Ultra Bright White LED

LEDW25E

Description

LEDW25E is an InGaN LED that emits light with a spectral output from 430 nm to 660 nm. This LED provides a wide 25° viewing angle is encapsulated in a round, clear epoxy casing with a 5 mm diameter.

Specifications

Absolute Max Ratings		
Specification	**Symbol**	**Max**
Reverse Voltage	V_{rev}	5 V
DC Forward Current, -40 to 40 °C	I_F	30 mA
Pulsed Forward Current[a]	I_{FP}	100 mA
Operating Case Temperature	T_{case}	-40 to 95 °C
Storage Temperature	$T_{storage}$	-40 to 100 °C

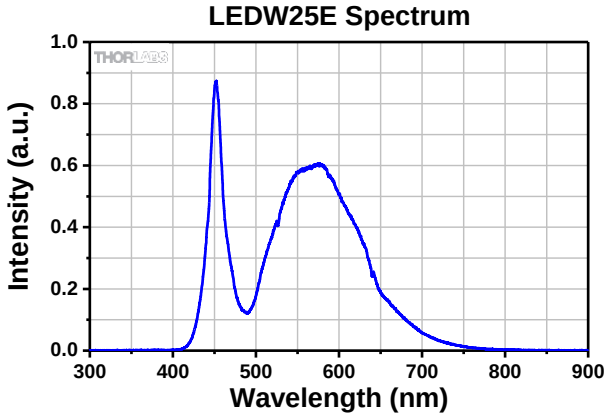
a. Condition: Duty cycle = 10%, pulse width = 100 µs.

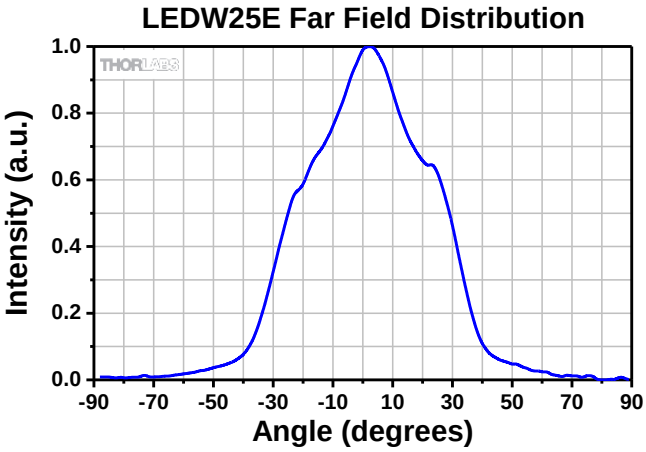
Specifications[b]				
	Symbol	**Min**	**Typical**	**Max**
Wavelength Range	λ	430 - 660 nm		
Optical Power	P_{op}	-	15 mW	-
Forward Current, CW @ P_{op}	I_{fwd}	-	20 mA	-
Forward Voltage at 20 mA	V_{op}	-	3.2 V	4.0 V
Viewing Half Angle (HWHM)	$\Theta_{1/2}$	-	25°	-

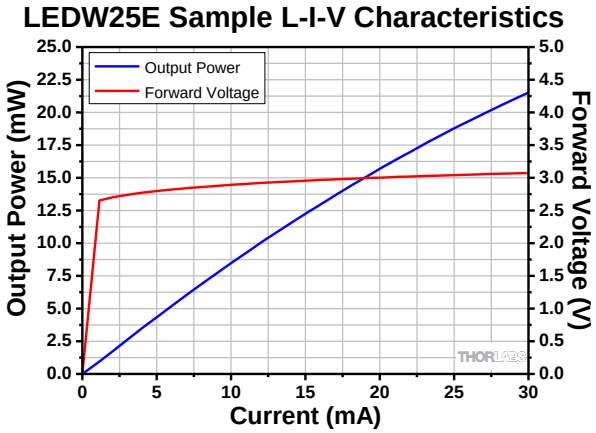
b. Unless otherwise specified, all specifications are for operation at 25 °C.

Soldering Specifications	
	Conditions
Hand Soldering	At 260 °C, hold the soldering iron tip 3 mm from the bottom of the epoxy casing for 3 seconds or less.

Typical Performance Plots

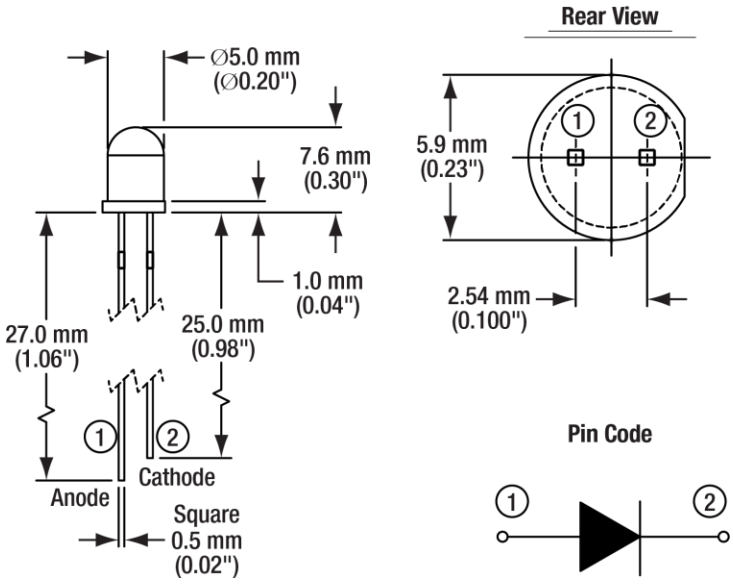






These measurements were taken at a case temperature of 25 °C. The output spectrum and radiation distribution were measured with a forward current of 20 mA.

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.

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.