Marktech Optoelectronics

3Northway Lane North Latham,New York 12110.
Tollfree:1.800.984.5337
Phone:1.518.956.2980
Fax:1.518.785.4725
Http://www.marktechopto.com

SPECIFICATION

PART NO. : MT0350-WR-A

3.2 x 2.8mm SMD TYPE

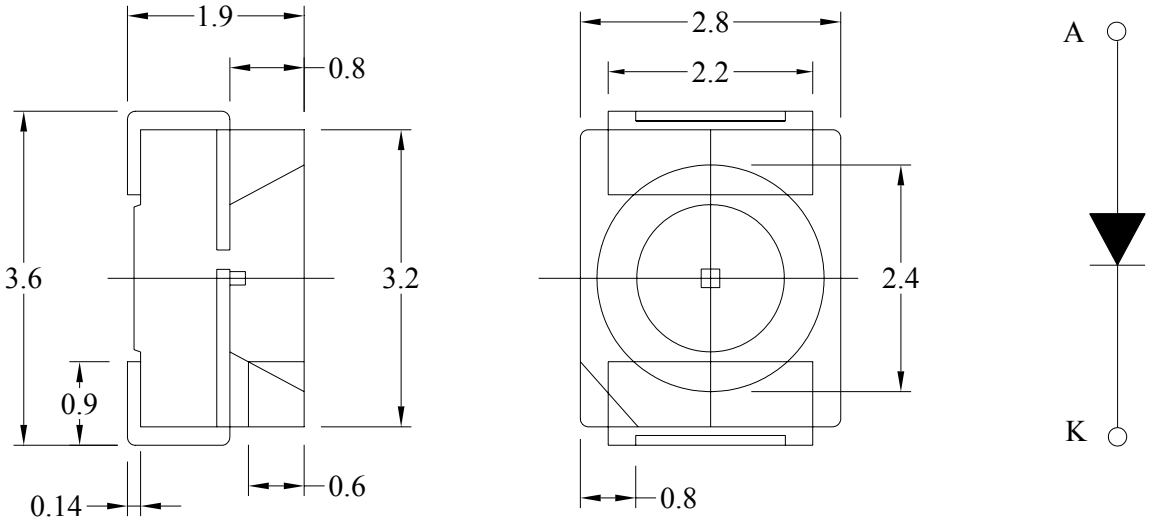
RoHS



ATTENTION

OBSERVE PRECAUTION FOR HANDLING ELECTRO STATIC SENSITIVE DEVICES

Package Dimensions



Notes:

1. All dimensions are in mm.
2. Tolerance is ±0.25mm unless otherwise noted.

Description

Part No.	LED Chip		Lens Color
	Material Em	itting Color	
MT0350-WR-A	InGaN/Sapphire	Warm White	Water Clear

Absolute Maximum Ratings at Ta=25 ℃

Parameter	Symbol	Rating	Unit
Power Dissipation	PD	120	mW
Reverse Voltage	VR	5	V
D.C. Forward Current	If	30	mA
Peak Current(1/10Duty Cycle,0.1ms Pulse Width.)	If(Peak)	100	mA
Operating Temperature Range	Topr.	-40 to +100	℃
Storage Temperature Range	Tstg.	-40 to +100	℃
Soldering Temperature	Tsld.	Reflow Soldering: 260℃ for 10 sec. Hand Soldering: 350℃ for 3 sec.	
Electric Static Discharge Threshold (HBM)	ESD	6000	V

Electrical and Optical Characteristics:

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Luminous Intensity		Iv	If=20mA	370	800		mcd
Luminous Flux		Φv	If=20mA		1950		mlm
Forward Voltage		Vf	If=20mA		3.2	4.0	V
Correlated Colour Temperature	29	CCT	If=20mA	2900	-	3100	°K
	31			3100	-	3300	
	33			3300	-	3500	
Reverse Current		Ir	Vr=5V			50	μA
Viewing Angle		2θ 1/2	If=20mA		120		deg

Notes: 1.The datas tested by IS tester.

