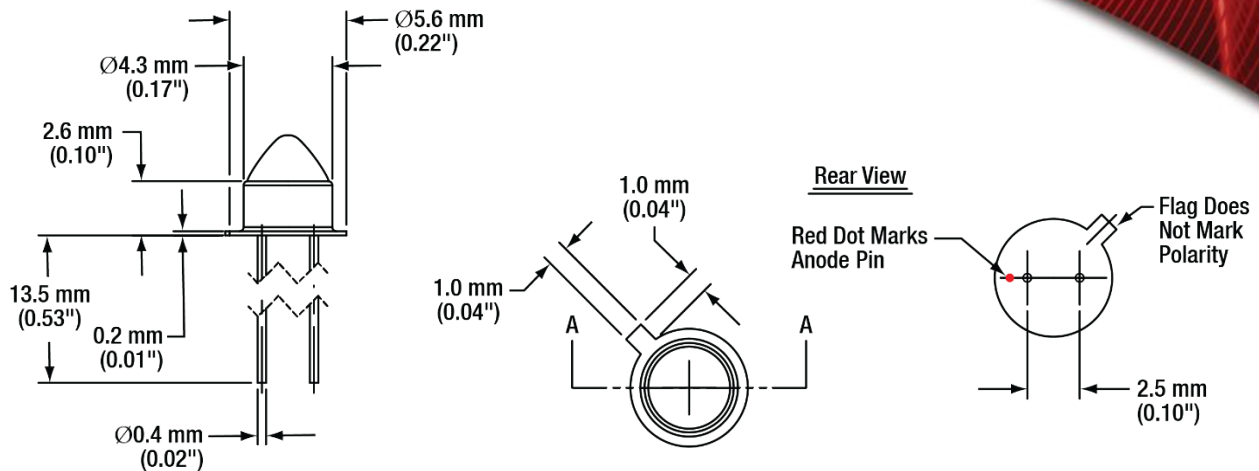
## Performance Plots



The data in the graphs above are measured at quasi-continuous wave (qCW) mode, with a repetition rate of 0.5 kHz. The pulse duration is 1 ms, and the duty cycle is 50%.



## Drawings



## Precautions and Warranty Information

These products are ESD (electro static discharge) sensitive and as a result are not covered under warranty. In order to ensure the proper functioning of an LED care must be given to maintain the highest standards of compliance to the maximum electrical specifications when handling such devices. The LEDs are particularly sensitive to any voltage that exceeds the absolute maximum ratings of the product. Any applied voltage in excess of the maximum specification will cause damage and possible complete failure to the product. The user must use handling procedures that prevent any electro static discharges or other voltage surges when handling or using these devices.

Do not look directly at the front of the LED or at the LED's lens when LED is operational. All statements regarding safety of operation and technical data only apply when the unit is operated correctly according to its specifications. The safety of any system incorporating the equipment is the responsibility of the assembler of the system. It is the full responsibility of the user to ensure safety. The device must not be operated in explosion-endangered environments! Keep out of reach of children.

Thorlabs, Inc. Life Support and Military Use Application Policy is stated below:

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2. A critical component is any component in a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system or to affect its safety or effectiveness.
3. The Thorlabs products described in this document are not intended nor warranted for usage in Military Applications.

