TOYO LED ELECTRONICS LIMITED

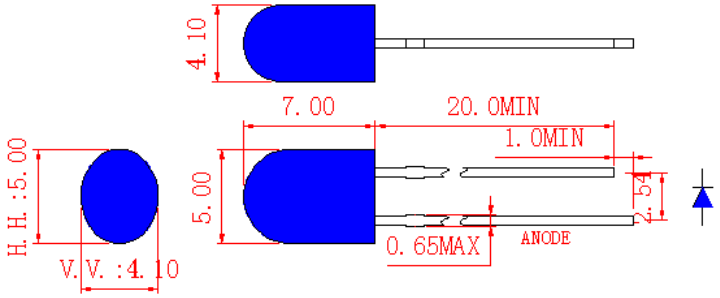
Room 1610, Hong Kong Plaza, 188 Connaught Road West, Hong Kong.
Tel : (852) 2540 7288 Fax : (852) 2517 1797
Http://www.toyo-led.com E-mail : sales@toyo-led.com

P/N: TY-571BL1D100-500(20)

5*4mm Oval Straight Body LEDs Series

PACKAGE DIMENSION

Pb-free



Selection Guide

Part No.	Dice		Lens Color	Iv(mcd)(IF=20mA)			Viewing Angle (2θ½)
	Raw Material	Emitted Color		MIN	TYP	MAX	
TY-571BL1D100-500(20)	InGaN	Blue	Blue diffused	200	500	---	H.H.: 100 °
				200	500	---	V.V.: 50 °

Absolute Maximum Ratings(Ta=25C)

Item	Symbol	Maximum	Unit
Power Dissipation	PD	93	mW
Peak Forward Current (1/10 Duty Cycle 0.1ms Pulse Width)	IFP	100	mA
Forward Current	IFmax	30	mA
Reverse Voltage	VR	5	V
Operating / Storage Temperature Range	Topr / Tstg	-40 ℃ to +85 ℃	

Electrical / Optical Characteristics(Ta=25C)

Item	Symbol	Min.	Typ.	Max.	Unit	Condition
Peak Wavelength	λp	-	471	-	nm	IF=20mA
Dominant Wavelength	λd	460	465	470	nm	IF=20mA
Forward Voltage	VF	2.80	3.20	3.60	V	IF=20mA
Capacitance	C	-	-	95	pF	VF=0V;f=1MHz
Reverse Current	IR	-	-	10	uA	VR=5V

NOTES:

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

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■ Typical Electro-Optical Characteristic Curve:

