



## INFRARED EMITTING DIODE

### 1.ELEMENT APPEARANCE

Model No.	Material	Lighting Color	Resin Color
RT5-2407E20T	AlGaAs/AlGaAs	Non-Visible	Water Clear

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

Characteristic	Symbol	Rating	Unit
Forward direct current	IFM	200	mA
Reverse voltage	V <sub>RM</sub>	5	V
Operating temperature	T <sub>opr</sub>	-40 to +85	°C
Storage temperature	T <sub>stg</sub>	-40 to +100	°C
Power dissipation	P <sub>d</sub>	400	mW
Lead soldering temperature (3mm from body ) 260°C for 5sec.			

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

Characteristic	Symbol	Condition	Min.	Typ.	Max.	Unit
Radiant intensity	I <sub>e</sub>	IF=50mA		7.5		mW/sr
Forward voltage	V <sub>F</sub>	IF=100mA		1.6	2.0	V
Reverse current	I <sub>R</sub>	V <sub>R</sub> =4V			10	μA
Peak emission wavelength	λ <sub>p</sub>	IF=50mA		850		nm
Spectral band width @ 50%	Δλ	IF=50mA		40		nm
Rise time/Fall time	tr/tf	IF=50mA		25/15		ns
Viewing angle	2θ 1/2	IF=50mA		100		deg.

- ※ Radiant Intensity Measurement allowance is ±15%
- ※ Forward voltage Measurement allowance is ±0.05V
- ※ Peak emission wavelength Measurement allowance is ±0.5nm

