



TOYO LED ELECTRONICS LIMITED

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

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Fax : (852) 2517 1797
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P/N: TY-L0603BL1(0.40)

0603 Package 1.6*0.8mm Surface Mount LEDs Series

✧ Features:

- 1.6*0.8*0.4 mm
- Mono-color type
- Soldering methods :All SMT assembly methods
- Comply ROHS standard

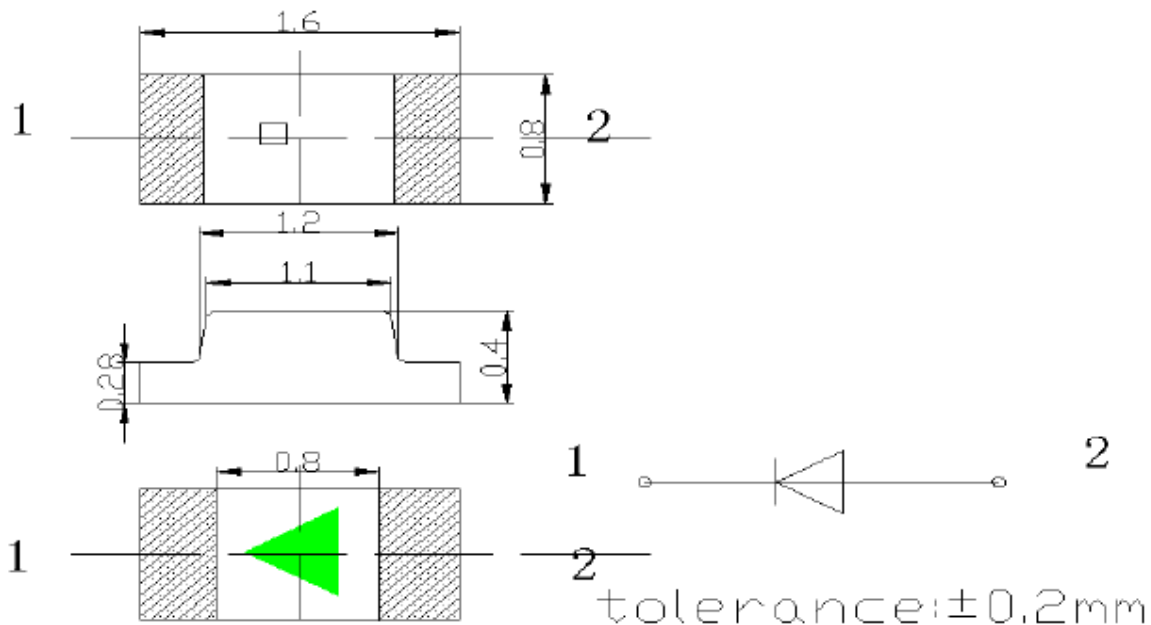
✧ Description

The Blue source color devices are made with **InGaN** on sapphire Light Emitting Diode.

✧ Application

- LCD backlight
- Illuminations

✧ 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-L0603BL1(0.40)	Blue	Water Clear	InGaN

❖ Absolute Maximum Ratings(Ta=25°C)

Item	Symbol	Maximum	Unit
Power Dissipation	PD	114	mW
Continuous Forward Current	I _{Fmax}	30	mA
Peak Forward Current(1/10 Duty Cycle 0.1ms Pulse Width)	I _{FP}	160	mA
Reverse Voltage	V _R	5	V
Operating Temperature Range	T _{opr}	-40 to+85	°C
Storage Temperature Range	T _{stg}	-40 to+85	°C
Lead Solder Temperature	Tsol	260 °C for 3 seconds	

