



TOYOLED ELECTRONICS LIMITED

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

Tel : (852) 2540 7288
http://www.toyo-led.com

Fax : (852) 2517 1797
E-mail : sales@toyo-led.com



P/N:TY-YSV1204RGB1(1.50)-R5

1204 Package 3.2*1.0mm Side View Surface Mount LEDs Series

◇ Features:

- 3.2mm×1.0mm SMT LED, 1.50mm thickness
- PLCC-4 package
- White package
- Suitable for all SMT assembly and solder process

◇ Description

The Red source color devices are made with InGaAlP on Substrate Light Emitting Diode.

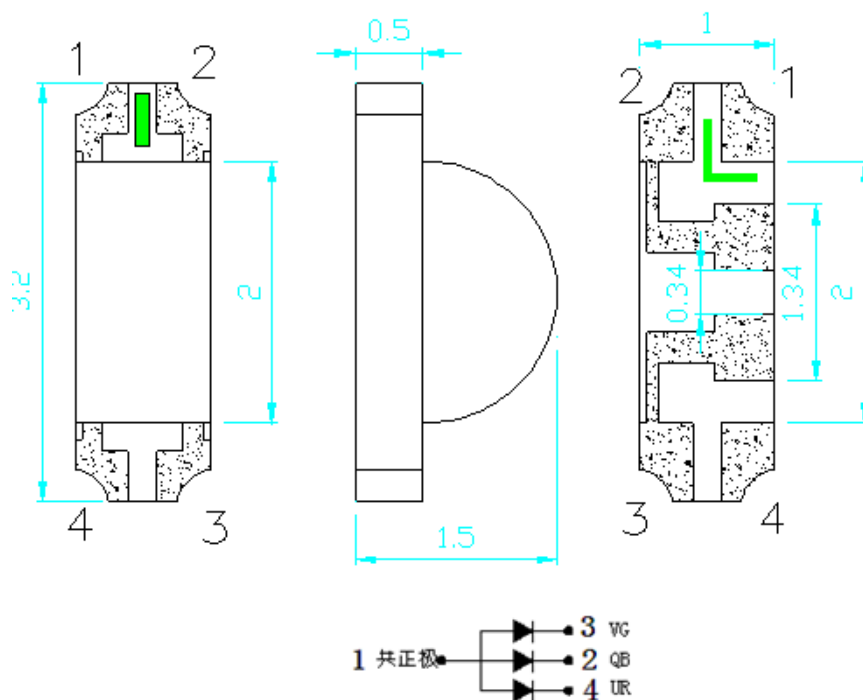
The Green source color devices are made with InGaN on Substrate Light Emitting Diode.

The Blue source color devices are made with GaN on Substrate 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 Outline Dimensions



NOTES:

1. All dimensions are in millimeter;
2. Tolerance is ± 0.15 mm unless otherwise specified;
3. Specifications are subject to change without notice.



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Part No.	Emitted Color			Len's Color	Chip Material		
TY-YSV1204RGB1(1.50)-R5	Red	Green	Blue	Water clear	InGaAlP	InGaN	GaN

✧ Absolute Maximum Ratings(Ta=25°C)

Item	Symbol	Maximum	Unit
Power Dissipation	R	75	mW
	G	135	
	B	135	
Forward Current	I _F	R/G/B 30	mA
Peak Forward Current(1/10 Duty Cycle 0.1ms Pulse Width)	I _{FP}	G/B 135	mA
		R 80	mA
Reverse Voltage	V _R	5	V
Operating Temperature Range	Topr / Tstg	-40 to+85	°C

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

Item	Symbol	Condition	Min.	Typ.	Max	Unit
Forward Voltage	V _F	R	--	1.9	2.2	V
		G/B	--	2.9	3.3	
Luminous Intensity	I _v	R	100	200	--	mcd
		G	350	550	--	
		B	100	200	--	
Wavelength	λ _d	R	--	620	625	nm
		G	--	518	524	
		B	--	466	472	
Viewing Angle	2θ _{1/2}	I _F =20mA	--	120	--	deg
Reverse Current	I _R	V _R =5V	--	5	10	uA

NOTES:

- Luminous intensity testing tolerance is ±10%;
- Dominant Emission Wavelength testing tolerance is ±1nm;
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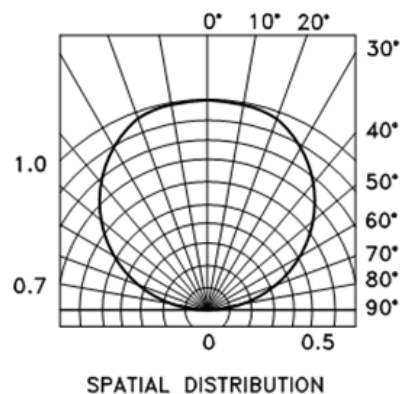
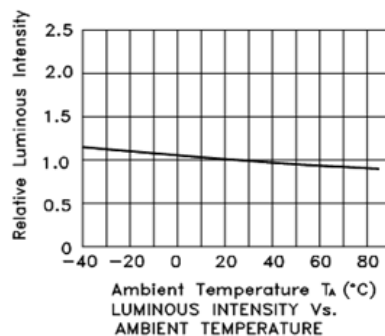
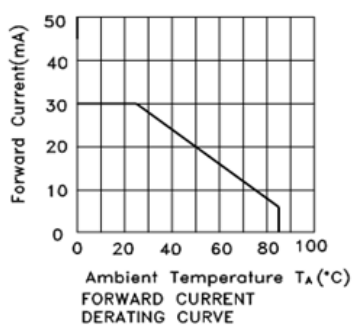
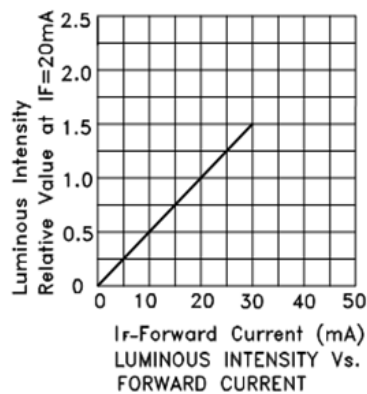
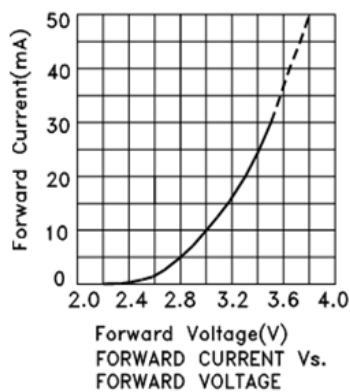
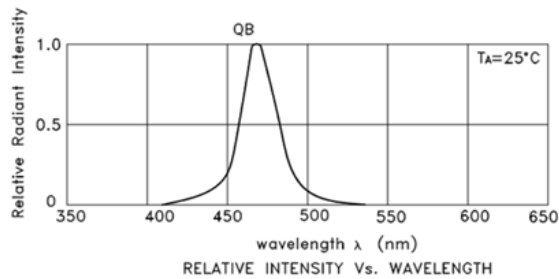
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P/N:TY-YSV1204RGB1(1.50)-R5

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◇ Typical Electro-Optical Characteristics Curves : blue





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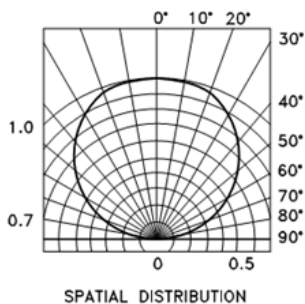
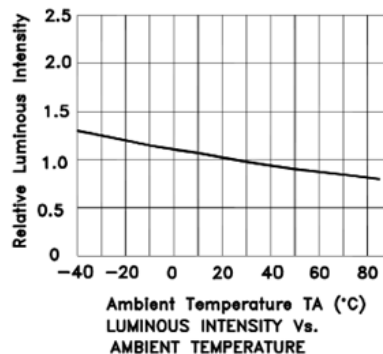
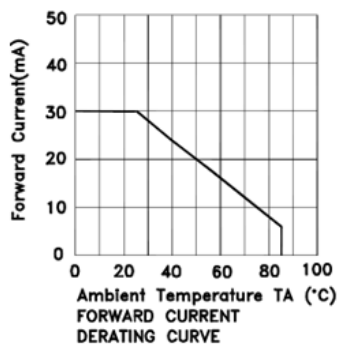
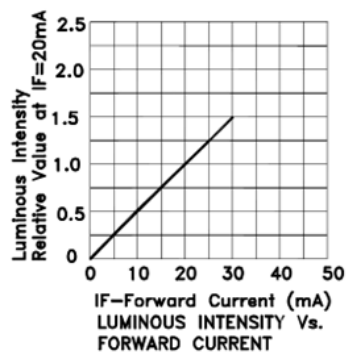
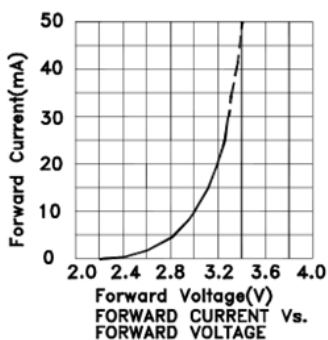
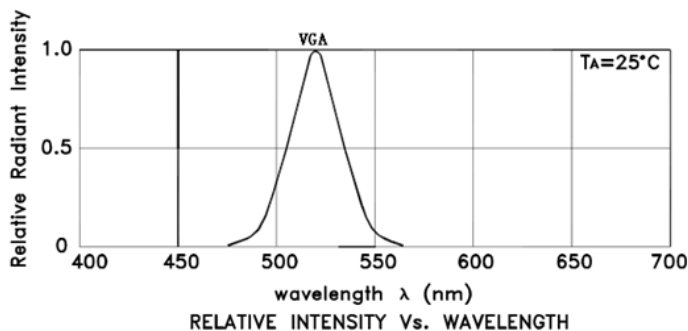
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P/N:TY-YSV1204RGB1(1.50)-R5

