



# 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

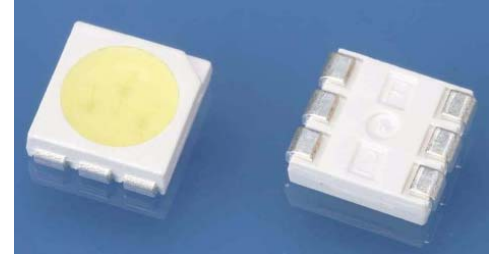


## P/N: TY-5050CW1

5.0 \* 5.0mm TOP SMD Series

### ◆ Features:

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



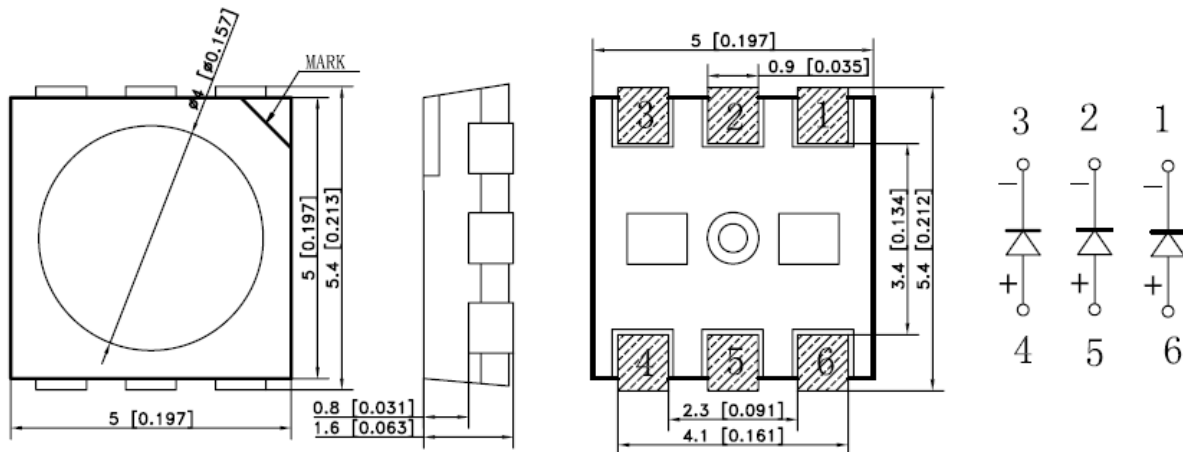
### ◆ Description

The White source color devices are made with InGaN 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[unit];
2. Tolerance is  $\pm 0.2\text{mm}$  (0.008 ") especially other specified;
3. Specifications are subject to change without notice.



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Part No.	Emitted Color	Len's Color	Chip Material
TY-5050CW1	White	Yellow	InGaN

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

Item	Symbol	Maximum	Unit
Power Dissipation	PD	330	mW
Continuous Forward Current	I <sub>Fmax</sub>	90	mA
Peak Forward Current(1/10 Duty Cycle 0.1ms Pulse Width)	I <sub>FP</sub>	100	mA
Peverse Voltage	V <sub>R</sub>	5	V
Operating Temperature Range	T <sub>opr</sub>	-40 to+85	25°C
Storage Temperature Range	T <sub>stg</sub>	-40 to+85	25°C

### ✧ Electrical/Optical Characteristics(Ta=25°C)

Item	Symbol	Condition	Min.	Typ.	Max	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =60mA	2.9	3.2	3.5	V
Luminous Intensity	I <sub>V</sub>	I <sub>F</sub> =60mA	4200	5400	6500	mcd
Luminous Flux	Φ	I <sub>F</sub> =60mA	11.5	15.8	20.2	lm
Typical Correlated Color Temperature	T <sub>c</sub>	I <sub>F</sub> =60mA	7000	8000	9000	K
			9000	1000	12000	
Chromaticity Coordinates	X	I <sub>F</sub> =60mA	--	0.33	--	--
	Y	I <sub>F</sub> =60mA	--	0.33	--	--
Viewing Angle	2θ <sub>1/2</sub>	I <sub>F</sub> =60mA	--	120	--	Deg
Capacitance	C	V <sub>F</sub> =0V, f=1MHZ	--	100	--	pF
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =5V	--	5	10	uA



