



SURFACE MOUNT LED

1.ELEMENT APPEARANCE

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Model No.	Material	Lighting Color	Resin Color
RT-0808RGB-1-03-YCT	R	AlGaInP	Red
	G	InGaN	Green
	B	InGaN	Blue
			Black Diffused

2.ABSOLUTE MAXIMUM RATINGS AT Ta=25°C

Characteristic	Symbol	Rating	Unit
Forward direct current	IFM	10	mA
Reverse voltage	VRM	5	V
Operating temperature	Topr	-35 to +85	°C
Storage temperature	Tstg	-40 to +100	°C
Power dissipation	Pd	R	25
		G	36
		B	36
			mW

3.ELECTRO-OPTICAL CHARACTERISTICS AT Ta=25°C

Characteristic	Symbol	Condition	Min.	Typ.	Max.	Unit
Luminous intensity	Iv	IF=5mA	R	10	20	mcd
		IF=2mA	G	10	20	
		IF=2mA	B	2	4	
Forward voltage	VF	IF=5mA	R	1.6	1.9	2.5
		IF=2mA	G	2.2	2.5	3.6
		IF=2mA	B	2.3	2.6	3.6
Reverse current	IR	VR=5V			10	μA
Dominant wavelength	λd	IF=5mA	R	610	620	630
		IF=2mA	G	515	530	540
		IF=2mA	B	460	470	480
Spectral line half width	Δλ	IF=5mA	R			24
		IF=2mA	G			38
		IF=2mA	B			28
Viewing angle(X,Y)	2θ 1/2			120		deg.

※Measurement Uncertainty of Luminous Intensity : ±15%

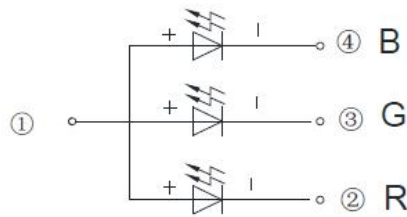
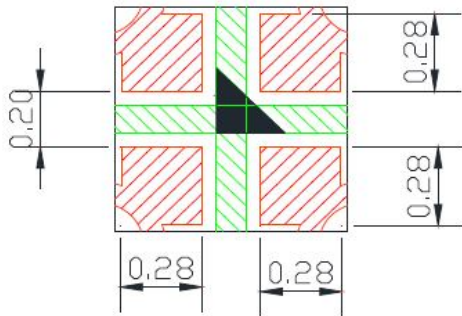
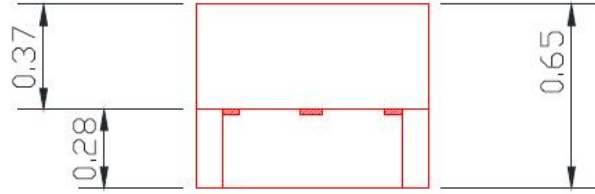
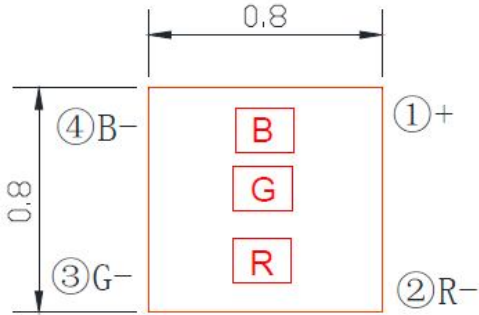
※Measurement Uncertainty of Forward Voltage : ±0.05V