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◇ Typical Electro-Optical Characteristics Curves : Green





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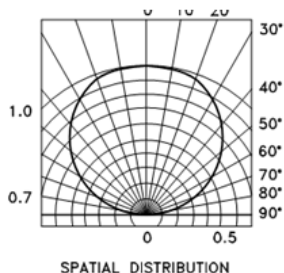
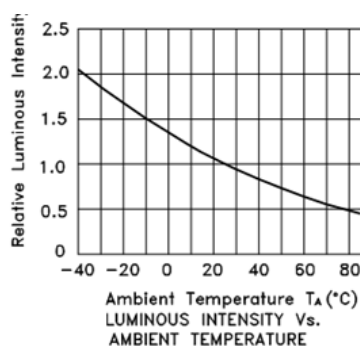
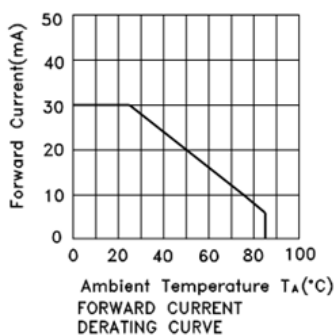
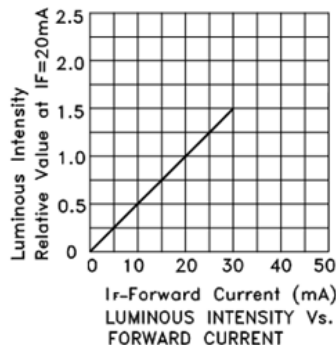
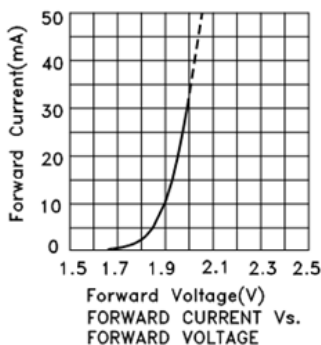
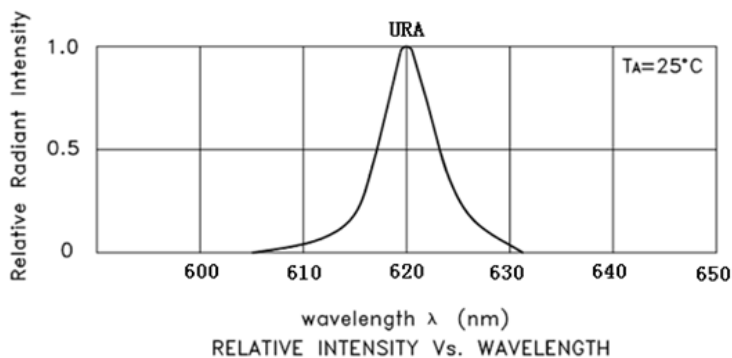
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◇ Typical Electro-Optical Characteristics Curves ; Red