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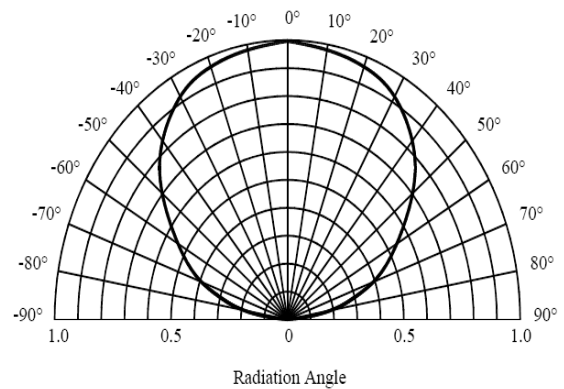
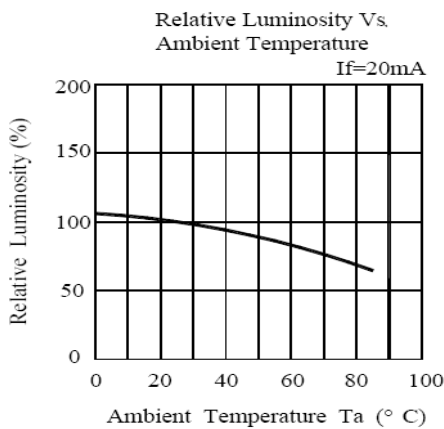
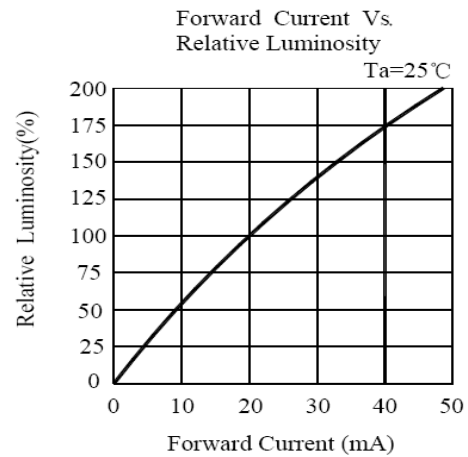
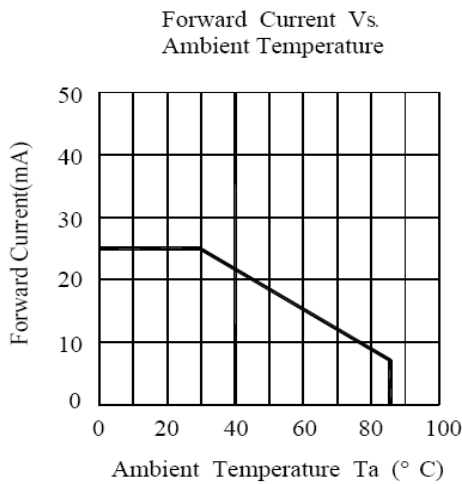
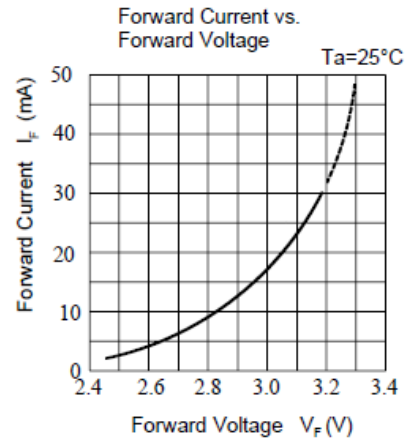
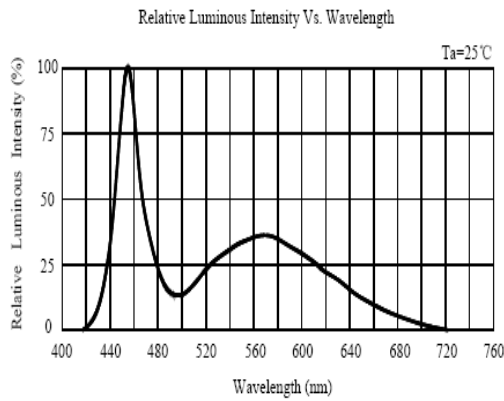
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### ◇ Typical Electro-Optical Characteristics Curves





