



## VISIBLE LED

### 1.ELEMENT APPEARANCE

Model No.	Material	Lighting Color	Resin Color
RT3-04HRYG	R	GaAsP/GaP	White Diffused
	YG	GaP/GaP	

### 2.ABSOLUTE MAXIMUM RATINGS AT Ta=25°C

Characteristic	Symbol	Rating	Unit
Forward direct current	IFM	25	mA
Reverse voltage	VRM	4	V
Operating temperature	Topr	-40 to +85	°C
Storage temperature	Tstg	-40 to +100	°C
Power dissipation	Pd	67.5	mW

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

Characteristic	Symbol	Condition	Min.	Typ.	Max.	Unit	
Luminous intensity	Iv	IF=20mA	R	7	14	40	mcd
			YG	9	18	40	
Forward voltage	VF	IF=20mA	R		2.0	2.7	V
			YG		2.2	2.7	
Reverse current	IR	VR=4V			10	µA	
Peak emission wavelength	λp	IF=20mA	R		632		nm
			YG		568		
Dominant wavelength	λd	IF=20mA	R		624		nm
			YG		572		
Spectral line half width	Δλ	IF=20mA	R		35		nm
			YG		30		
Viewing angle	2θ 1/2	IF=20mA		50		deg.	

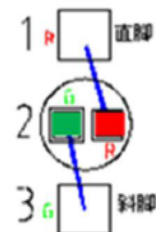
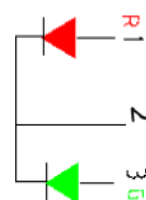
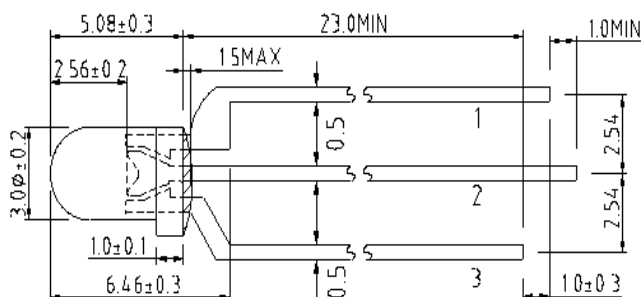
※Radiant Intensity Measurement allowance is ±15 %