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

Item	Symbol	Condition	Min.	Typ.	Max	Unit
Forward Voltage	V _F	I _F =20mA	2.8	3.2	3.6	V
Luminous Intensity	I _V	I _F =20mA	90	100	120	mcd
Wavelength	λ	I _F =20mA	465	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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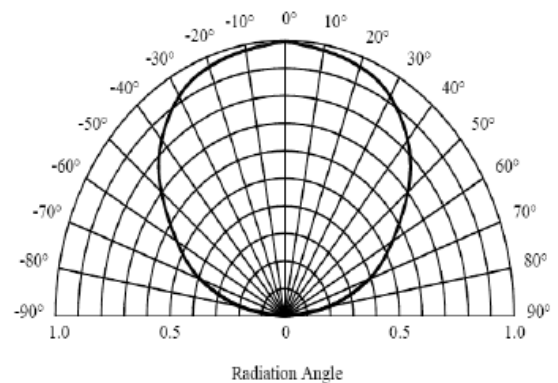
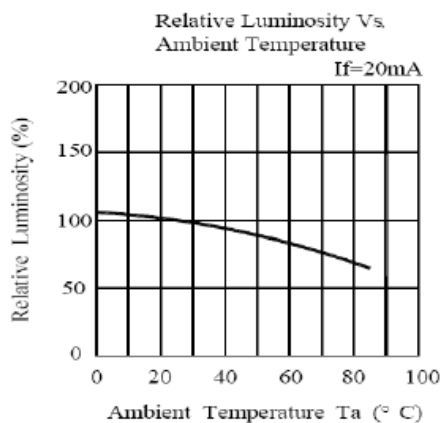
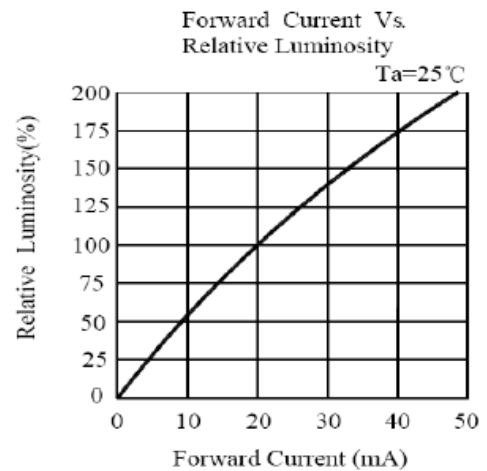
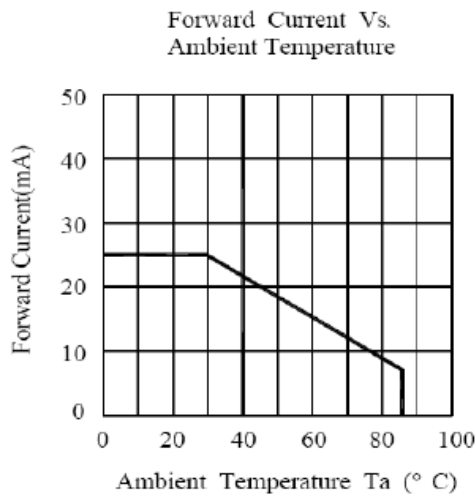
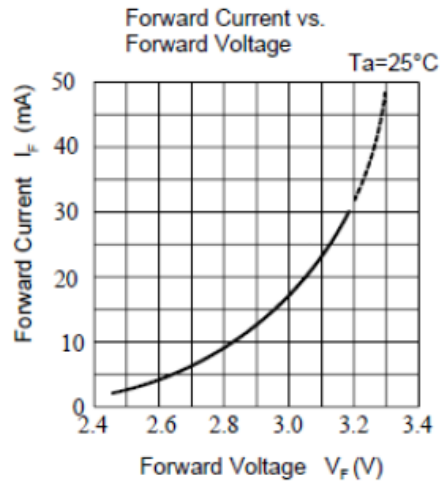
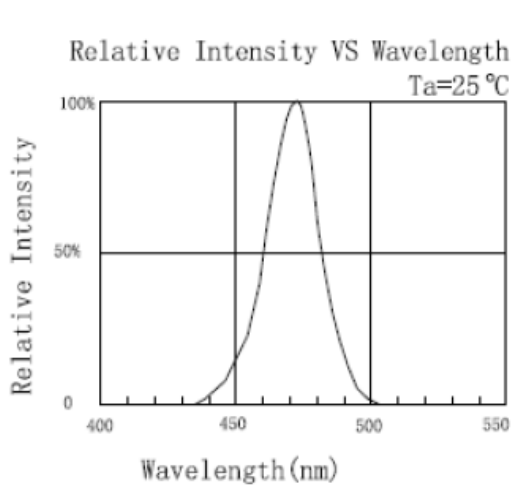
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◇ Typical Electro-Optical Characteristics Curves





