



TOYO LED ELECTRONICS LIMITED

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

Tel : (852) 2540 7288
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P/N: TY-5050UA3-200

5.0 * 5.0mm TOP SMD Series

SPECIFICATION FOR CUSTOMER APPROVAL

P/N:TY-5050UA3-200

DATE : December 30, 2015

PREPARED BY : Chen Li fen

CONFIRMED BY : Yan Guo liang

PLEASE CONFIRM & SIGN BACK THIS SHEET TO US

CUSTOMER: _____

APPROVAL BY: _____

(COMPANY CHOP)

(SIGNATURE)



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◆ Features:

- 5.0mm×5.0mm SMT LED , 1.60mm thickness
- PLCC-6package
- White package
- Suitable for all SMT assembly and solder process
- Available on tape and reel

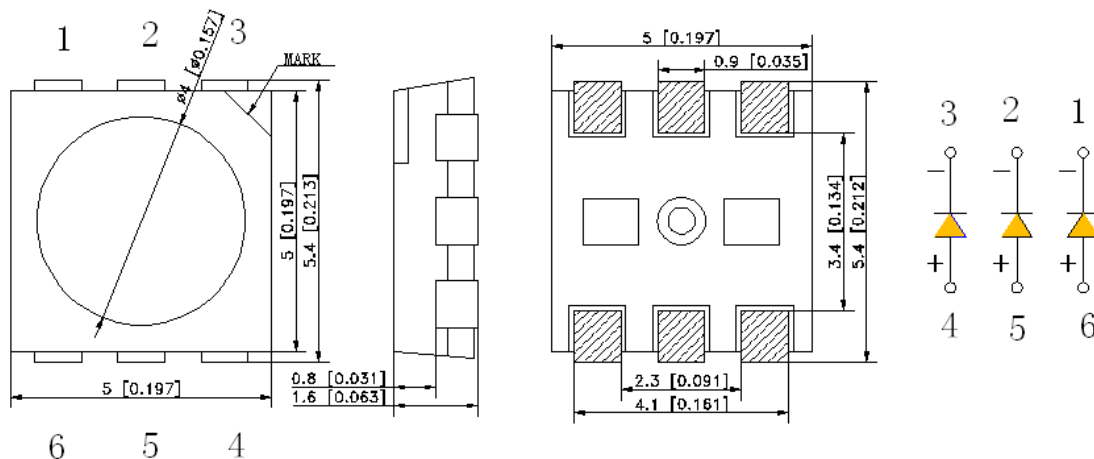
◆ Description

The Amber source color devices are made with AlGaInP on sapphire Light 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;
2. Tolerance is±0.2mm unless other specified;
3. Specifications are subject to change without notice.



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Part No.	Emitted Color	Len's Color	Chip Material
TY-5050UA3-200	Amber	Water clear	AlGaInP

✧ Absolute Maximum Ratings(Ta=25)

Item	Symbol	Maximum	Unit
Power Dissipation	PD	75	mW
Continuous Forward Current	I _{Fmax}	30	mA
Peak Forward Current(1/10 Duty Cycle 0.1ms Pulse Width)	I _{FP}	90	mA
Reverse Voltage	V _R	5	V
Operating Temperature Range	T _{opr}	-40 to+85	
Storage Temperature Range	T _{stg}	-40 to+85	

✧ Electrical/Optical Characteristics(Ta=25)

Item	Symbol	Condition	Min.	Typ.	Max	Unit
Forward Voltage	V _F	I _F =60mA	1.8	2.1	2.6	V
Luminous Intensity	I _v	I _F =60mA	100	200	---	mcd
Luminous Flux	ϕ	I _F =60mA	---	---	---	lm
Wavelength	λ	I _F =60mA	600	605	615	nm
Viewing Angle	2θ _{1/2}	I _F =60mA	--	120	--	Deg
Capacitance	C	V _F =0V, f=1MHZ	--	110	--	pF
Reverse Current	I _R	V _R =5V	--	5	10	uA



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◇ Typical Electro-Optical Characteristics Curves

