



TOYO LED ELECTRONICS LIMITED

Unit 10-11, 19/F, Metro Loft, 38 Kwai Hei Street, Kwai Chung, N.T., Hong Kong
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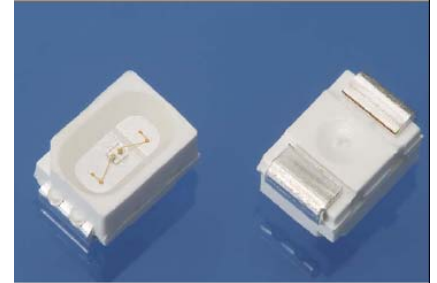


P/N: TY-L3020BL1(1.3)

3020Package3.0*2.0mm TOP SMD Series

◆ Features:

- 3.0*2.0*1.3mm
- Mono-color type
- Soldering methods :All SMT assembly methods
- Comply ROHS standard



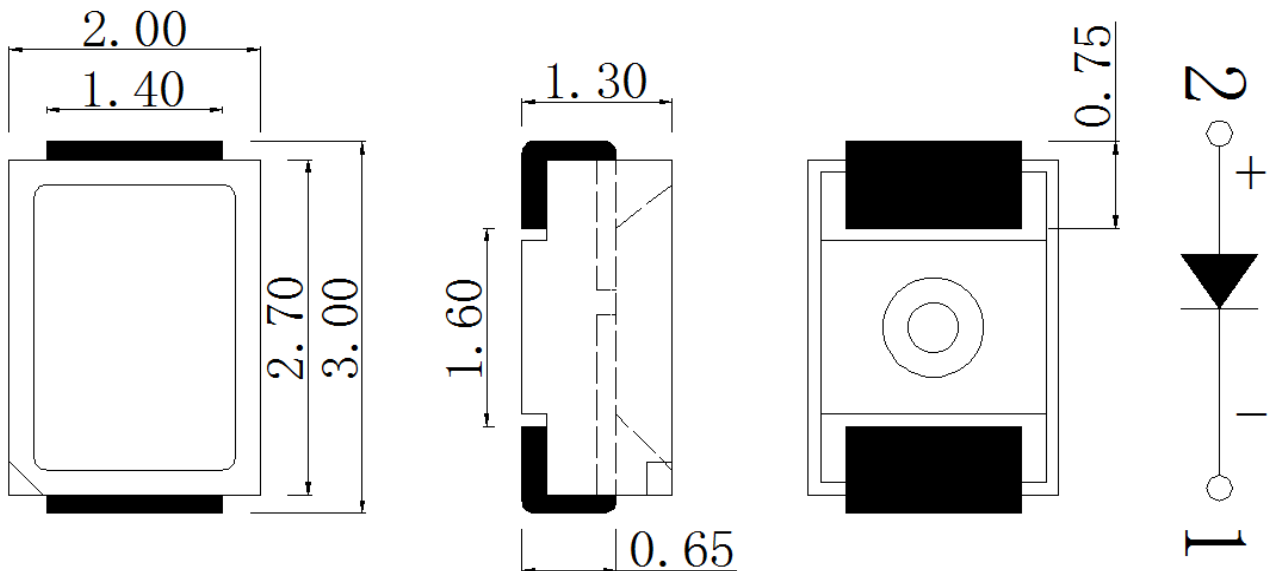
◆ Description

The Blue source color devices are made with InGaN on sapphireLight Emitting Diode.

◆ Application

- Optical indicator
- Indicator and backlighting in telephone and fax
- Flat backlight for LCD,switch and symbol
- Light pipe application
- General use

◆ Package Dimensions



NOTES:

1. All dimensions are in millimeter[unit];
2. Tolerance is $\pm 0.1\text{mm}(0.004")$ unless other specified;
3. Specifications are subject to change without notice.



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Part No.	Emitted Color	Lens Color	Chip Material
TY-L3020BL1(1.3)	Blue	Water Clear	InGaN

◇ Absolute Maximum Ratings(Ta=25°C)

Item	Symbol	Maximum	Unit
Power Dissipation	PD	100	mW
Continuous Forward Current	I _{Fmax}	30	mA
Peak Forward Current(1/10 Duty Cycle 0.1ms Pulse Width)	I _{FP}	100	mA
Reverse Voltage	V _R	5	V
Operating TemperatureRange	T _{opr}	-35 to+85	°C
Storage TemperatureRange	T _{stg}	-40 to+100	°C
Lead Solder Temperature	T _{sol}	Reflow Soldering : 260 °C for 5 sec. Hand Soldering : 350 °C for 3 sec.	