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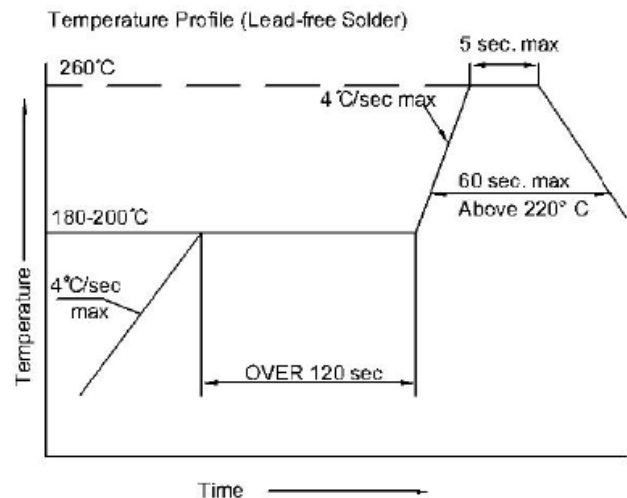
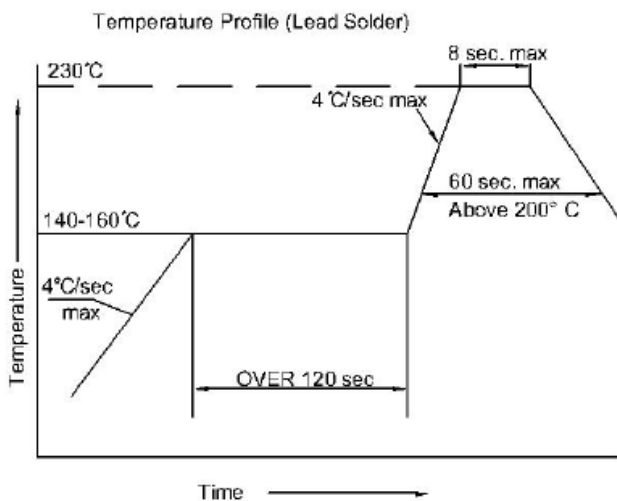
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◇ Reliability Test Items And Conditions

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 15mins To(5mins) L:-40°C 15mins	300 cycles	22pcs	0/1
3	Thermal Shock	H:+100°C 15mins To(5mins) L:-40°C 15mins	300 cycles	22pcs	0/1
4	High Temperature Storage	TEMP: 85°C	1000hrs	22pcs	0/1
5	Low Temperature Storage	TEMP:-40°C	1000hrs	22pcs	0/1
6	DC Operating Life	IF=20MA	1000hrs	22pcs	0/1
7	High Humidity	85%R.H.	1000hrs	22pcs	0/1

