



# TOYO LED ELECTRONICS LIMITED

Room 1610, Hong Kong Plaza, 188 Connaught Road West, Hong Kong.  
Tel : (852) 2540 7288  
Http://www.toyo-led.com

Fax : (852) 2517 1797  
E-mail : sales@toyo-led.com



**P/N: TY-51UR1D60-40H502**

5mm Round Type LEDs Series

# SPECIFICATION FOR CUSTOMER APPROVAL

**P/N: TY-51UR1D60-40H502**

DATE : February 21, 2014

PREPARED BY : Yanguoliang

CONFIRMED BY :

**PLEASE CONFIRM & SIGN BACK THIS SHEET TO US**

**CUSTOMER:** \_\_\_\_\_  
(COMPANY CHOP)

**APPROVAL BY:** \_\_\_\_\_  
(SIGNATURE)



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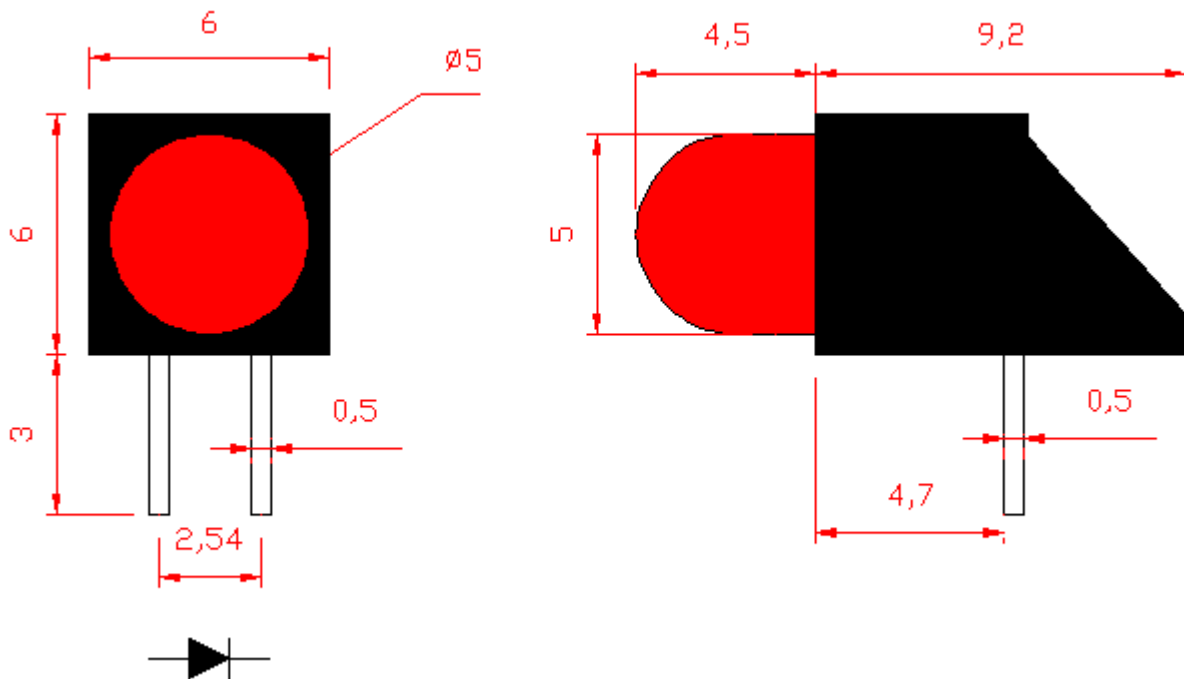
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## PACKAGE DIMENSION



### NOTES:

1. All dimensions are in millimeter(inch);
2. Tolerance is  $\pm 0.25\text{mm}(0.01")$  unless other specified;
3. Specifications are subject to change without notice.



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### Selection Guide

Part No.	Chip:		Lens Color	Iv(mcd)(If=20mA)			Viewing Angle (2θ½)
	Raw Material	Emitted Color		MIN	TYP	MAX	
TY-51UR1D60-40H502	AlGaInP	Red	Red Diffused	20	40	-	60 °

### Absolute Maximum Ratings(Ta=25C °)

Item	Symbol	Maximum	Unit
Power Dissipation	PD	72	mW
Peak Forward Current (1/10 Duty Cycle 0.1ms Pulse Width)	IFP	100	mA
Continuous Forward Current	IFmax	30	mA
Reverse Voltage	VR	5	V
Capacitance	C	95	pF
Operating / Storage Temperature Range	Topr / Tstg	-40 °C to +85 °C	
Lead Solder Temperature	Tsol	260 °C for 3 seconds	

### Electrical / Optical Characteristics(Ta=25C °)

Item	Symbol	Min.	Typ.	Max.	Unit	Condition
Peak Wavelength	λp	-	640	-	nm	IF=20mA
Dominant Wavelength	λd	625	635	640	nm	IF=20mA
Forward Voltage	VF	1.8	2.10	2.40	V	IF=20mA
Reverse Current	IR	-	-	10	uA	VR=5V

#### NOTES:

- 1.All dimensions are in millimeter;
- 2.Tolerance is ±0.25mm, unless other specified; Luminous intensity tolerance is ±10%;
- 3.Dominant Emission Wavelength tolerance is ±5%; Specifications are subject to change without notice.



