



# TOYO LED ELECTRONICS LIMITED

Room 1610, Hong Kong Plaza, 188 Connaught Road West, Hong Kong.

Tel : (852) 2540 7288  
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Fax : (852) 2517 1797  
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**P/N: TY-31NRD50-10H2**

3 mm Round Type LEDs Series

# SPECIFICATION FOR CUSTOMER APPROVAL

## P/N:TY-31NRD50-10H2

DATE : February 21, 2014

PREPARED BY : Yanguoliang

CONFIRMED BY :

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

CUSTOMER: 00687-U  
(COMPANY CHOP)

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



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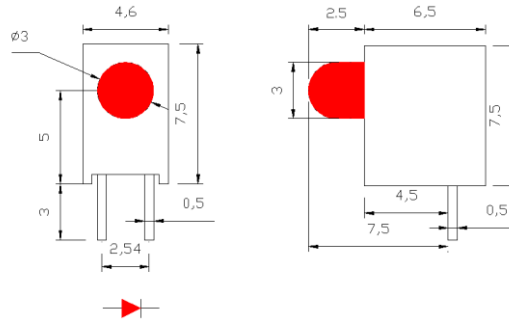
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## PACKAGE DIMENSION



### Selection Guide

Part No.	Chip: TK108YGU		Lens Color	Iv(mcd)(IF=20mA)			Viewing Angle (20½)
	Raw Material	Emitted Color		MIN	TYP	MAX	
TY-31NRD50-10H2	AlGaAs	Normal Red	Red Diffused	2	10	-	50 °

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

Item	Symbol	Maximum	Unit
Power Dissipation	PD	65	mW
Peak Forward Current (1/10 Duty Cycle 0.1ms Pulse Width)	IFP	90	mA
Continuous Forward Current	IFmax	30	mA
Reverse Voltage	VR	5	V
Capacitance	C	20	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	$\lambda_p$	-	700	-	nm	IF=20mA
Dominant Wavelength	$\lambda_d$	620	640	660	nm	IF=20mA
Forward Voltage	VF	1.7	2.0	2.4	V	IF=20mA
Reverse Current	IR	-	-	10	uA	VR=5V

#### NOTES:

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



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### ■ Typical Electro-Optical Characteristic Curve:

FIG. 1 Forward Current Vs. Forward Voltage

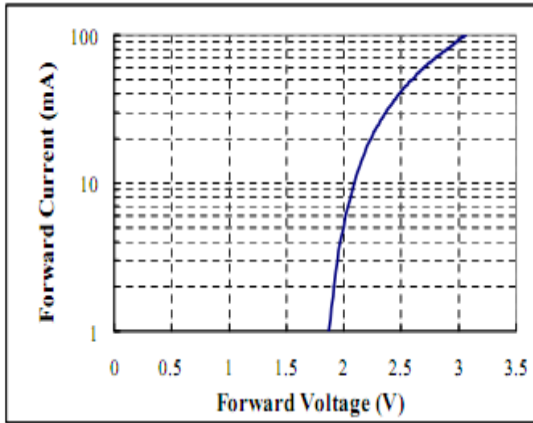


FIG. 2 Relative Intensity Vs. Forward Current

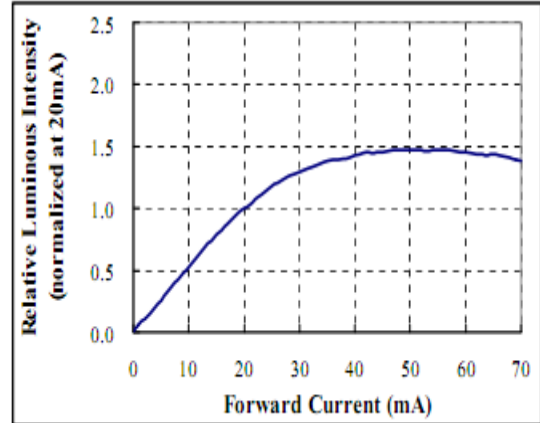


FIG. 3 Forward Voltage Vs. Temperature

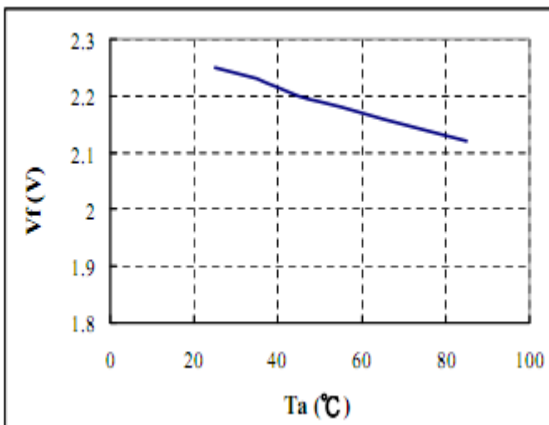


FIG. 4 Relative Intensity Vs. Temperature

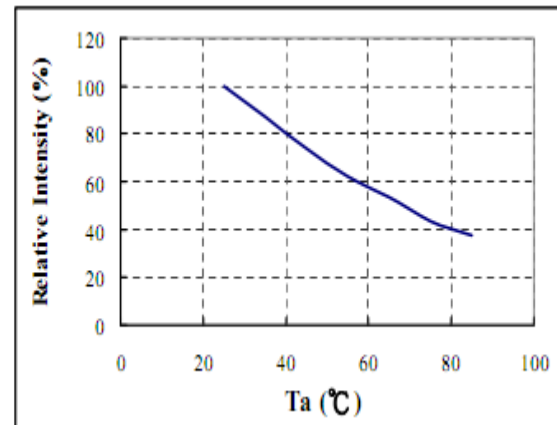
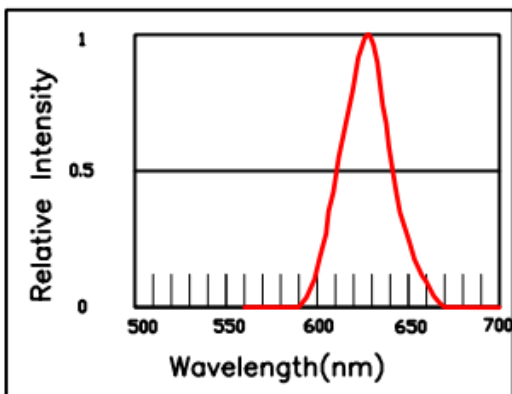


FIG. 5 Relative Intensity Vs. Wavelength





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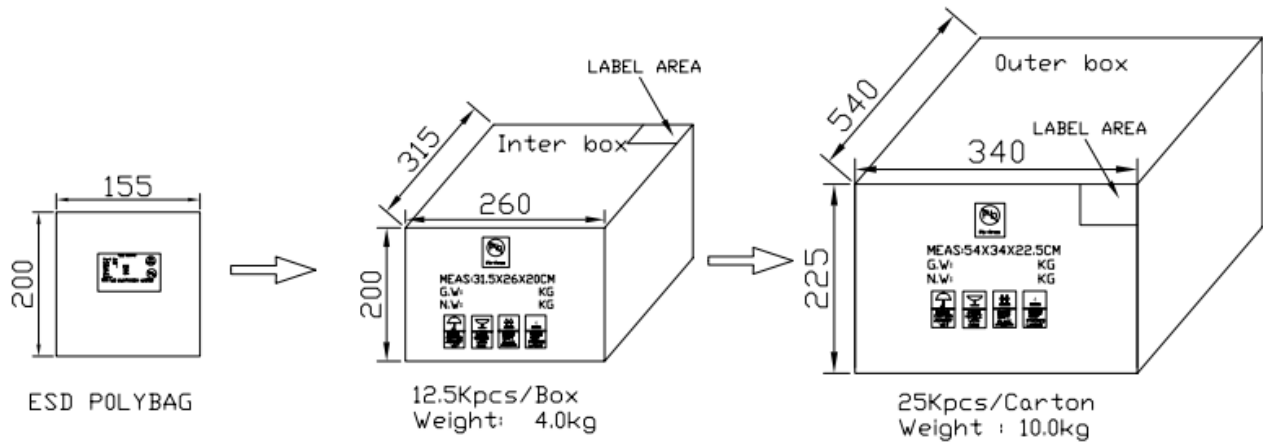
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## BULK & PACKING DIMENSIONS



### Notes:

1. All dimension are in millimeter;
2. Tolerance is  $\pm 0.25$ mm, unless other specified.
3. Not recommend to solder within 3mm from the resin.
4. Any kind of LEDs can be made in taped & reel.