

Unmounted Single-Color LED, 625 nm



LED625E

Description

The LED625E emits light with a spectral output centered at 625 nm. The diode is encapsulated in a round clear epoxy casing with a 5 mm diameter.

Specifications

Specification	Value
Color	Red
Nominal Wavelength	625 nm
LED Type	5 mm Epoxy Housing (T-1 ¾)
Maximum Current ^a	50 mA
Test Current ^a	20 mA
Reverse Voltage ^a	5 V
Full Viewing Angle ^{a,b}	20°
Typical Bandwidth (FWHM) ^{a,b}	20 nm
Operating Temperature (Non-Condensing)	-40 to 85 °C
Storage Temperature	-40 to 100 °C
Typical Lifetime	>5000 h
Emitter Size	1 mm x 1 mm

	Symbol	Min	Typical	Max
Peak Wavelength	λ_p	625 nm	635 nm	645 nm
LED Power Output ^{a,b}	P_{out}	5 mW	9 mW	-
Forward Voltage ^a	V_F	-	2.1 V	2.3 V

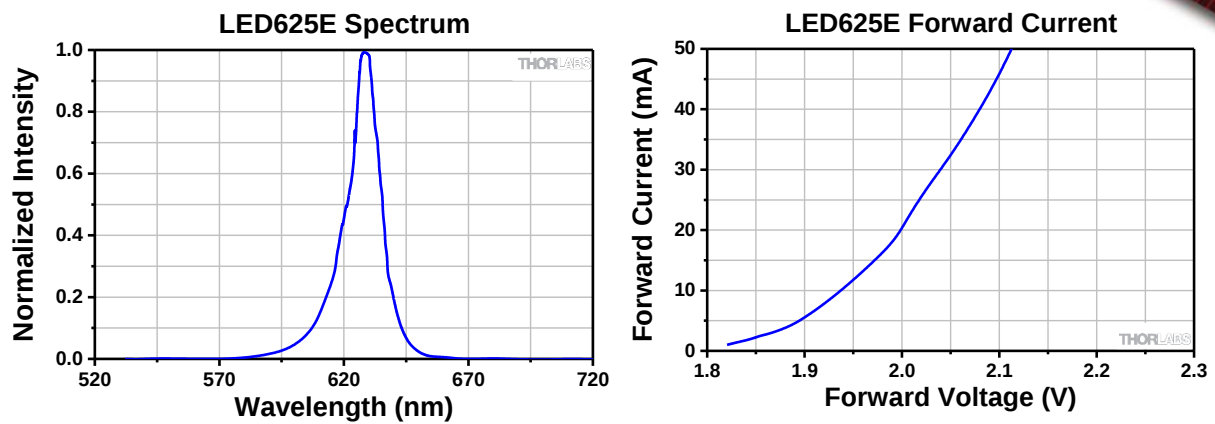
a. Measured at 25 °C

b. When Driven with the Test Current

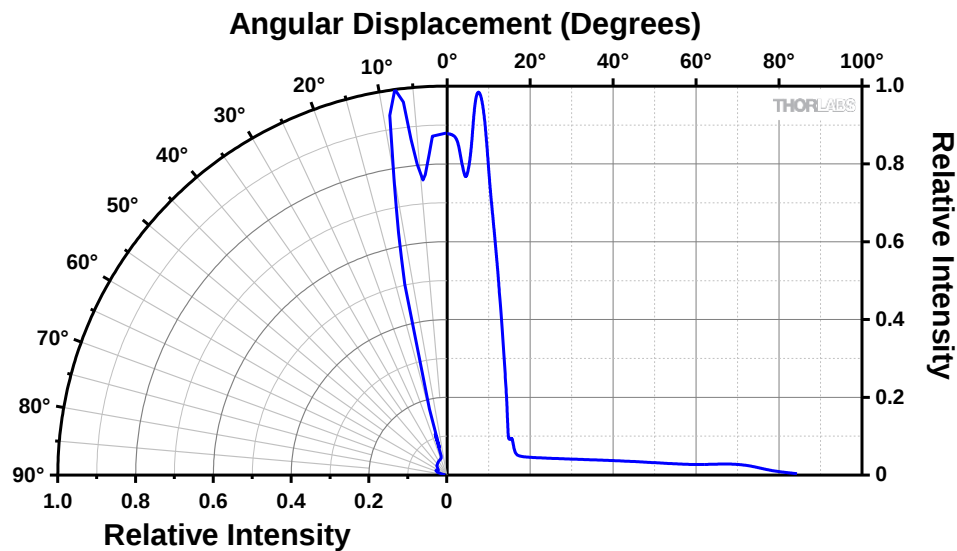
Soldering Specifications

Manual Soldering Temperature	T_{SOL}	365 °C (within 3 sec)
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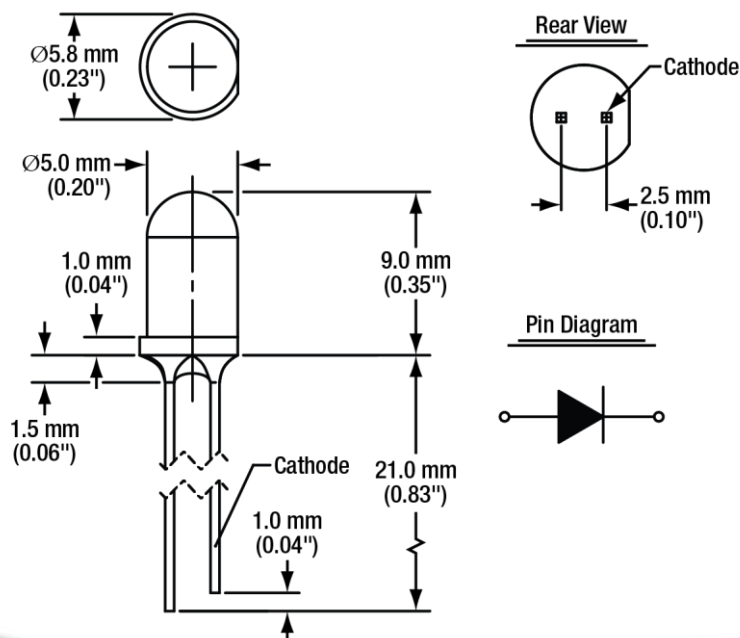
Typical Performance Plots



LED625E Spatial Radiation Distribution



Drawings



Precautions and Warranty Information

These products are ESD (electro static discharge) sensitive and as a result warranty is only valid for one year for unopened products in accordance with and subject to the terms and conditions set forth in Thorlabs' General Terms and Conditions of Sale which can be found at https://www.thorlabs.com/Images/PDF/LG-PO-001_Thorlabs_terms_and_%20agreements.pdf. Warranty is void after product packaging is opened. 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.

During operation, the LED emits high intensity ultraviolet (UV) light, which is harmful to skin and eyes. UV light is hazardous to skin and may cause cancer. Avoid exposure to UV light when LED is operational. Precautions must be taken to avoid looking directly at the UV light without the use of UV light protective glasses. Do not look directly at the front of the LED or at the LED's lens when LED is operational. Safety of the assembled end product is the sole responsibility of the assembler of the system. Keep out of reach of children.

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

THORLABS' PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS OR IN ANY MILITARY APPLICATION WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE PRESIDENT OF THORLABS, INC. As used herein:

- 1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and whose failure to perform, when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury to the user.*
- 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.*

