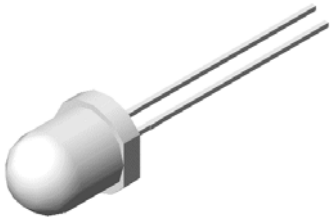
8mm Round Super Bright LED

VT 8W38.52

Description

This high brightness WHITE emitting LEDs are made from the most efficient InGaN technology. Its chip material is of InGaN technology, able to reach a high light output efficiency. These series of LEDs come in moisture resistance water clear lens while offering various viewing angles. Other than Bulk packing, tape and reel is available. Changes in viewing angle, luminous intensity and lens color is acceptable.



RoHS

Pb pb-free

Applications

- Lighting indicator
- Status lights
- ON/OFF indicator
- Backlight illumination

Electronic Optical Characteristics (@ 20mA):

Part Number	Emitted Color	CCx	CCy	Lens Color	Iv(mcd)		View Angle (2θ1/2)	VF(V)	
					Min.	Typ.		Typ.	Max.
VT 8W38.52	White	0.30	0.29	Clear	4500	9000	20	3.5	4.0

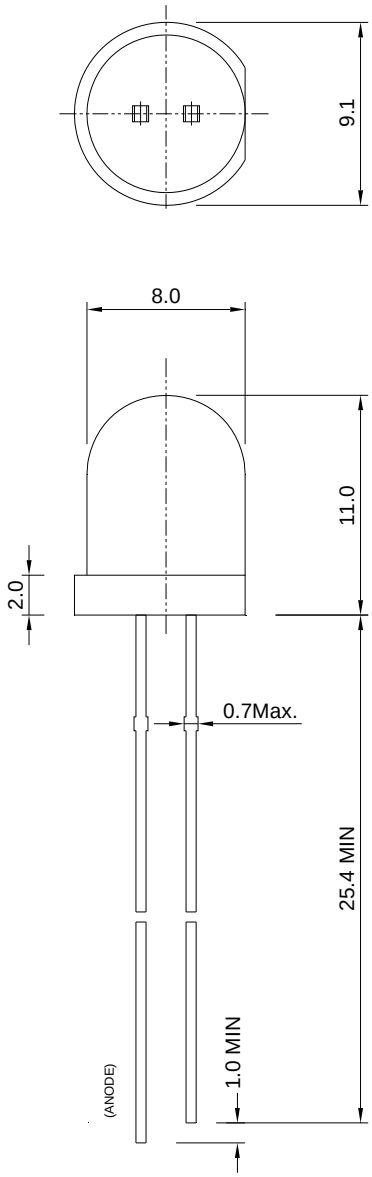
Absolute Maximum Ratings at Ta=25℃

Emitted Color	P_D(mW)	I_F (mA)	ESD(V)	I_R(uA)@$V_{R=}$5V	Topr(℃)	Tstg(℃)
White	120	30	150	50	-30~+85	-40~+100

Note: Please take note the Absolute Maximum Rating values. Any operation beyond the specified ratings in this table will result degradation of LED life-span and may cause LED to fail.

Package Dimension:

unit: mm

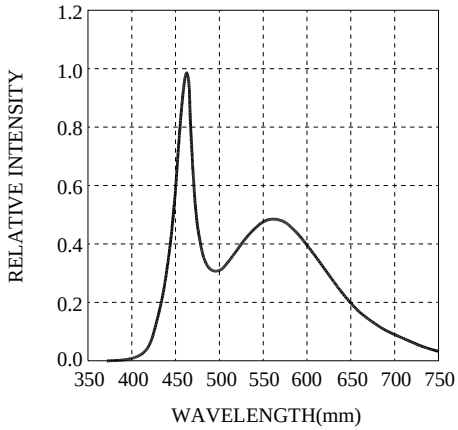


Notes:

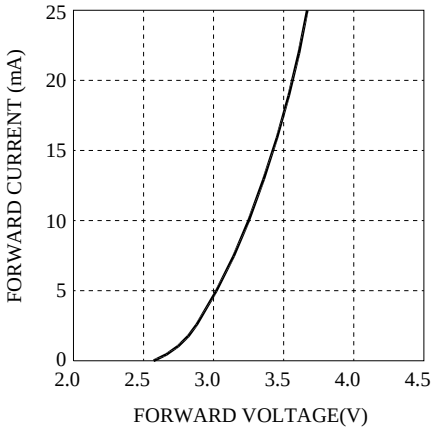
1. All dimensions are millimeters.
2. Dimensional tolerance is +/- 0.2mm unless otherwise specified.
3. Epoxy meniscus under flange is 1.5 mm max.
4. Specifications are subject to change without notice.

Typical Electro-optical Characteristics Curves

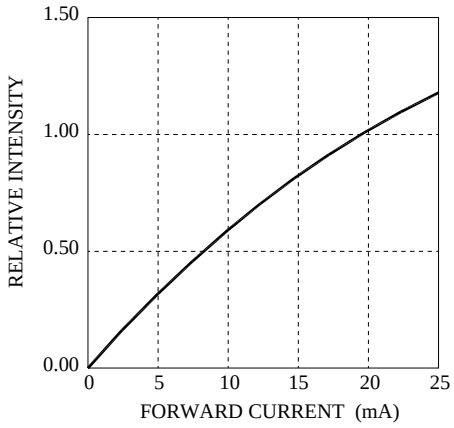
Relative Intensity vs. Wavelength



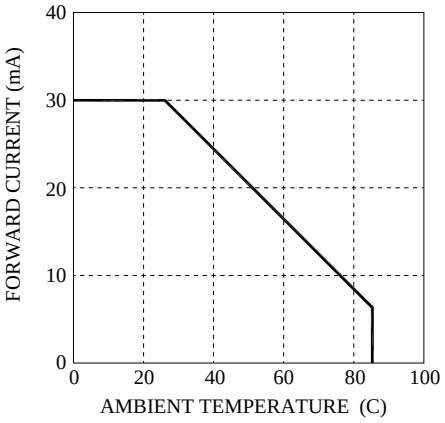
Forward Current vs. Forward Voltage



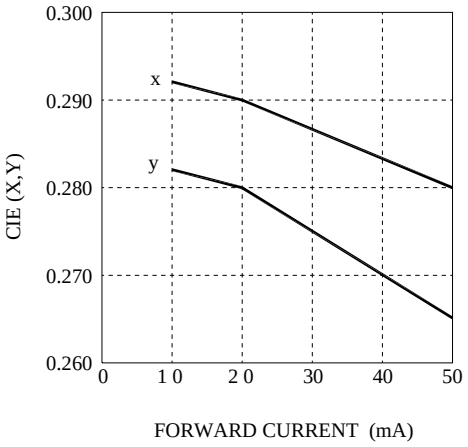
Relative Intensity vs. Forward Current



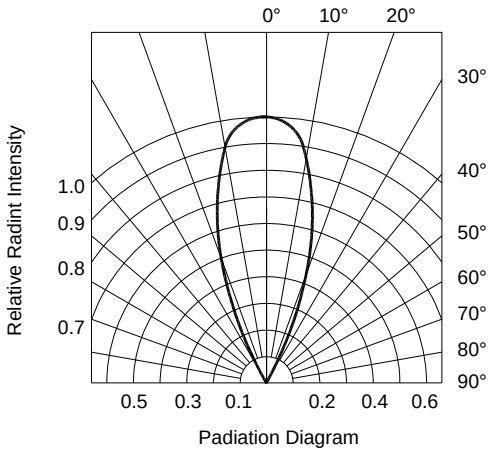
Forward Current vs. Ambient Temp.