◇ SMT Reflow Soldering Instructions

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





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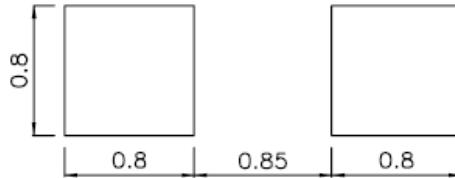
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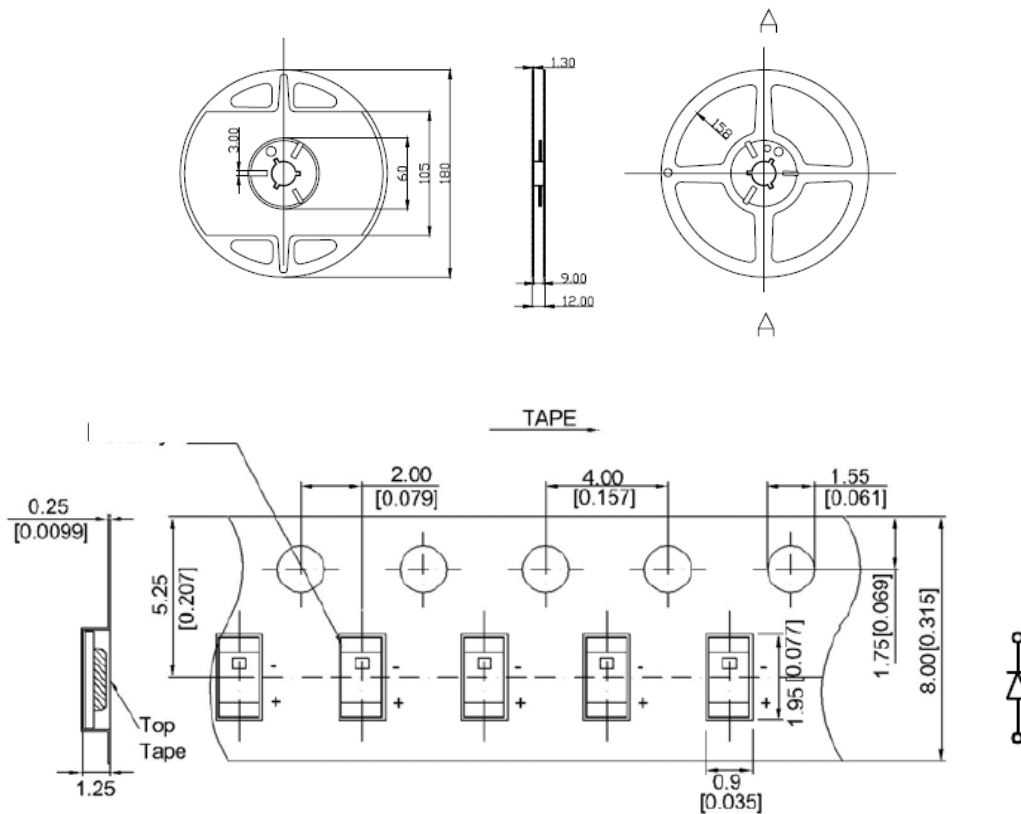
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❖ Recommended Soldering Pad Dimensions



❖ Tape Specification: 4,000PCS per reel



❖ Package Label

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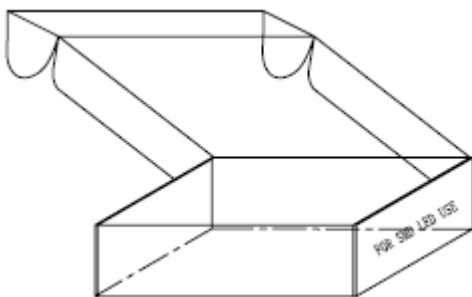
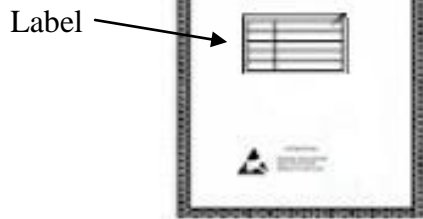
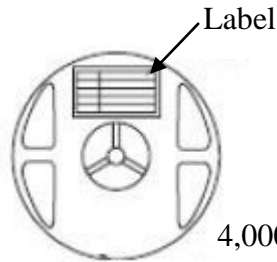
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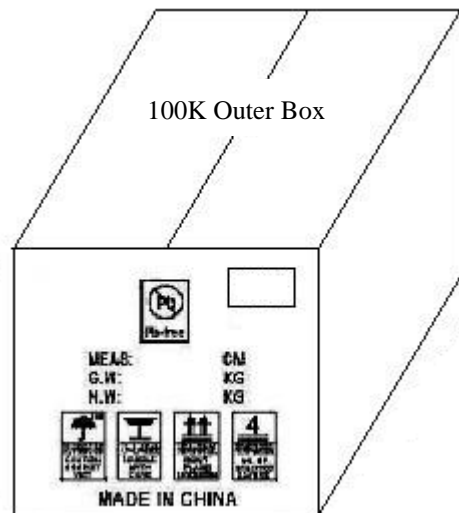
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❖ Package & Shipping Instructions



5Reels/Inner Box (20KPCS)
Size: 250*220*68(mm)



5 Inner boxes/Outer Box (100KPCS)
Size: 350*260*230(mm)