

Ultra Bright NIR, Epoxy-Encased LED, 1550 nm

LED1550E



Description

The LED1550E emits light with a spectral output centered at 1500 nm. This LED is composed of heterostructures (HS) grown on an InGaAsP substrate. The diode is encapsulated in a round clear epoxy casing with a 5 mm diameter.

Specifications

Absolute Max Ratings ^a	
Specification	Max
Power Dissipation	120 mW
Reverse Voltage	5 V
DC Forward Current	100 mA
Forward Voltage at 20 mA	1.5 V
Reverse Current ^b	10 μ A
Pulsed Current ^c	1000 mA
Operating Temperature	-40 to 100 °C
Storage Temperature	-40 to 100 °C

Optical Specifications	
	Typical
Center Wavelength	1500 nm (\pm 50 nm)
FWHM	100 nm
Half Viewing Angle	15°
Forward Voltage at 20 mA	1.2 V
Forward Optical Power at 20 mA	1.2 mW
Total Optical Power at 20 mA	2.0 mW
Rise (Fall) Time	10 (10) ns

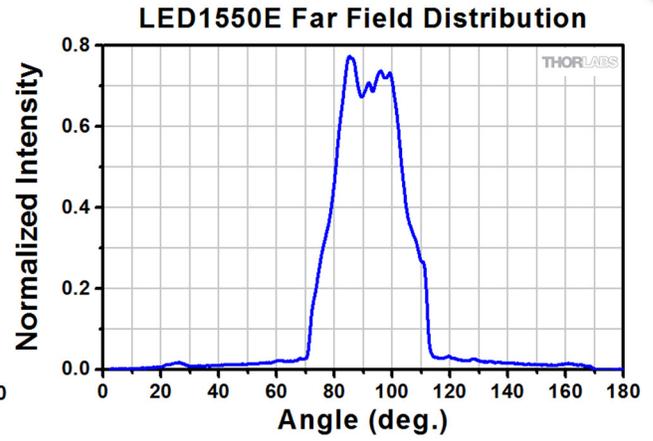
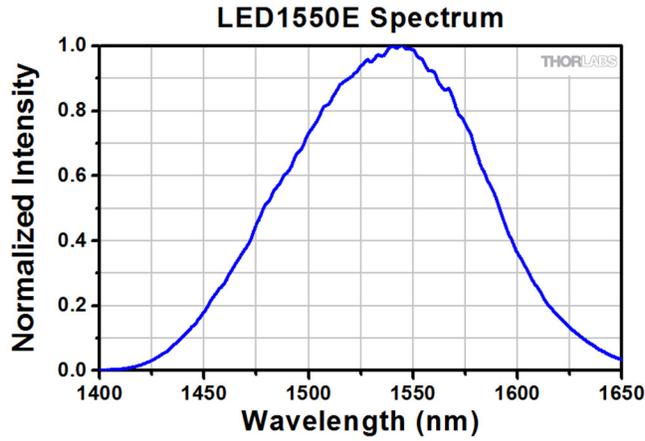


- All maximum measurements specified are at 25 °C.
- $V_r = -5$ V
- 1 ms Pulse with 10% Duty Cycle

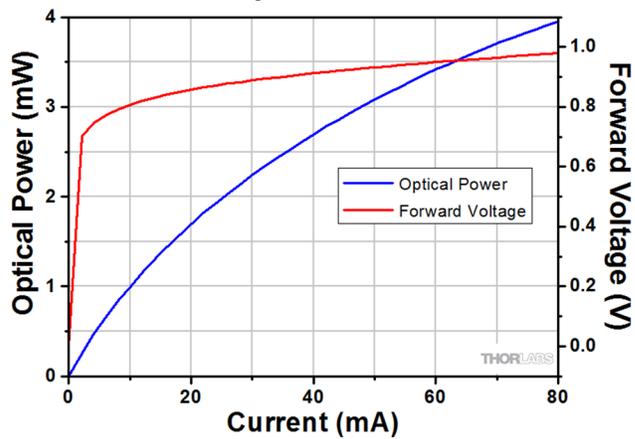
Soldering Specifications	
	Conditions
Dip Soldering	295 °C \pm 5 °C , for less than 3 seconds
Hand Soldering	260 °C \pm 5 °C , for less than 5 seconds
Reflow Soldering	Preheating: 70 °C to 80 °C , for 30 seconds Soldering: 245 °C \pm 5 °C , for less than 5 seconds

Cleaning Solvents							
Solvent	Ethyl Alcohol	Isopropyl Alcohol	Propanol	Acetone	Chloroseen	Trichloroethylene	MKS
Approved	Yes	Yes	Yes	No	No	No	No

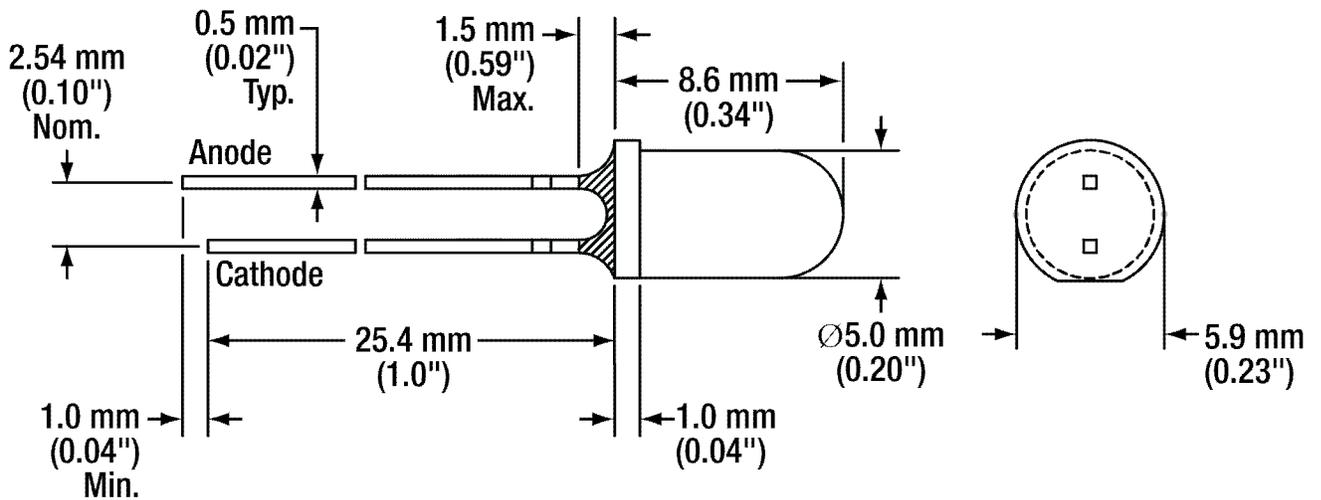
Typical Performance Plots



LED1550E Sample L-I-V Characteristics



Drawing



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.