2. Customer's special requirements are also welcome.

Typical Electrical/Optical Characteristic Curves
(25℃ Ambient Temperature Unless Otherwise Noted)

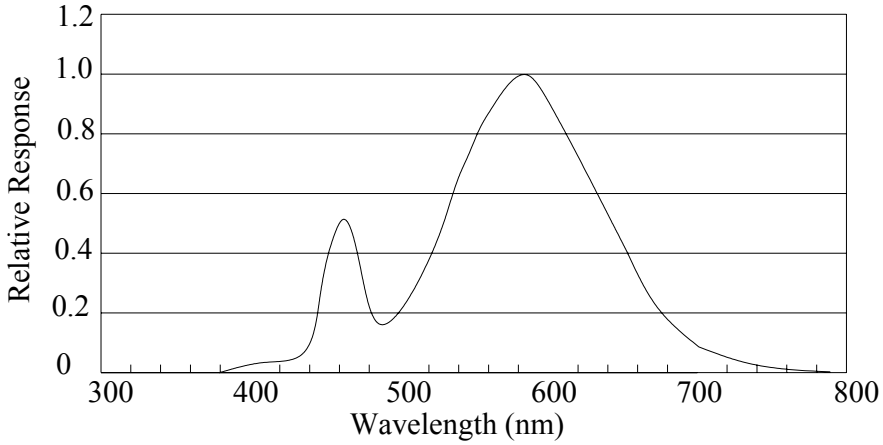
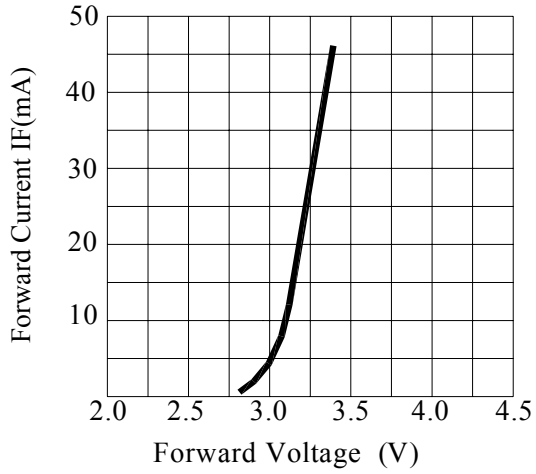
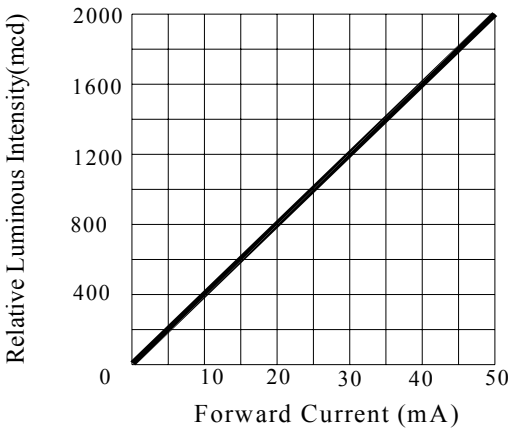


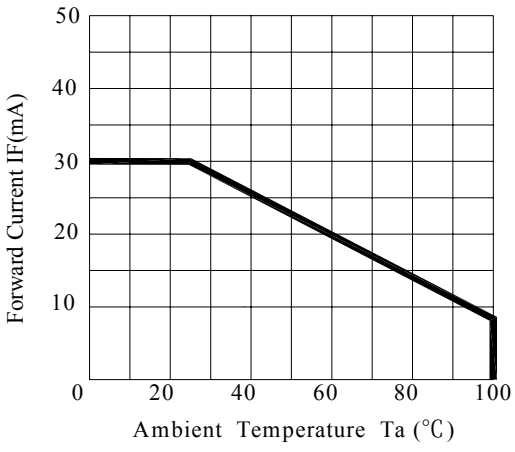
Fig.1 WHITE LED Spectrum VS. WAVELENGTH



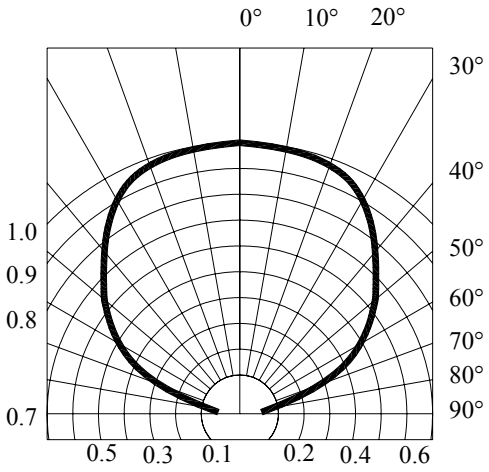
Forward Current VS. Applied Voltage



Forward Current VS. Luminous Intensity



Ambient Temperature VS. Forward Current



Radiation Diagram

PRECAUTION IN USE

Storage

Recommended storage environment

Temperature: 5 °C ~ 30°C (41°F ~ 86°F)

Humidity: 60% RH Max.