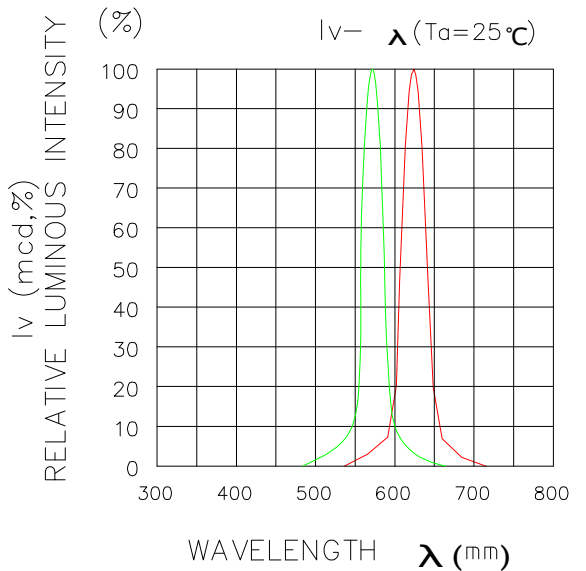
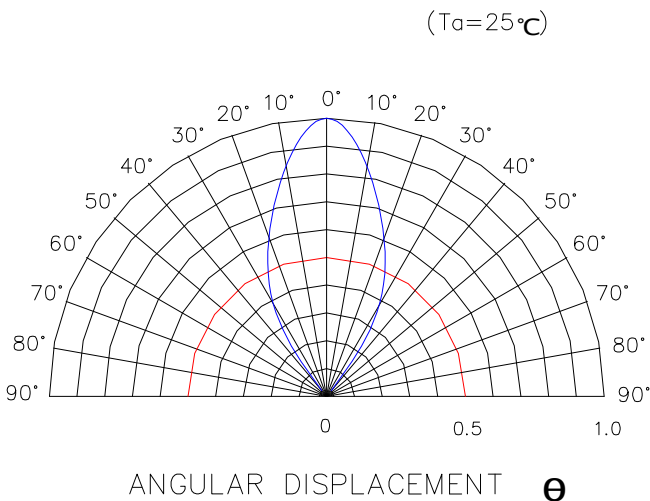
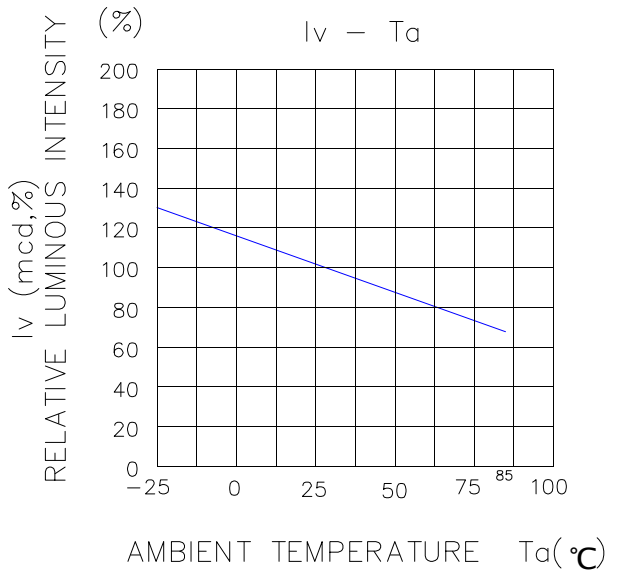
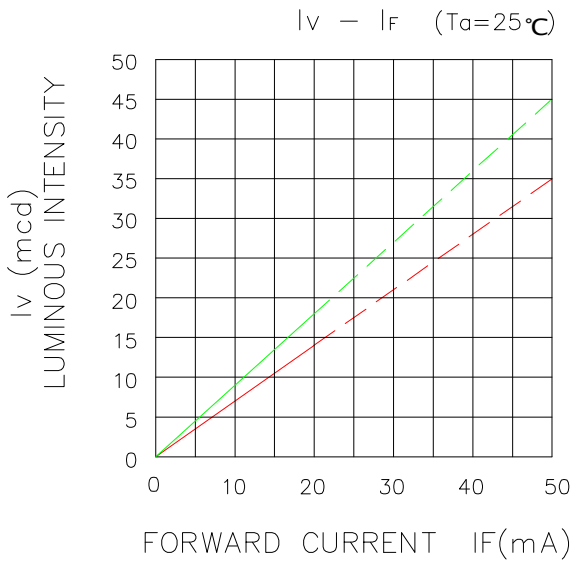
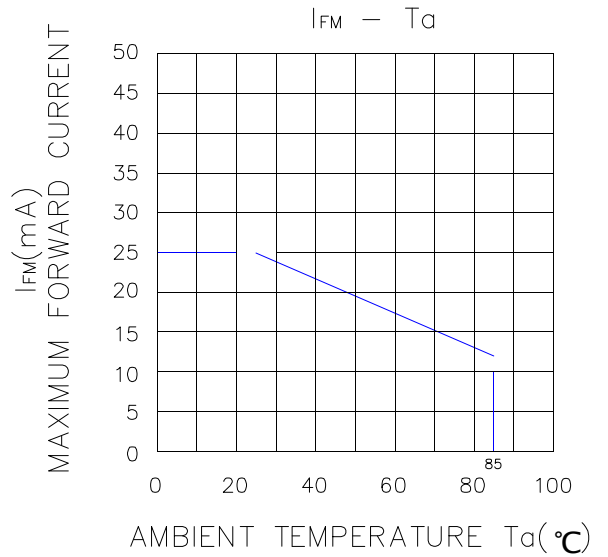
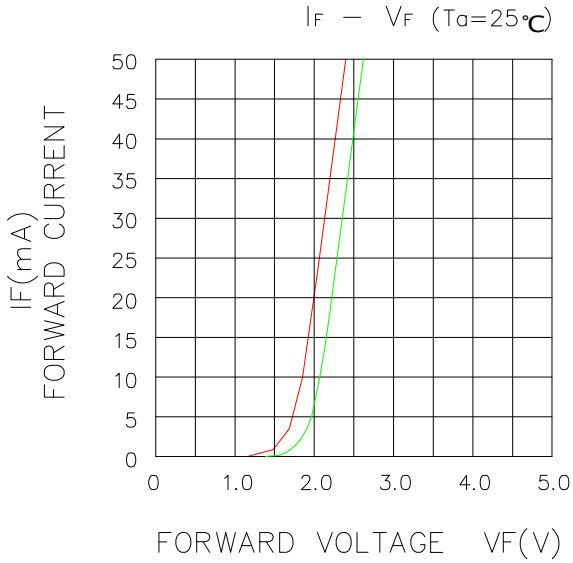
※Forward voltage Measurement allowance is ±0.05V

※Peak emission wavelength Measurement allowance is ±0.5nm

### 4.DIMENSIONS UNIT : m/m

Tolerance is ±0.2mm unless otherwise specified.







## PACKING METHOD

### 5. PACKING METHOD:

SPQ: 1,000 pcs

Bag's dimension: L 11 cm \*W 9~10 cm \*H 6~7 cm

10 bags will be packed into a big bag.