FIG. 1 Forward Current Vs. Forward Voltage

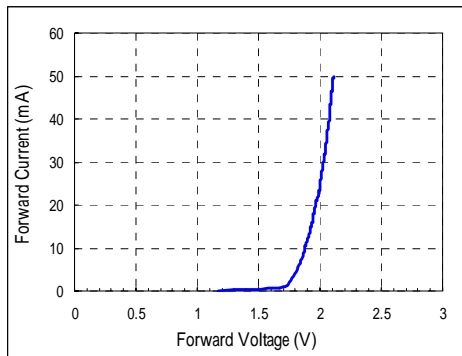


FIG. 2 Relative Intensity Vs. Forward Current

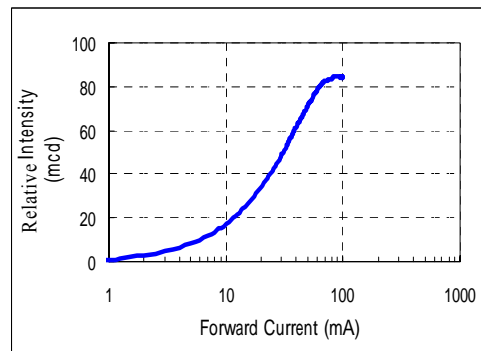


FIG. 3 Forward Voltage Vs. Temperature

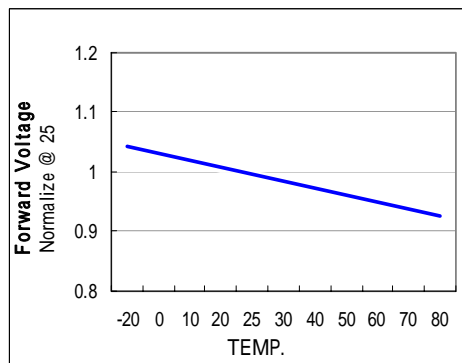


FIG. 4 Relative Intensity Vs. Temperature

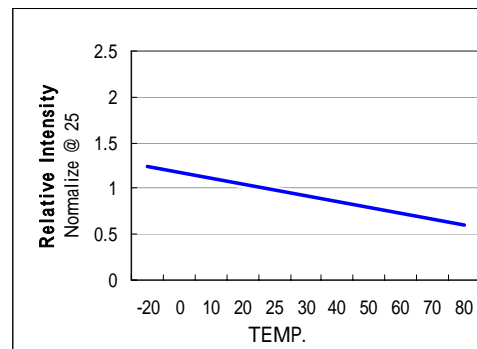
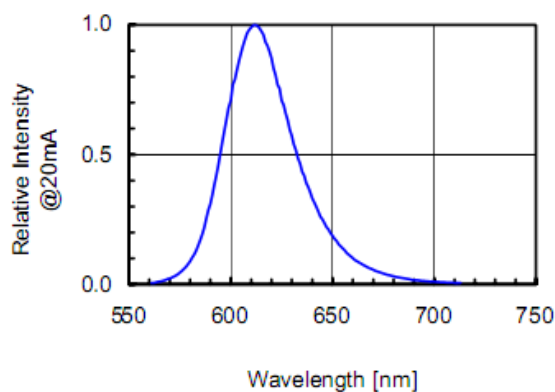


FIG. 5 Relative Intensity Vs. Wavelength





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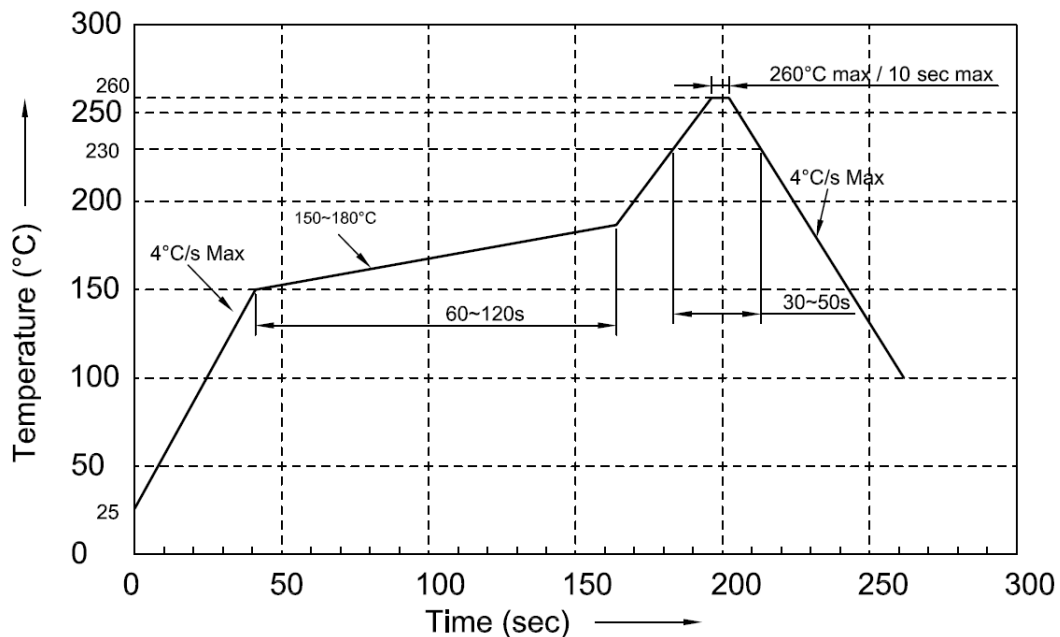
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◇ Reliability Test Items And Conditions