Use within 7 days after opening of sealed vapor/ESD barrier bags.

If the mois ture absorbent mater ial (s ilica ge l) has faded a way or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions.

Baking treatment : 60±5℃ for 24 hours.

Fold the opened bag firmly and keep in dry environment.

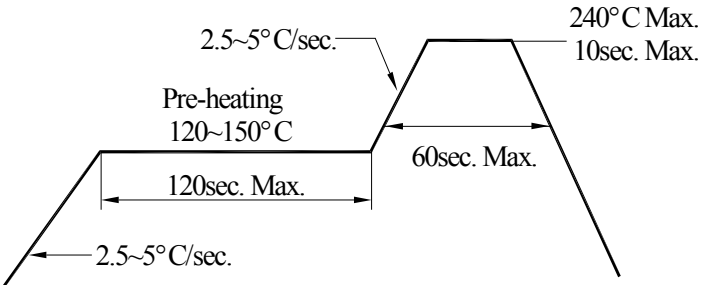
Soldering

Reflow So ldering			Hand Soldering	
	Lead Solder	Lead – free Solder		
Pre-heat	120~150℃ 180~200	℃	Temperature	350℃ Max .
Pre-heat time	120sec. Max.	120sec. Max.	Soldering time	3sec. Max. (one time only)
Peak temperature	240℃ Max.	260℃ Max .		
Soldering time	10sec. Max.	10sec. Max.		
Condition T	refer to emperature-profile 1	refer to Temperature-profile 2		

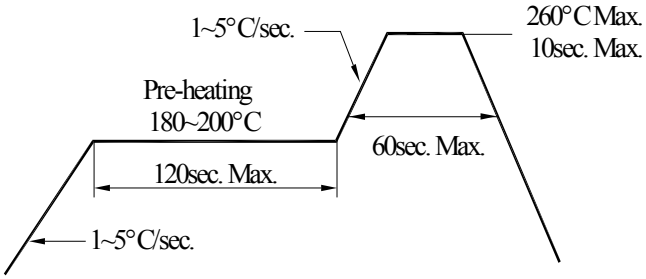
***After reflow soldering rapid cooling should be avoided.**

[Temperature-profile (Surface of circuit board)]
Use the conditions shown to the under figure.

＜1 : Lead Solder＞

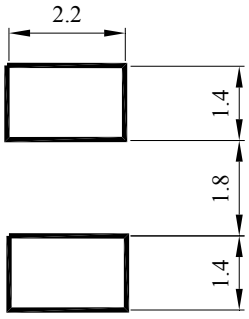


＜2 : Lead-free Solder＞



[Recommended soldering pad design]

Use the following conditions shown in the figure.



(UNIT:mm)

Handling of Silicone Resin LEDs

Handling Indications

During processing, mechanical stress on the surface should be minimized as much as possible. Sharp objects of all types should not be used to pierce the sealing compound

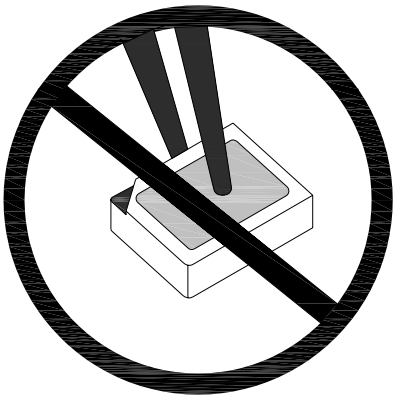


Figure 1

In general, LEDs should only be handled from the side. By the way, this also applies to LEDs without a silicone sealant, since the surface can also become scratched.