◇ Reliability Test Items And Conditions



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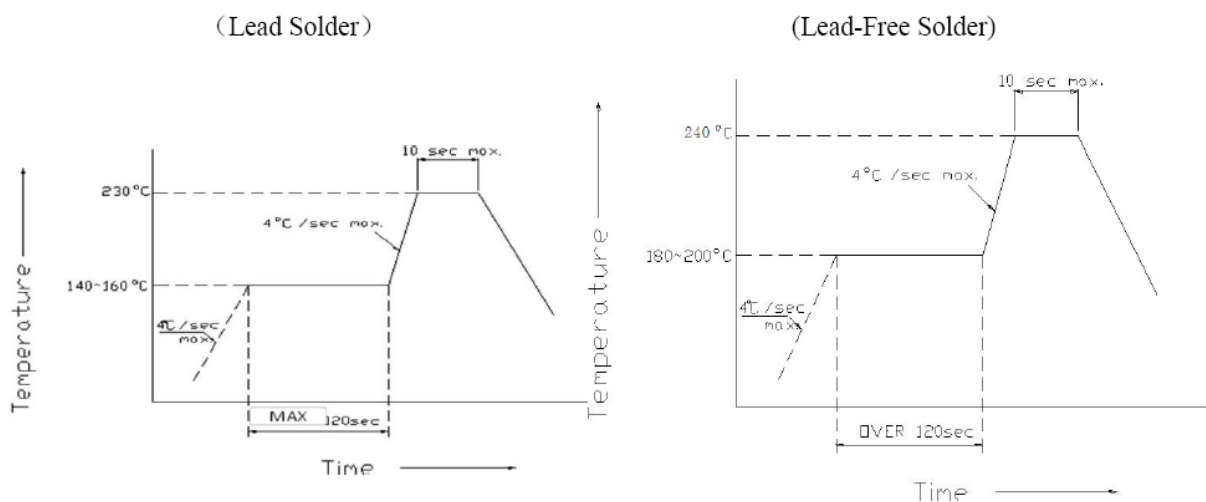


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NO.	Item	Test Condition	Test Hr/cycle/time	Sample Qty	Ac/Re
1	Reflow	TEMP:260±5°C; (3-7 sec)	2 times	22pcs	0/1
2	High Temperature/Humidity Storage	TEMP:60°C/ R.H.:85%	1000hrs	22pcs	0/1
3	Low Temperature Storage	TEMP:-40°C	1000hrs	22pcs	0/1
4	DC Operating Life	I _F =20mA	1000hrs	22pcs	0/1

❖ Recommended SMT Reflow Soldering Instructions



Notes:

1. We recommend the reflow temperature 245±5°C. The maximum soldering temperature should be limited to 260°C for 10s (max).
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Reflow soldering should not be done more than two times.



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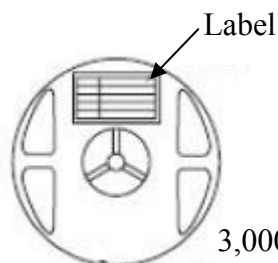
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Package & Shipping Instructions

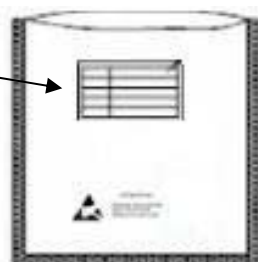


3,000PCS/Reel

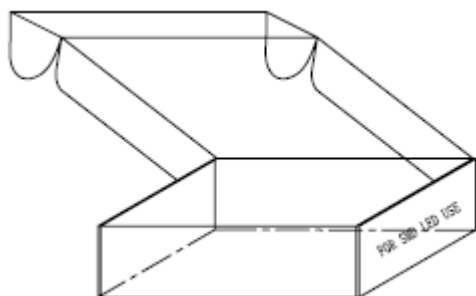


Desiccant

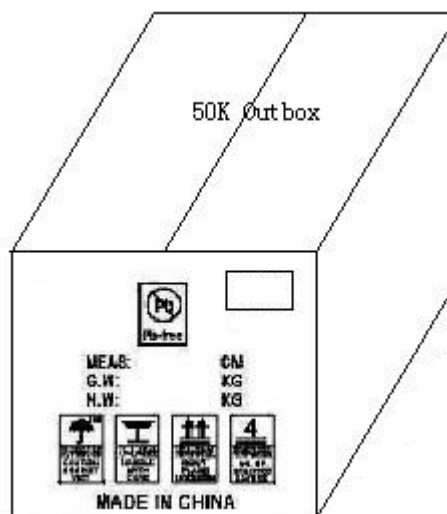
Label



Aluminum moisture-proof bag
Size: 240*216*0.112(mm)



5Reels/Inner Box (15KPCS)
Size: 250*220*68(mm)



5 Inner boxes/Outer Box (75KPCS)
Size: 350*260*230(mm)