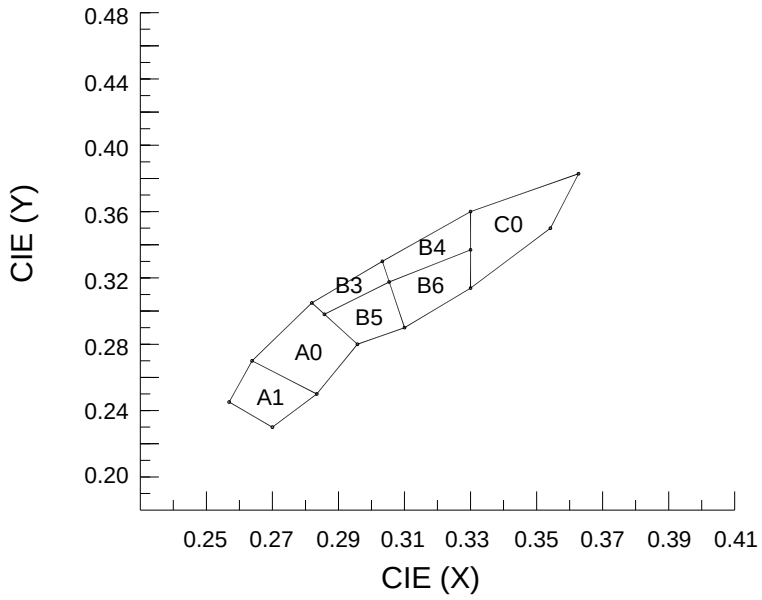
Chromaticity Coordinate vs. Forward Current



Relative Intensity vs. Angle Dispacemen



Color Ranks (I_F=20mA, Ta=25℃)



Rank	CIE x	CIE y	Rank	CIE x	CIE y
A1	0.255	0.245	B5	0.287	0.295
	0.264	0.267		0.307	0.315
	0.280	0.248		0.311	0.294
	0.270	0.230		0.296	0.276
A0	0.264	0.267	B6	0.307	0.315
	0.283	0.305		0.330	0.339
	0.296	0.267		0.330	0.318
	0.280	0.248		0.311	0.294
B3	0.283	0.305	C0	0.330	0.360
	0.304	0.330		0.361	0.385
	0.307	0.315		0.355	0.350
	0.287	0.295		0.330	0.318
B4	0.304	0.330	--	--	--
	0.330	0.360		--	--
	0.330	0.339		--	--
	0.307	0.315		--	--

Measurement uncertainty of the color coordinates: ±0.01

Note:

1. Application

   This device is suitable for general type of electronics products such as Office Equipment, Telecommunication products, Household products, toys...etc.

   Kindly consult us prior to using this device under stringent operating environment, condition or applications require demanding reliabilities.

2. Assembly

   If this device requires lead forming, it is recommended forming to be done before soldering and at least 2mm away from the base of the LED lens. The purpose is to avoid excessive mechanical stress asserted to the device.

3. Solder temperature

   Soldering iron: 290 ℃ max @ 3sec max. One times only.

   Wave soldering: Preheat @ 100℃ max.

   Solder @ 260℃ max.

   Time @ 10s max.

   * Note 1: Failing to abide the above may cause the LED to fail.

   * Note 2: Infrared Reflow type of soldering is not suitable for Through Hole type of LED.

4. Storage

   Avoid put in storage at an environment beyond 30 ℃ at 70% humidity. Once the package is opened, the devices must be used up within 60 days. Should a longer period is needed, it is suggested to store the unused devices in a air-tight and dry place such as a damp-proof cabinet.

7. ESD

   This device can be damaged by ESD. One way to avoid is to provide proper grounding or shunting to all equipment, machineries and fixtures that will "dissipate" any discharge away from the device.

   If these devices having abnormal function, it can be determined whether the device had been damaged by ESD with the following simple tests:

   (1) Device having high reverse leakage current

   (2) Device having low forward voltage

   (3) Device failed to light up under low current condition

8. Others

   The concept of obtaining White emitting color is combining a Blue dice with Phosphor. Under operating condition, the heat generated may cause minor color shift