NO.	Item	Test Condition	Test Hr/cycle/time	Sample Q'ty	Ac/Re
1	Reflow	TEMP:260±5 ; Min.5Sec	6 min	22pcs	0/1
2	High Temperature Storage	TEMP: 85	1000hrs	22pcs	0/1
3	Low Temperature Storage	TEMP:-40	1000hrs	22pcs	0/1
4	DC Operating Life	IF=20MA	1000hrs	22pcs	0/1
5	High Humidity	85%R.H.	1000hrs	22pcs	0/1

◇ SMT Reflow Soldering Instructions



Notes:

- We recommend the reflow temperature 245±5 .The maximum soldering temperature should be limited to 260 for 10s (max).
- Don't cause stress to the epoxy resin while it is exposed to high temperature.
Number of reflow process shall be 2 times or less.



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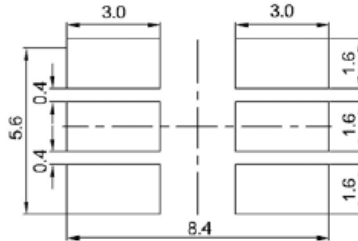
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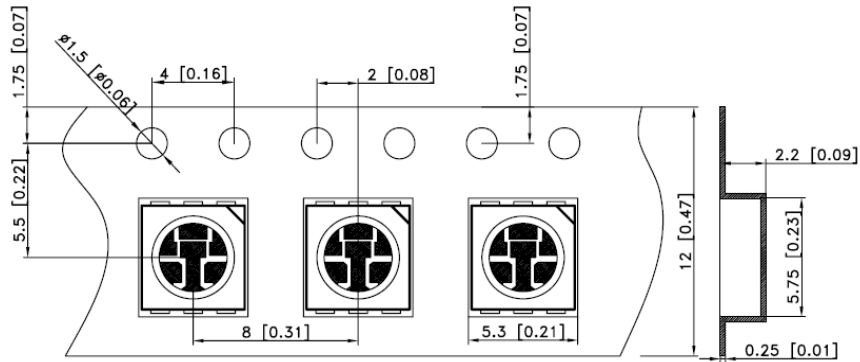
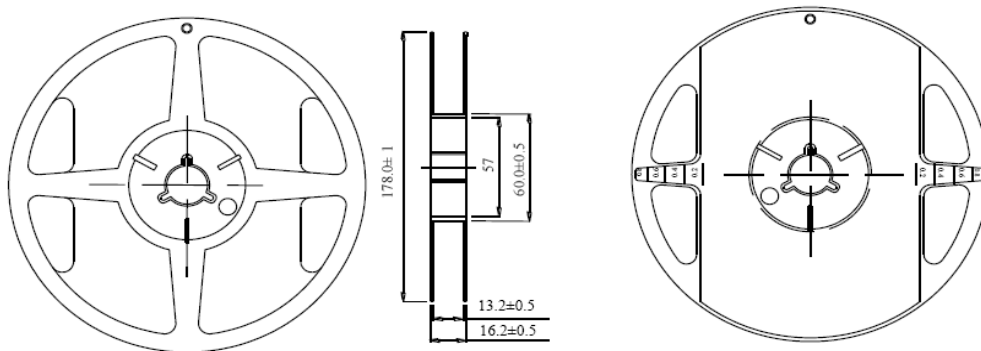
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❖ Recommended Soldering Pad Dimensions



❖ Tape Specification: 2,000PCS per reel



❖ Package Label

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