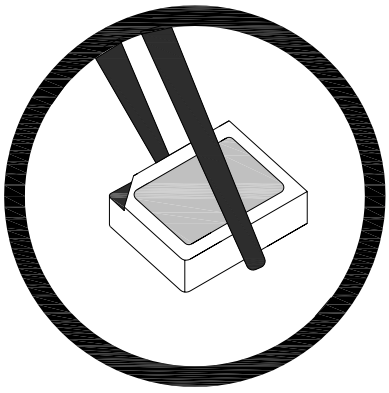
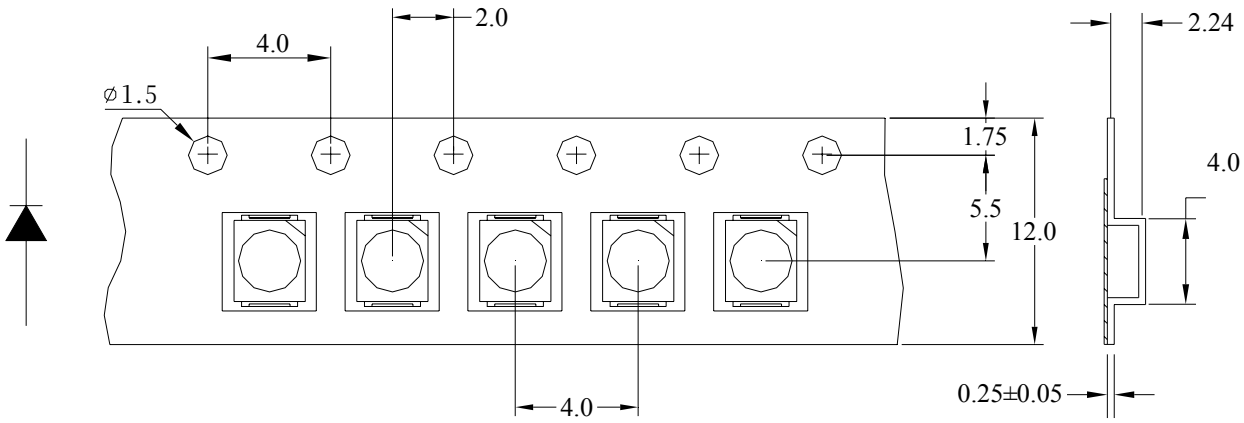


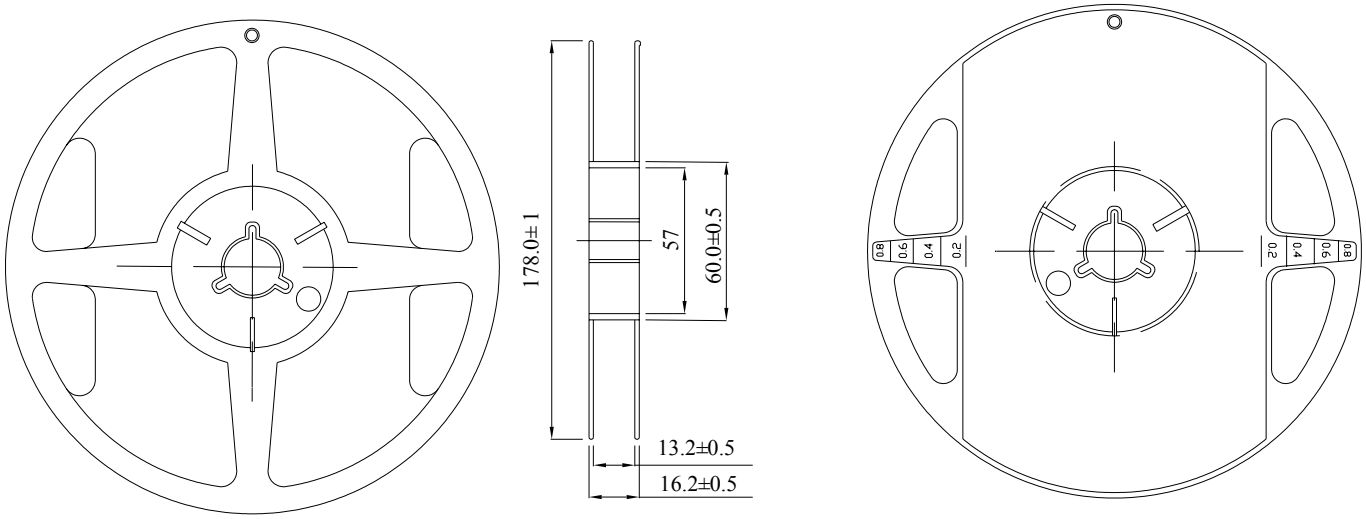
Figure 2

When populating boards in SMT production, there are basically no restrictions regarding the form of the pick and place nozzle, except that mechanical pressure on the surface of the resin must be prevented.
This is assured by choosing a pick and place nozzle which is larger than the LED's reflector area.

Dimensions for Tape



Dimensions for Reel



Notes:

1.All dimensions are in mm, tolerance is±2.0mm unless otherwise noted.

2.Specifications are subject to change without notice.