Fig 1. 10,000 pcs per carton

OuterCarton's dimension: L 34.5cm \*W 28cm \*H 12cm



Fig 2. 20,000 pcs per carton

OuterCarton's dimension: L 34cm \*W 27.5cm \*H 22cm



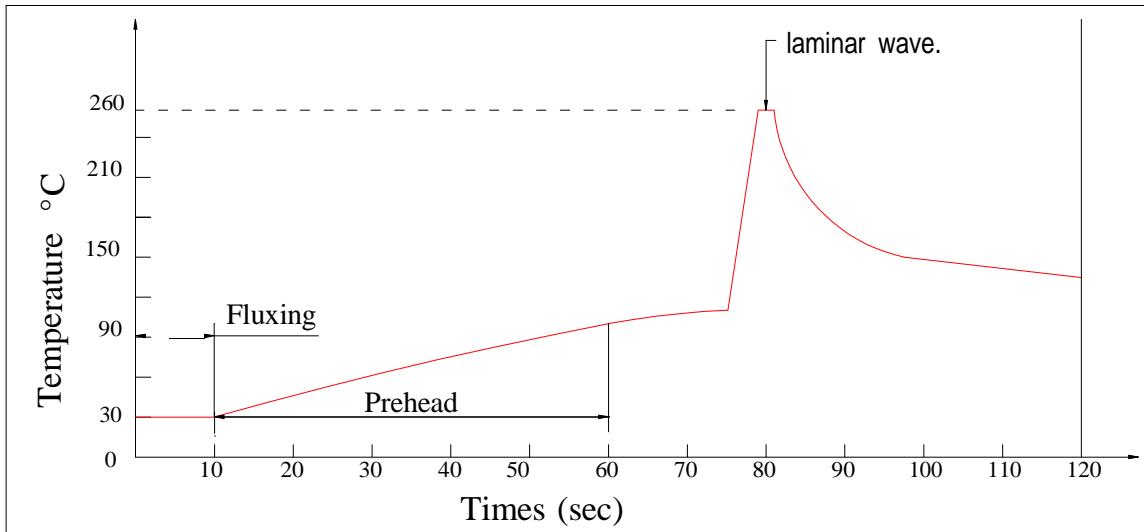


## Soldering Profile

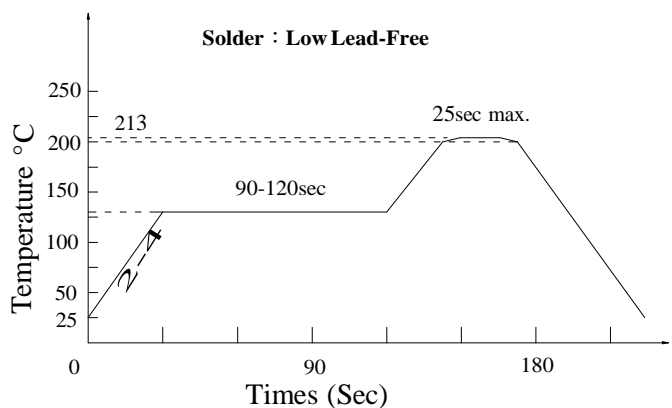
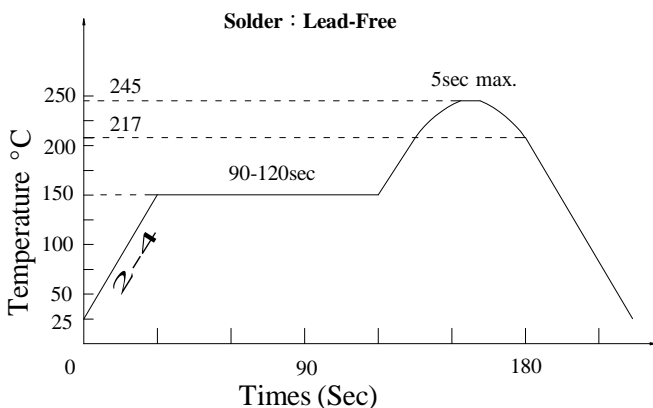
**Compliant with the following condition :**

- (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.



Profile Feature	SMD Type	
	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 / Shot	0 / 1	60 pcs
2	Thermal Shock	0°C(5min) ~100°C(5min)	20 Cycles	Open / Shot	0 / 1	60 pcs
3	High Temp. Storage	100°C	1000 Hrs	Open / Shot	0 / 1	60 pcs
4	Low Temp. Storage	-40°C	1000 Hrs	Open / Shot	0 / 1	60 pcs
5	Temperature Cycle Test	-40°C~85°C	100 Cycles , 200Hrs	Open / Shot	0 / 1	60 pcs
6	High Temp. High Humidity Test	60°C, 90% RH	1000Hrs	Open / Shot	0 / 1	60 pcs
7	DC Operation Life Test	IF=20mA	1000Hrs	Power decay	≤30%	60 pcs