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#### Typical Electro-Optical Characteristic Curve:

FIG. 1 Forward Current Vs. Forward Voltage

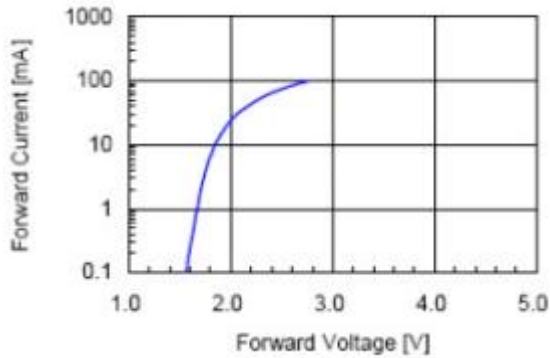


FIG. 2 Relative Intensity Vs. Forward Current

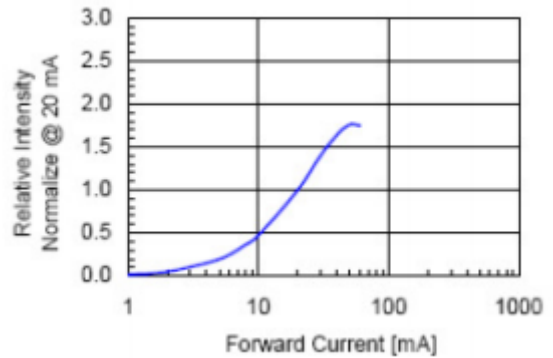


FIG. 3 Forward Voltage Vs. Temperature

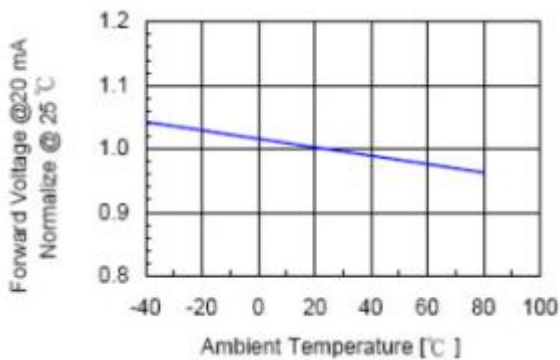


FIG. 4 Relative Intensity Vs. Temperature

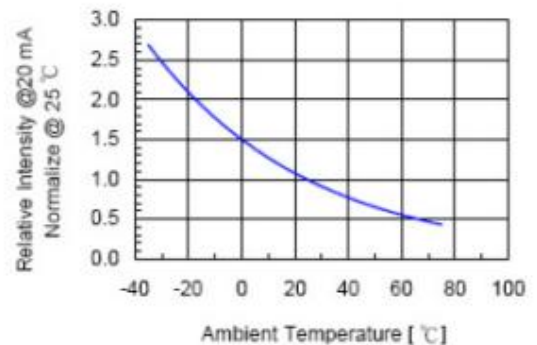
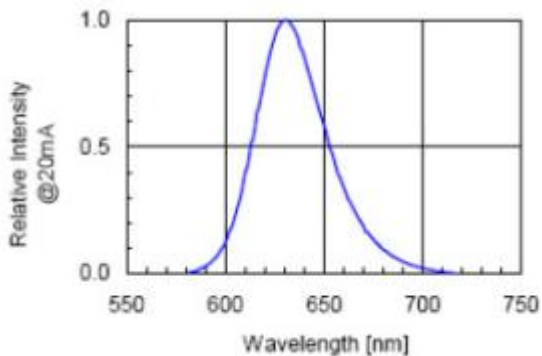


FIG. 5 Relative Intensity Vs. Wavelength





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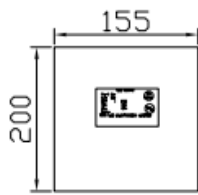
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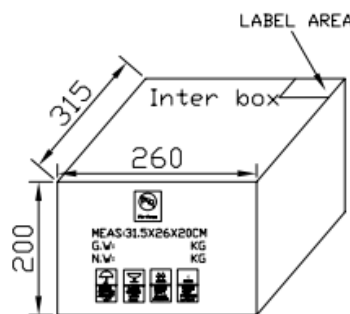
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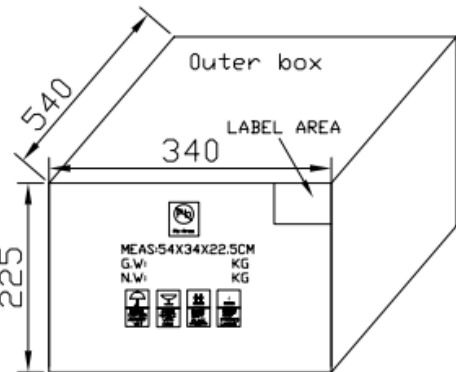
### BULK & PACKING DIMENSIONS



ESD POLYBAG



12.5Kpcs/Box  
Weight: 4.0kg



25Kpcs/Carton  
Weight : 10.0kg

#### Notes:

1. All dimension are in millimeter (inches);
2. Tolerance is  $\pm 0.25\text{mm}$  (0.01") unless otherwise specified.
3. Not recommend to solder within 3mm from the resin.
4. Any kind of LEDs can be made in taped & reel.