FIG. 1 Forward Current Vs. Forward Voltage

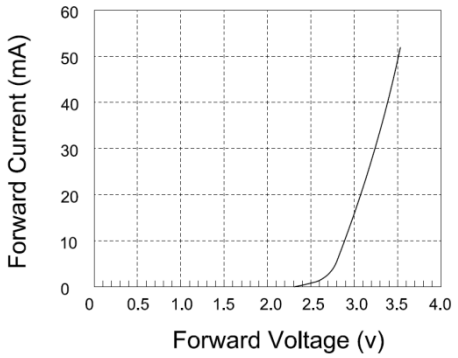


FIG. 2 Relative Luminosity Vs. Forward Current

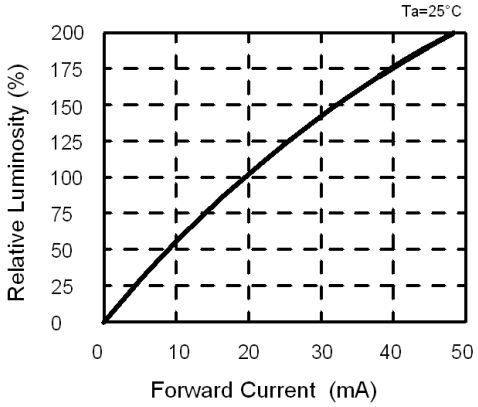


FIG. 3 Forward Current Vs. Temperature

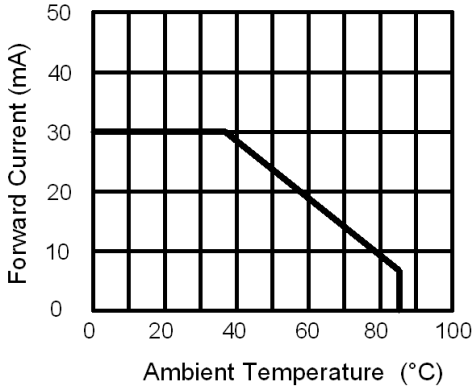


FIG. 4 Relative Luminosity Vs. Temperature

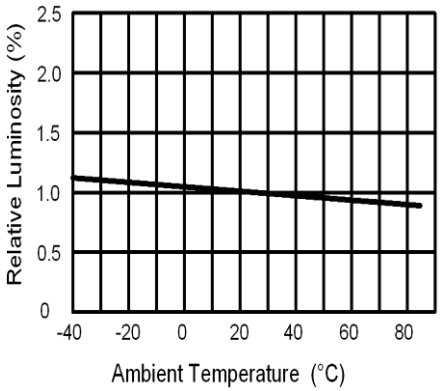
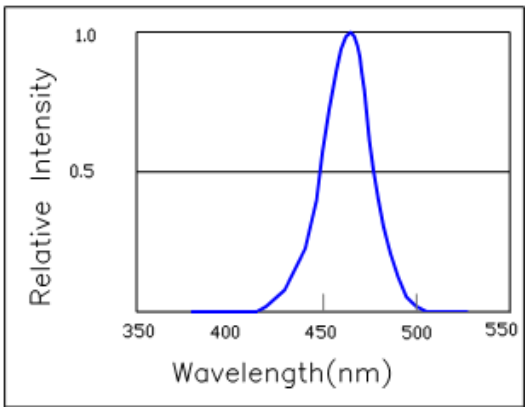


FIG. 5 Relative Intensity Vs. Wavelength



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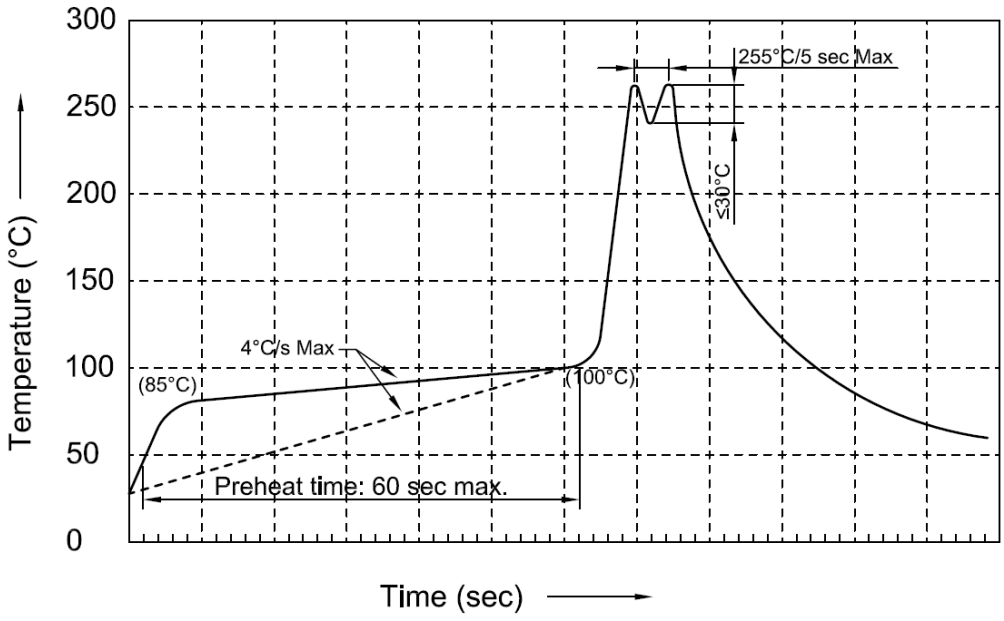
Recommended Wave Soldering Profiles:



Notes:

1. Recommend pre-heat temperature of 105℃ or less (as measured with a thermocouple attached to the LED pins) prior to immersion in the solder wave with a maximum solder bath temperature of 260℃.
2. Peak wave soldering temperature between 245-255℃ for 3 sec (5 sec max).
3. Do not apply stress to the epoxy resin while the temperature is above 85℃.
4. Fixtures should not incur stress on the component when mounting and soldering process.
5. More than one wave soldering is not allowed..

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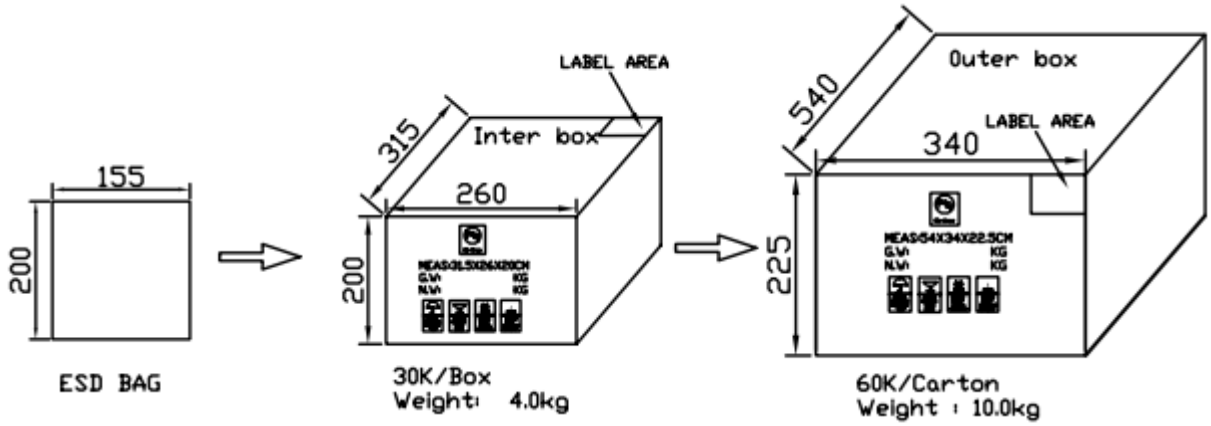
BULK & PACKING DIMENSIONS



Notes:

1. All dimension are in millimeter;
2. Tolerance is ±0.25mm unless otherwise specified.
3. Not recommend to solder within 3mm from the resin.
4. Any kind of LEDs can be made in taped.