※Peak emission wavelength Measurement allowance is ±1.0nm



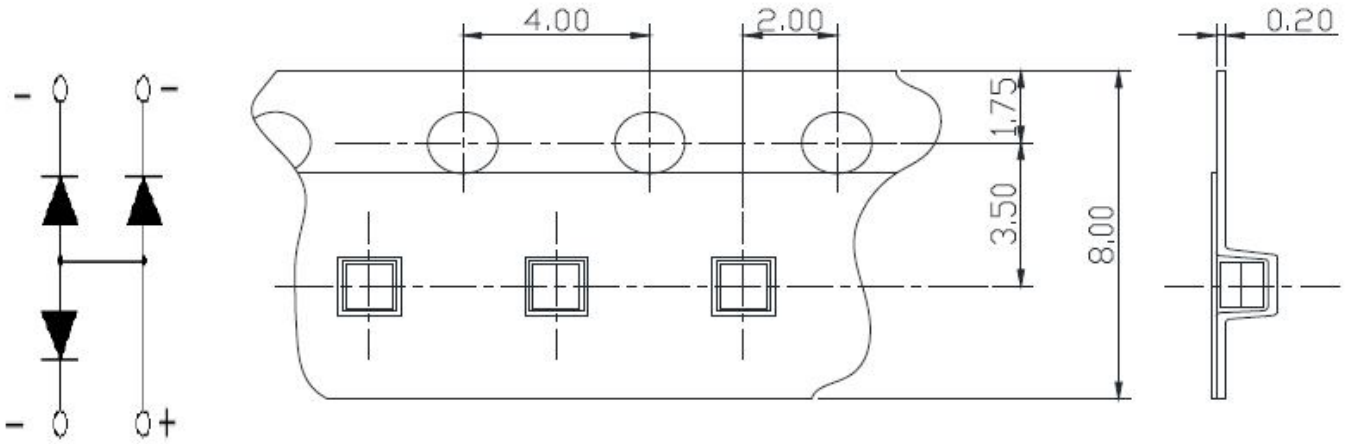
Model : RT-0808RGB-1-03-YCT

4.DIMENSIONS UNIT : m/m TOLERANCE : ± 0.25 m/m



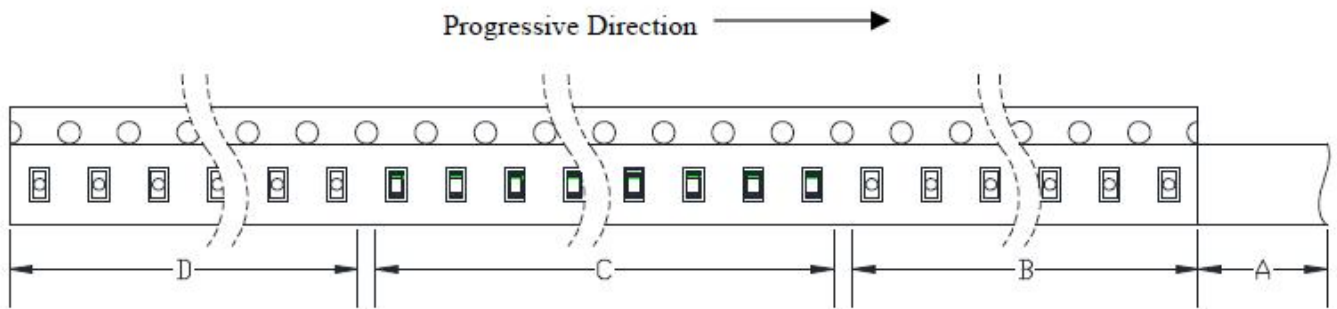


Carrier Tape (Units:mm)



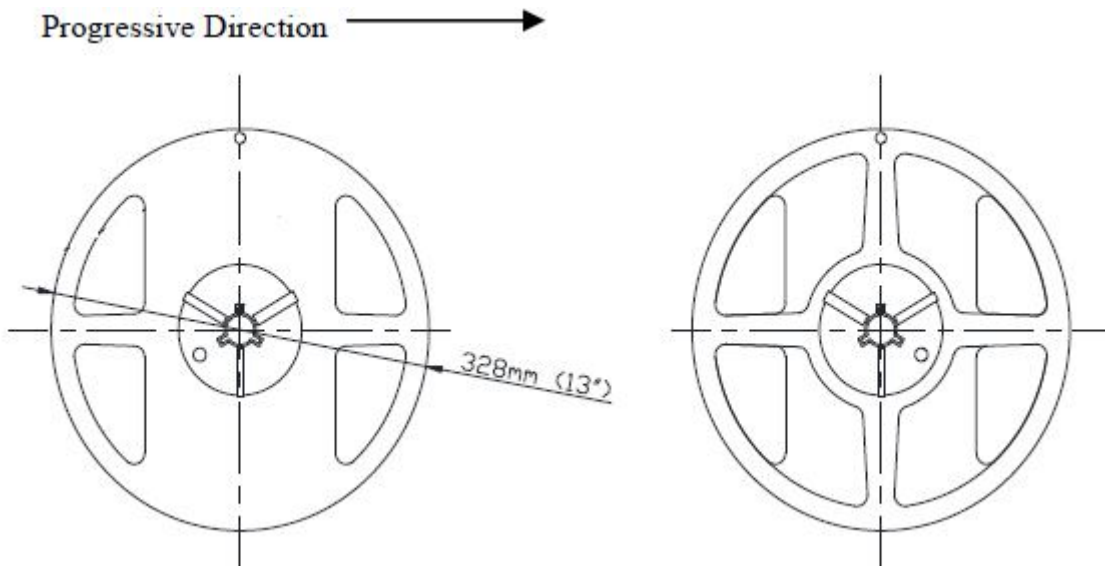
All dimensions in mm, tolerances unless mentioned is ± 0.1 mm.