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

Item	Symbol	Condition	Min.	Typ.	Max	Unit
Forward Voltage	V _F	I _F =20mA	2.8	3.2	---	V
Luminous Intensity	I _v	I _F =20mA	400	700	---	mcd
DominantWavelength	λ _d	I _F =20mA	460	470	---	nm
Viewing Angle	2θ _{1/2}	I _F =20mA	---	120	---	Deg
Reverse Current	I _R	V _R =5V	---	---	10	uA



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◇ Typical Electro-Optical Characteristics Curves

FIG. 1 Forward Current Vs. Forward Voltage

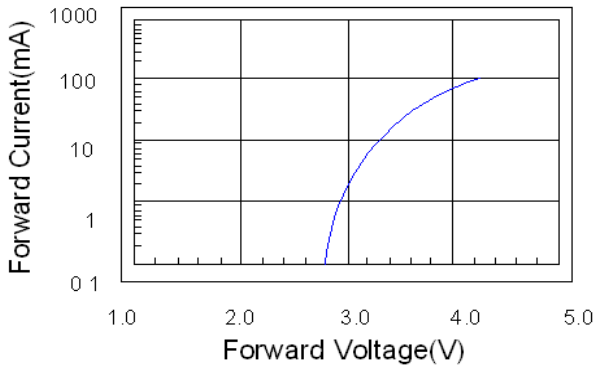


FIG. 2 Relative Intensity Vs. Forward Current

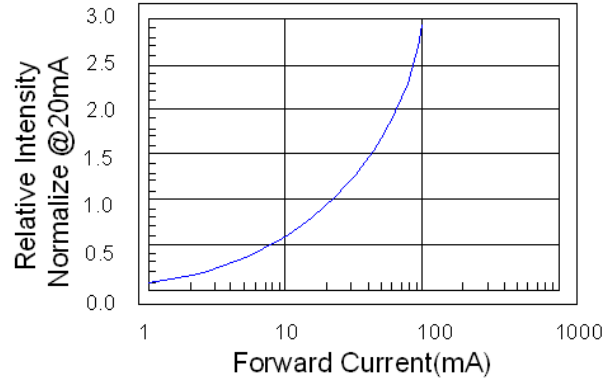


FIG. 3 Forward Voltage Vs. Temperature

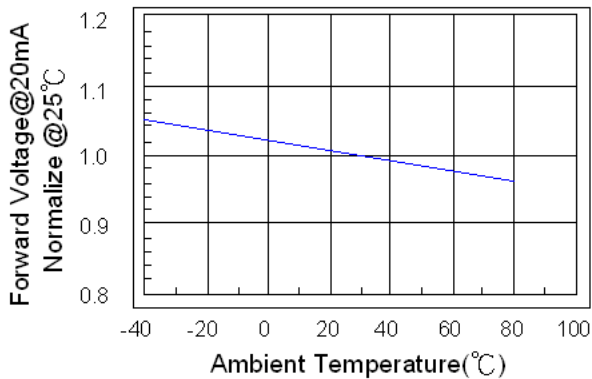


FIG. 4 Relative Intensity Vs. Temperature

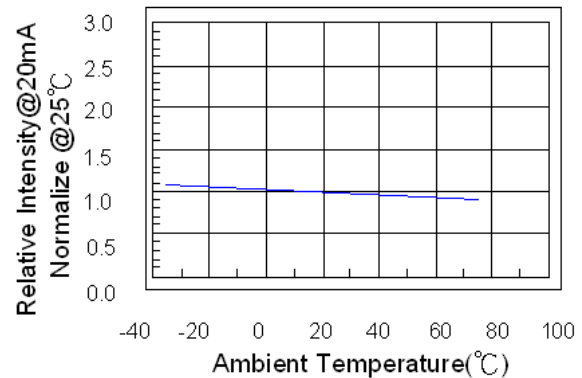
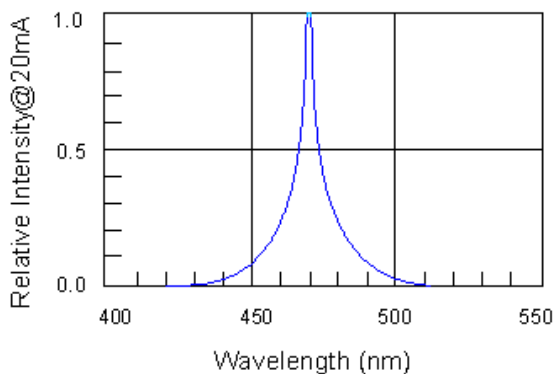


