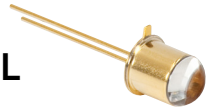
High-Power IR LED with Ball Lens, 1050 nm

LED1050L



Description

The LED1050L is an InGaAsP/InP LED mounted on a TO-18 package with a spherical glass lens. It is designed for high output power applications.

Specifications

Absolute Max Ratings	
Specification	**Max**
Reverse Voltage	3 V
DC Forward Current	100 mA
Operating Case Temperature	-20 to 90 °C
Storage Temperature	-30 to 100 °C

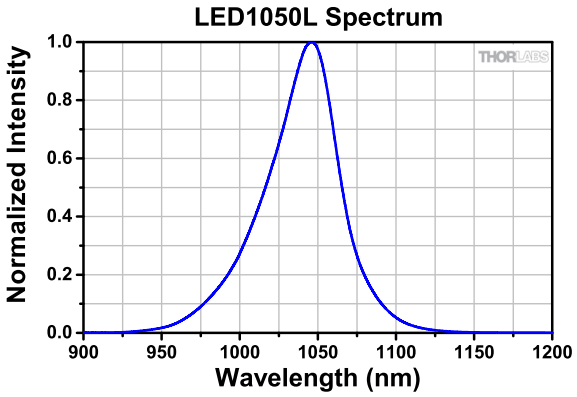
Specifications[a]			
	Min	**Typical**	**Max**
Operating Current (Continuous)	-	50 mA	100 mA
Forward Voltage at 50 mA	-	1.1 V	1.4 V
Optical Output Power at 50mA	-	4 mW	-
Beam Divergence (FWHM)	-	15°	-
Peak Wavelength	1000 nm	1050 nm	1100 nm
Bandwidth (FWHM)	-	50 nm	-
Rise Time	-	10 ns	-
Fall time	-	10 ns	-

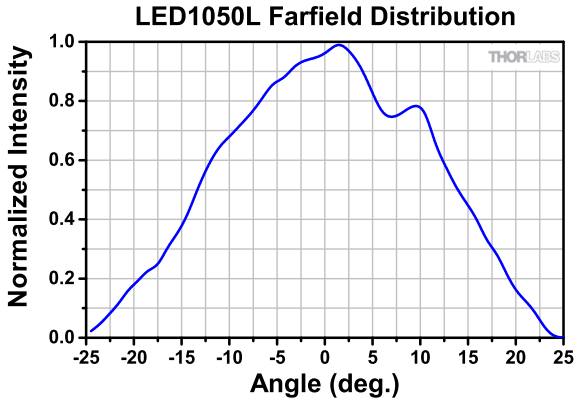
a. Unless otherwise specified, all specifications are for operation at 25 °C.

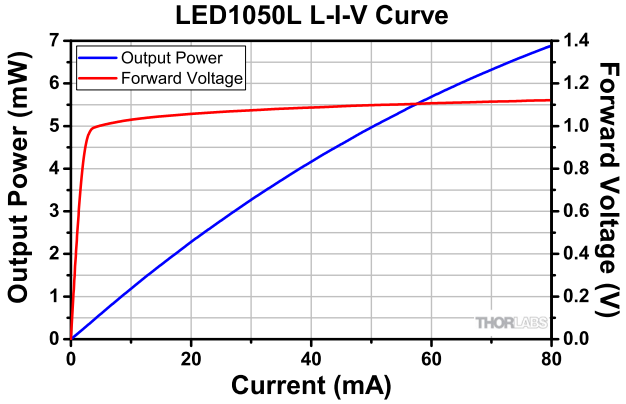
Soldering Specifications	
	Conditions
Dip Soldering	Pre-heat backside of PCB at 90 °C maximum for 60 seconds or less; Solder bath at 265 °C maximum for 5 seconds or less
Hand Soldering	Soldering iron tip at 265 °C maximum for 3 seconds or less

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

Typical Performance Plots

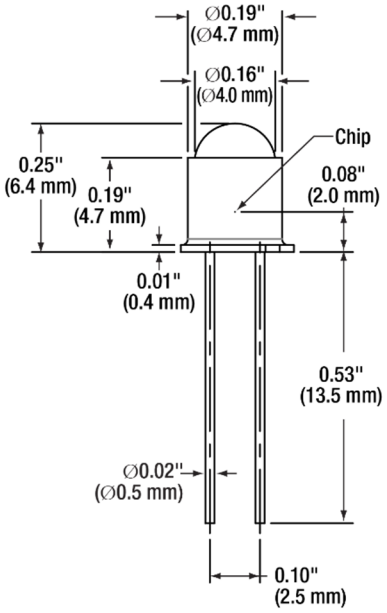


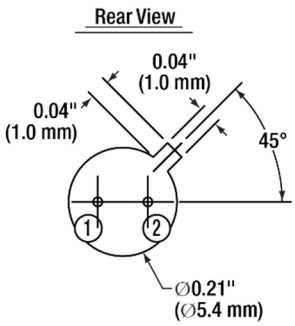


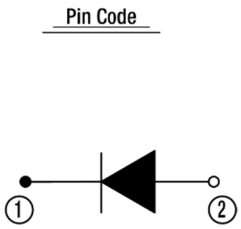


These measurements were taken at a case temperature of 25 °C. The output spectrum and farfield distribution were measured with an operating current of 50 mA.

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.

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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.