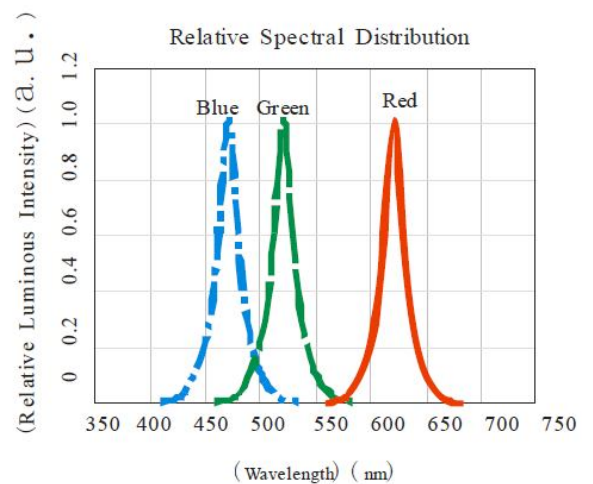
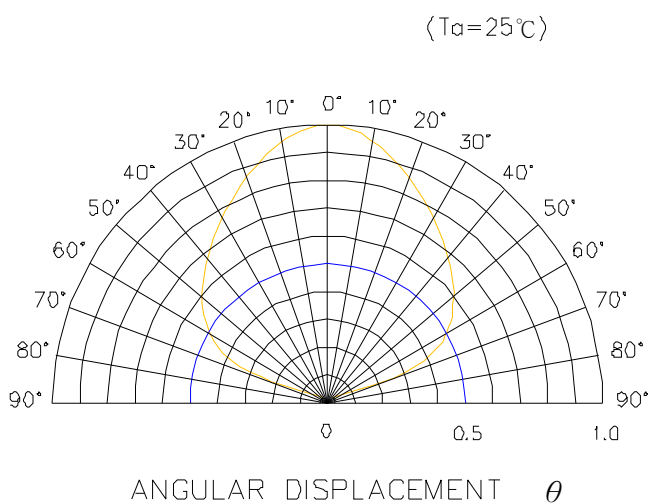
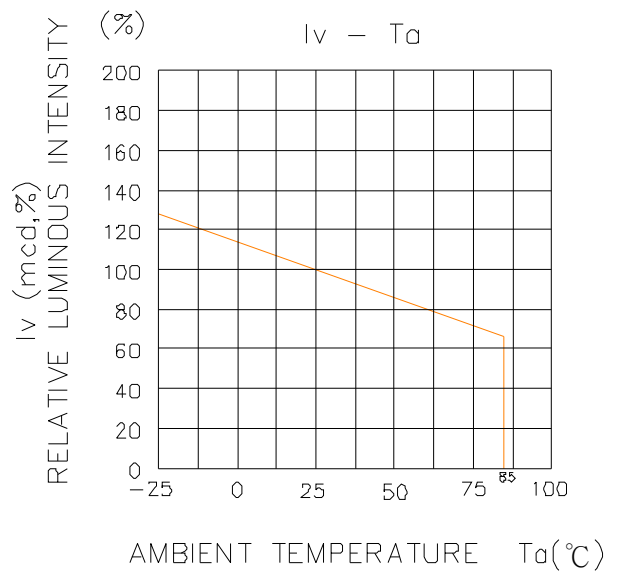