FIG. 5 Relative Intensity Vs. Wavelength





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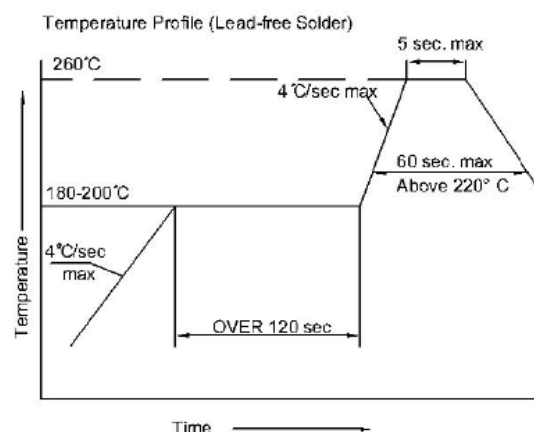
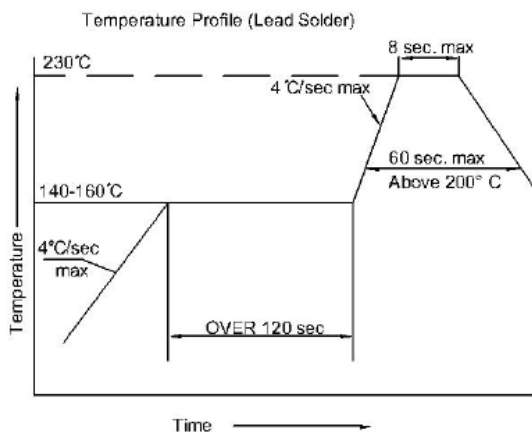
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◇ Reliability Test Items And Conditions

NO.	Item	Test Condition	Test Hr/cycle/time	Sample Q'ty	Ac/Re
1	Reflow	TEMP:260±5°C; Min.5Sec	6 min	22pcs	0/1
2	Temperature Cycle	H:+100°C 30mins To(5mins) L:-40°C 30mins	100cycles	22pcs	0/1
3	Thermal Shock	H:+100°C 15mins L:-40°C 15mins	500 cycles	22pcs	0/1
4	Low Temperature Storage	TEMP:-40°C	1000hrs	22pcs	0/1
5	DC Operating Life	IF=20MA	1000hrs	22pcs	0/1
6	High Temperature High Humidity	85°C 85%R.H.	1000hrs	22pcs	0/1

◇ SMT Reflow Soldering Instructions

Number of reflow process shall be than 2 times and cooling
 Process to normal temperature is required between first and second
 soldering process





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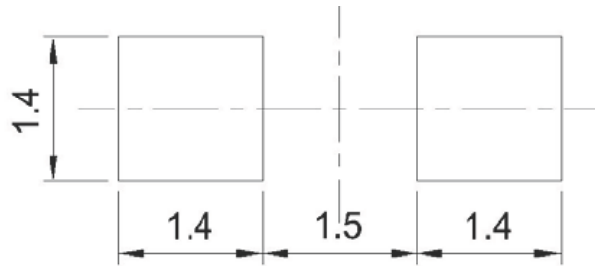
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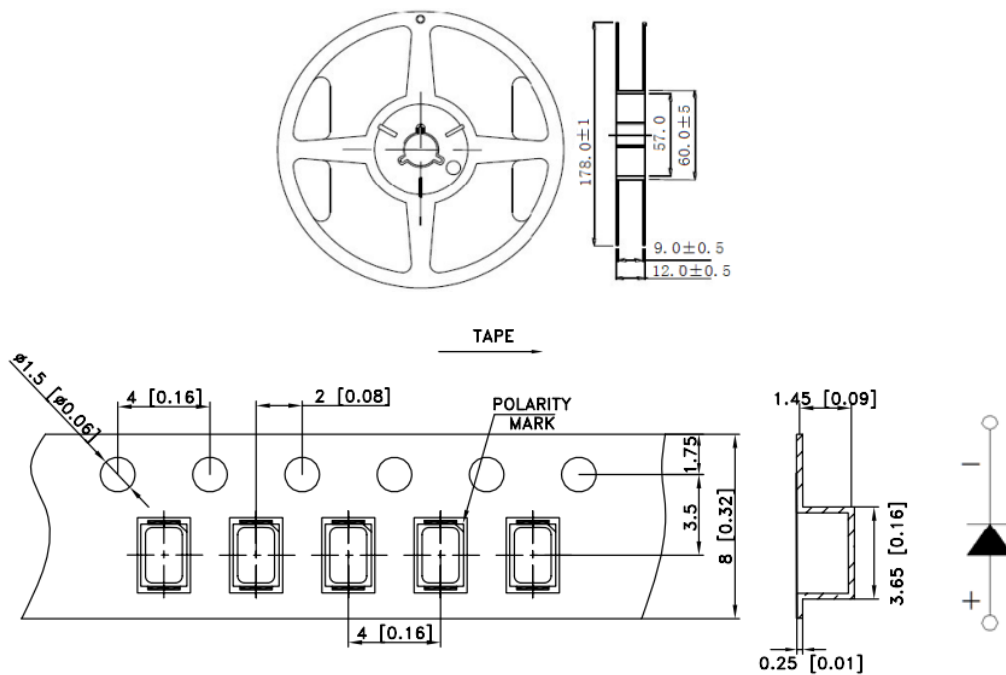
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Recommended Soldering Pad Dimensions