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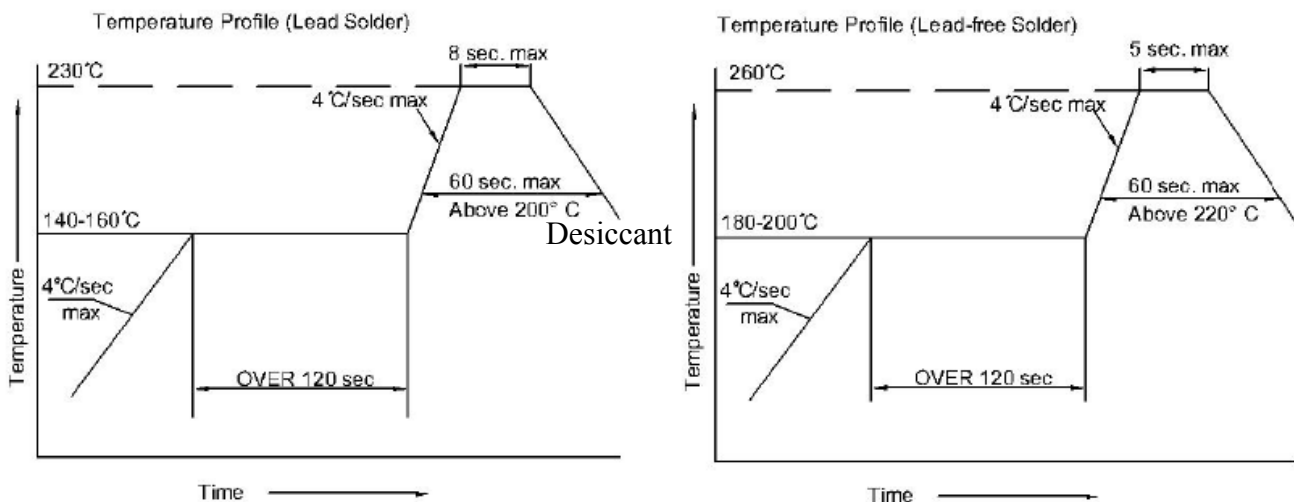
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### ◇ Reliability Test Items And Conditions

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:+260°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 Temperature	85°C	1000hrs	22pcs	0/1
8	High Humidity	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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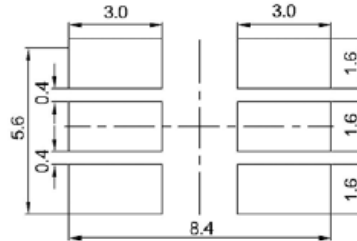
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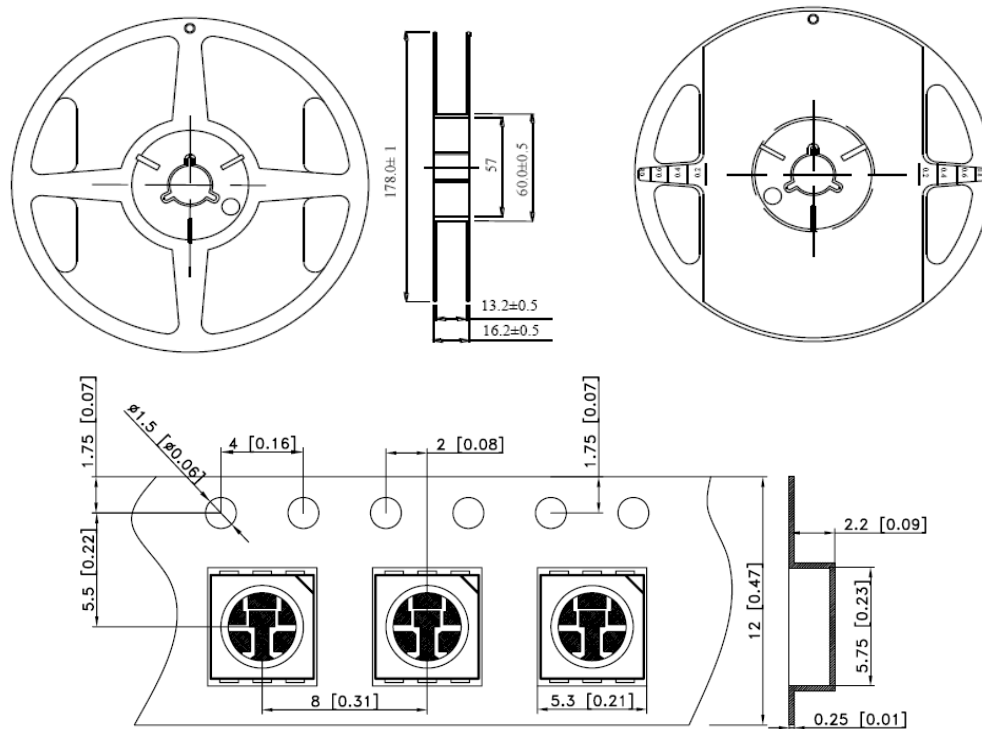
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### ◇ Recommended Soldering Pad Dimensions



### ◇ Tape Specification: 1,000PCS per reel



### ◇ Package Label

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