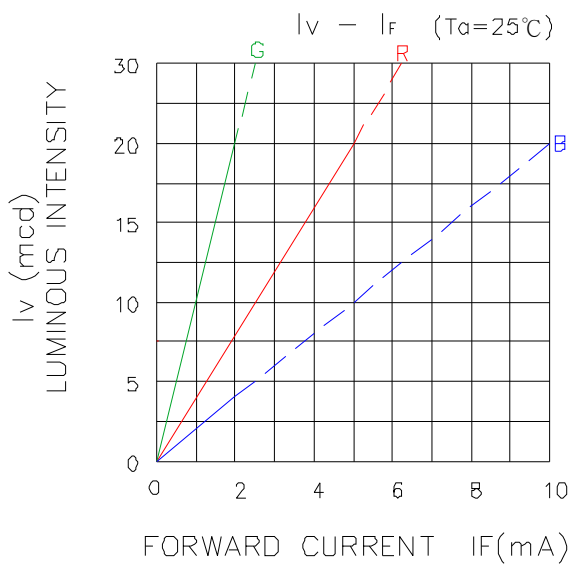
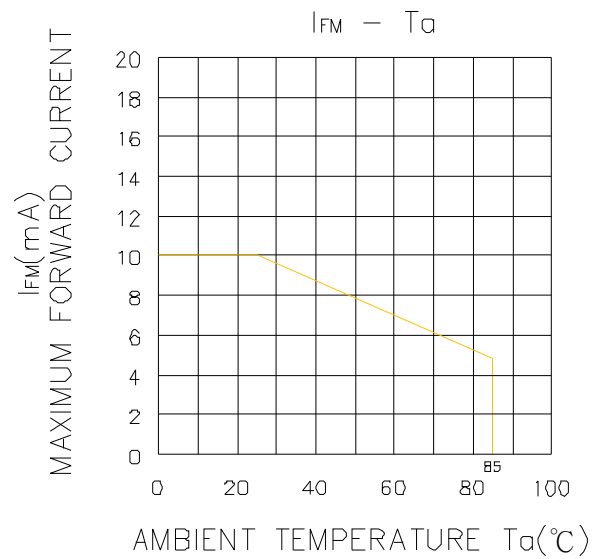
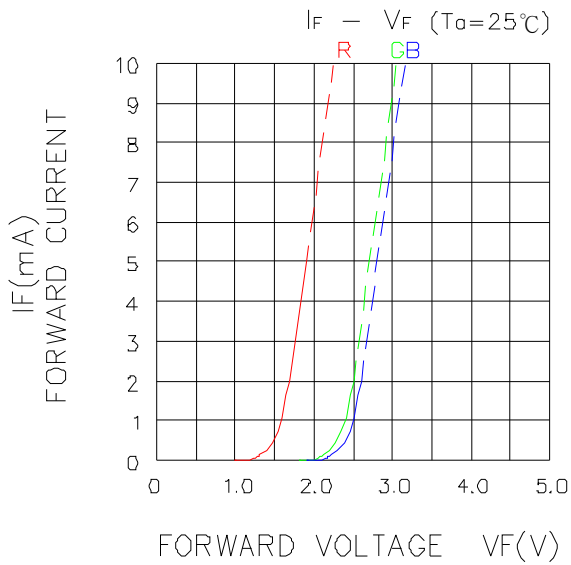
Details Of Carrier Tape (Units:mm)