Tape Specification: 3,000pcs/Reel



Package Label

SMD LED	
PART NO: _____	QA Pass
LOT NO : _____	
Q' TY : _____	
VF : _____	IV : _____
TC : _____	BIN: _____
DATE : _____	
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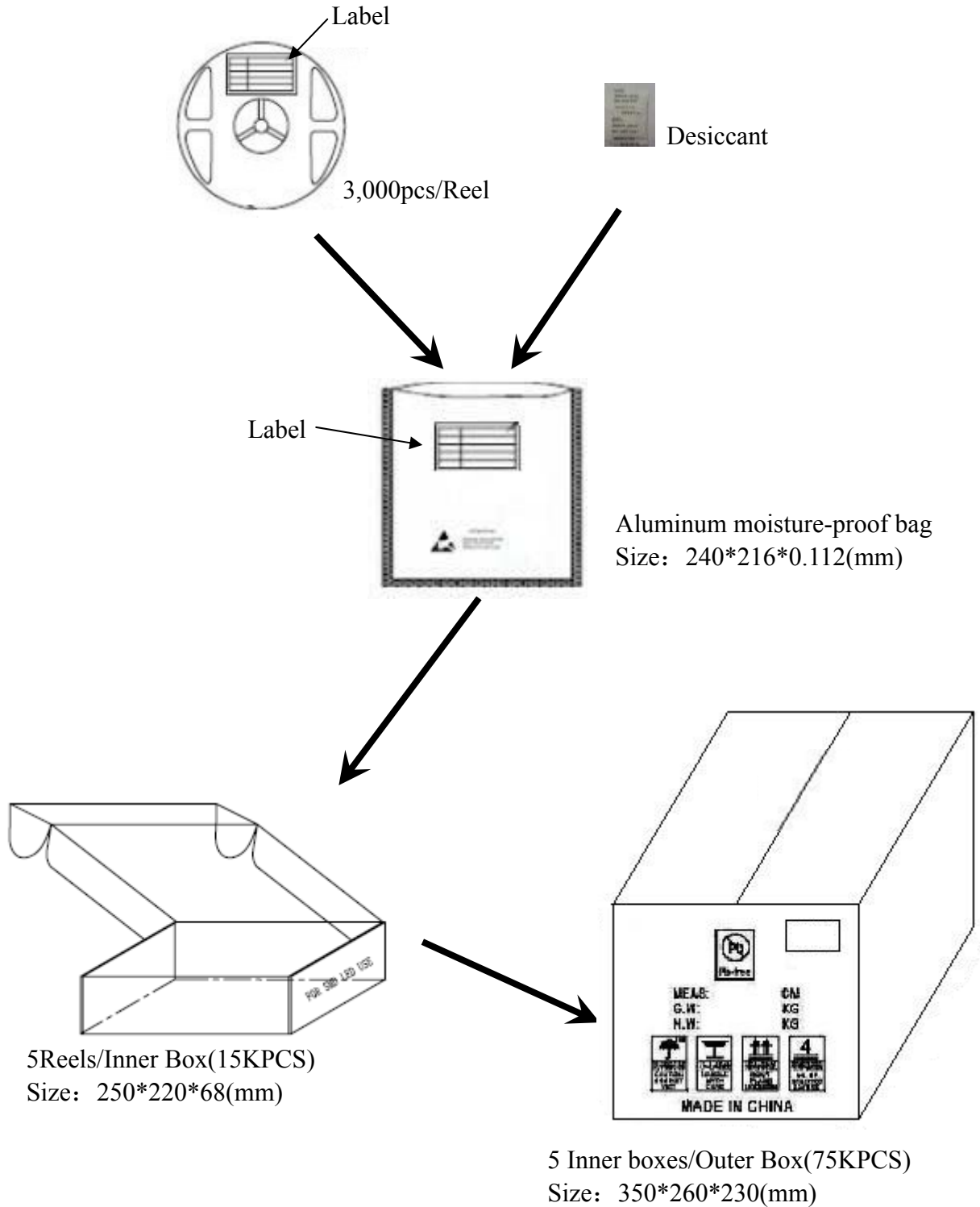
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❖ Package & Shipping Instructions





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REVISION HISTORY

DATE	REVISION CONTENTS	VERSION
2018-08-23	New	A