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OTHER NOTES

1.Storage conditions:

a. Avoid continued exposure to the condensing moisture environment and keep the product away from rapid transitions in ambient temperature.

b. LEDs should be stored with temperature ≤30℃ and relative humidity ≤60%。

c. Product in the original sealed package is recommended to be assembled within 72 hours of opening. Product in opened package for more than a week should be baked for 30 (+10/-0) hours at 85-100℃.

2. The lead pitch of the LED must match the pitch of the mounting holes on the PCB during component. Lead-forming may be required to insure the lead pitch matches the pitch. Refer to the figure below for proper lead forming procedures. (Fig.①)

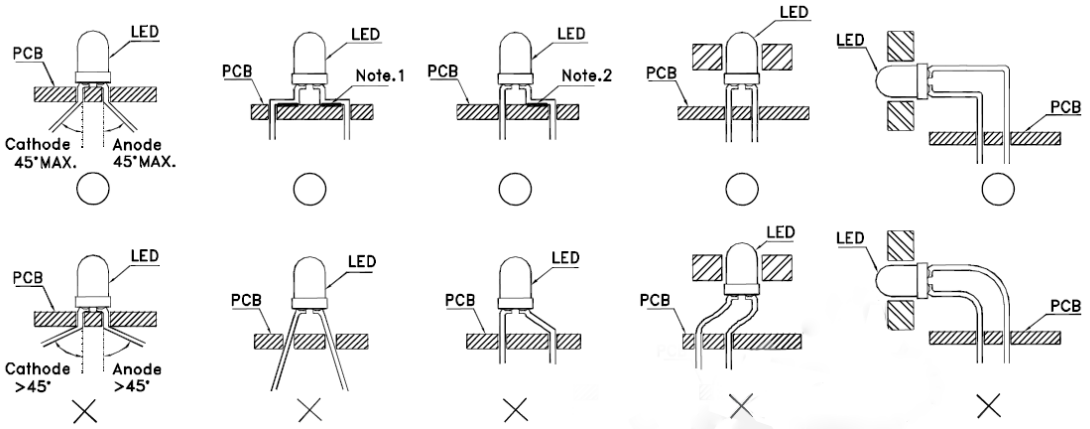


Fig.①

3. Use stand-offs (fig.②) or spacers (fig.③) to securely position the LED above the PCB.

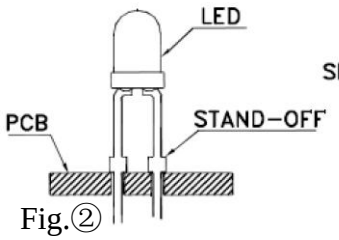


Fig.②

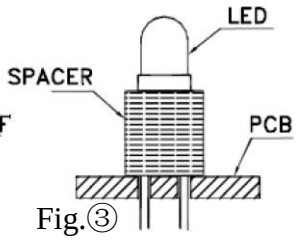


Fig.③

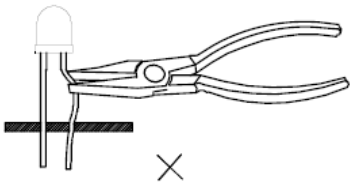


Fig.④

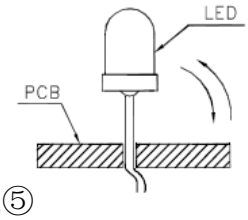
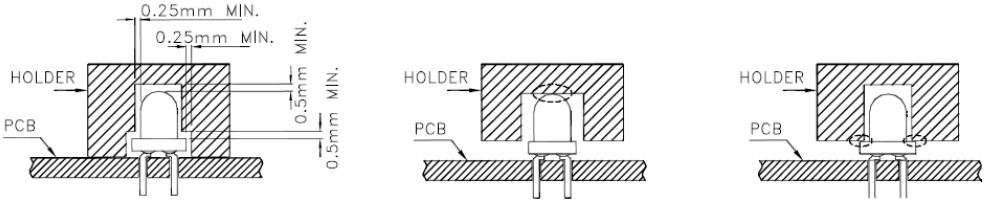


Fig.⑤

4. During lead forming, use tools or jigs to hold the leads securely so that the bending force will not be transmitted to the LED lens and its internal structures. Do not perform lead forming once the component has been mounted onto the PCB.(fig.④)

5. Do not bend the leads more than twice. (fig.⑤)

6. During soldering, component covers and holders should leave clearance to avoid placing damaging stress on the LED during soldering.



7. The tip of the soldering iron should never touch the lens epoxy.

8. Through-hole LEDs are incompatible with reflow soldering.

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REVISION HISTORY

DATE	REVISION CONTENTS	VERSION
2015-05-15	New	A