A: Top Cover Tape, 200mm; B: Leader, Empty, 100mm; C: 15000 Lamps Loaded; D: Trailer, Empty, 100mm.

Reel Dimension (Units:mm)





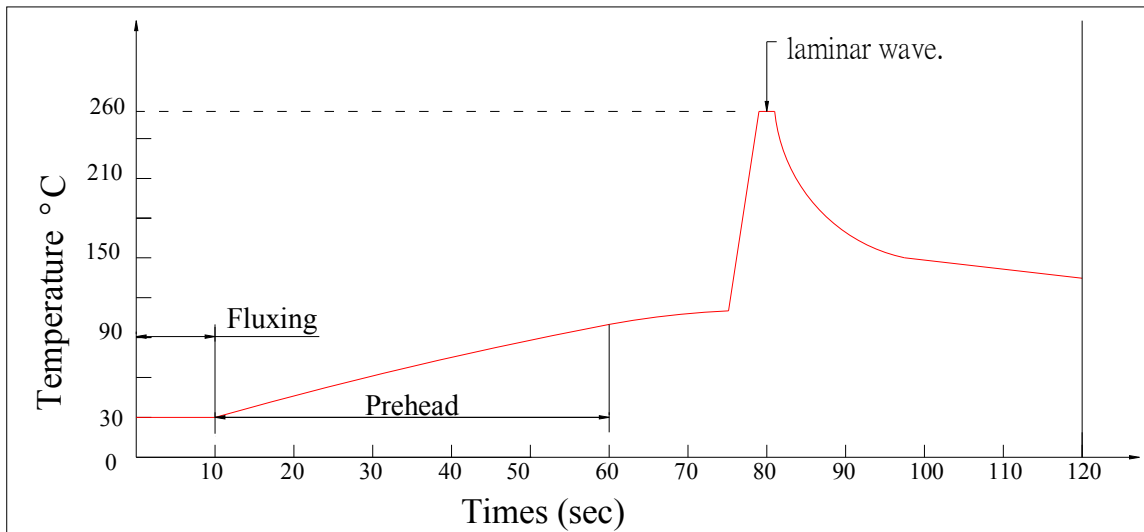


Soldering Profile

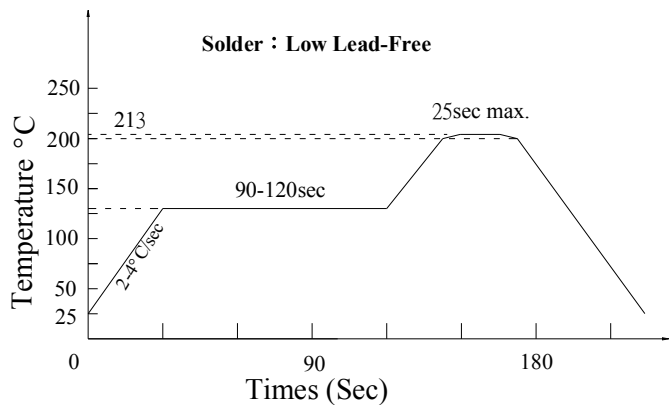
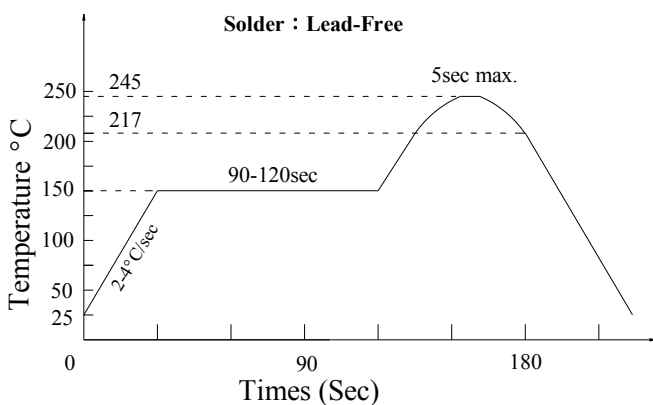
Compliant with the following condition :

- (1) Leaded quantity of product below 100 ppm
- (2) Lead-free process

Shape	Lead Frame Type
Hand soldering	1.Temp.at tip of iron : 300 °C max.(30W max.) 2.Soldering time : 3 sec max. 3.Distance : 3 mm MIN (from solder joint to case)
DIP soldering	1.Preheat temp : 100 °C max , 60 sec max. 2.Bath temp : 260 °C max. 3.Bath time : 3 sec max. 4.Distance : 3 mm MIN (From solder joint to case)
Recommended soldering profile	1.Preheat temp. : 100 °C , 50 sec max. 2.Peak temp. : 260 °C max. 3.Peak time : 3 sec max. 4.Duration above: 200°C , 3 sec max.



SMD Type		
Profile Feature	Solder : Lead-Free	Solder : Low Lead-Free
Preheat temp	150-180 °C , 4°C/sec max. 120 sec max.	130-170 °C , 4°C/sec max. 120 sec max.
Peak temp	245 °C max. , 5 sec max.	213 °C max. , 25 sec max.
Duration above	217 °C , 60 sec max.	200 °C , 40 sec max.





Reliability Test Items

CONDITIONS :

The reliability of products shall be satisfied with items listed below.

NO.	<u>Item</u>	Condition	Time / Cycle	Criteria	Ac / Re	Sample Quantity
1	Soldering Heat Test	260°C	5 sec	Open / Short	0 / 1	60 pcs
2	Thermal Shock	0°C (5min) ~100°C (5min)	20 Cycles	Open / Short	0 / 1	60 pcs
3	High Temp. Storage	100°C	1000 Hrs	Open / Short	0 / 1	60 pcs
4	Low Temp. Storage	-40°C	1000 Hrs	Open / Short	0 / 1	60 pcs
5	Temperature Cycle Test	-40°C~85°C	100 Cycles , 200Hrs	Open / Short	0 / 1	60 pcs
6	High Temp. High Humidity Test	60°C, 90% RH	1000Hrs	Open / Short	0 / 1	60 pcs
7	DC Operation Life Test	IF=5mA IF=2mA	1000Hrs	Power decay	≤ 30%	60 pcs