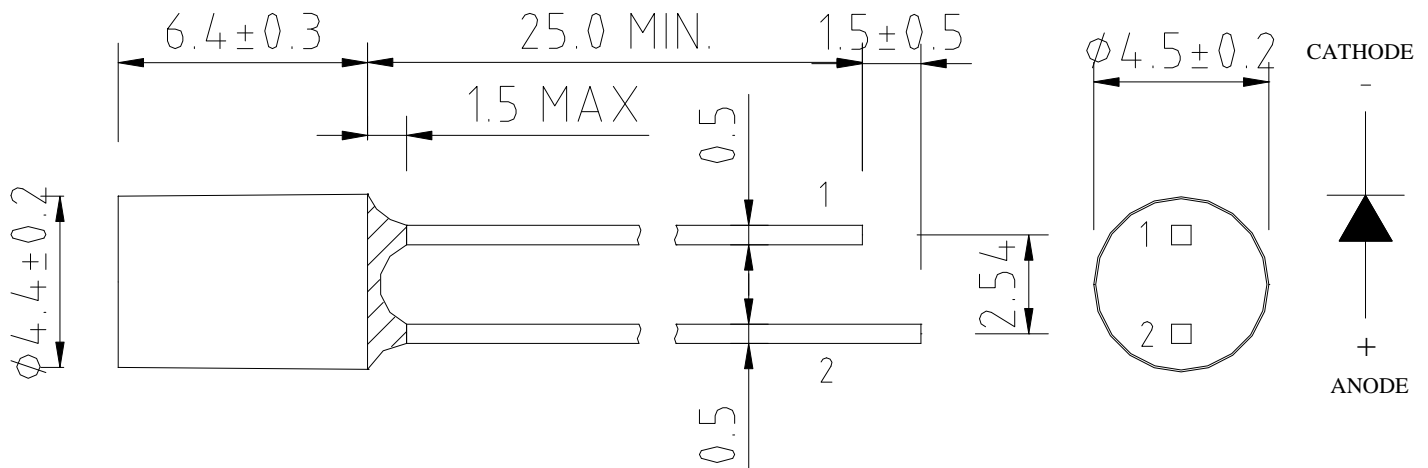


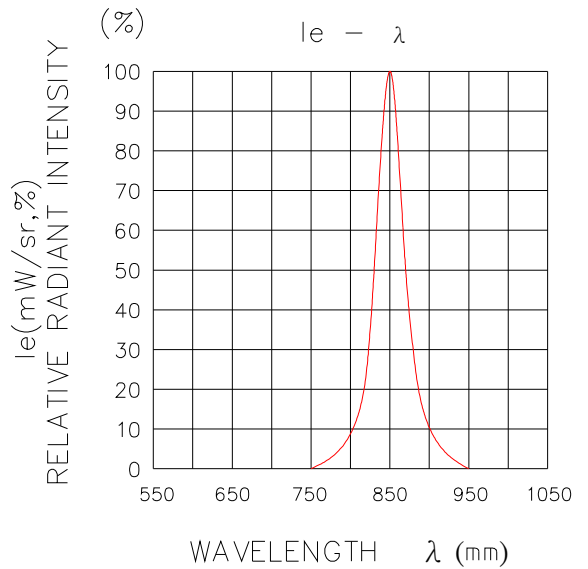
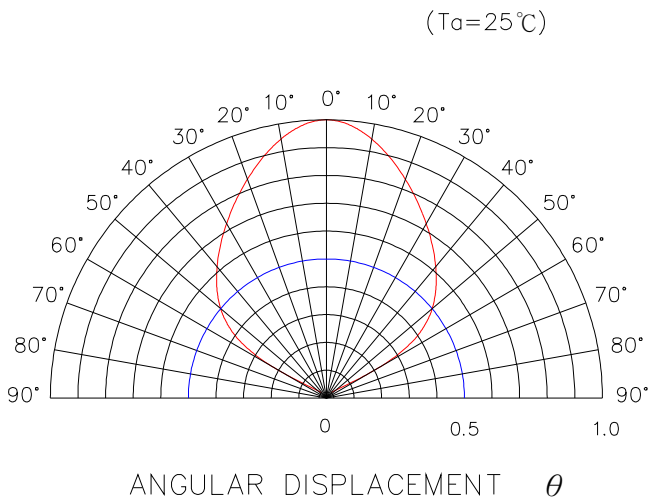
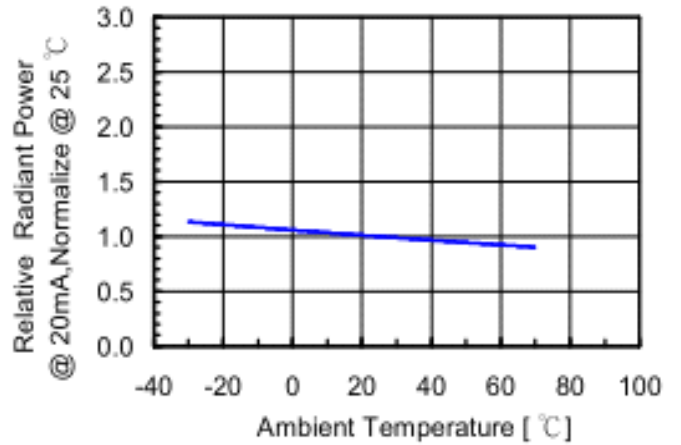
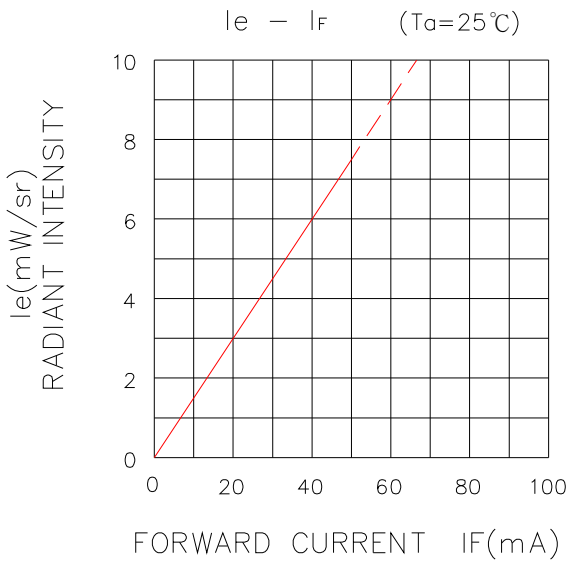
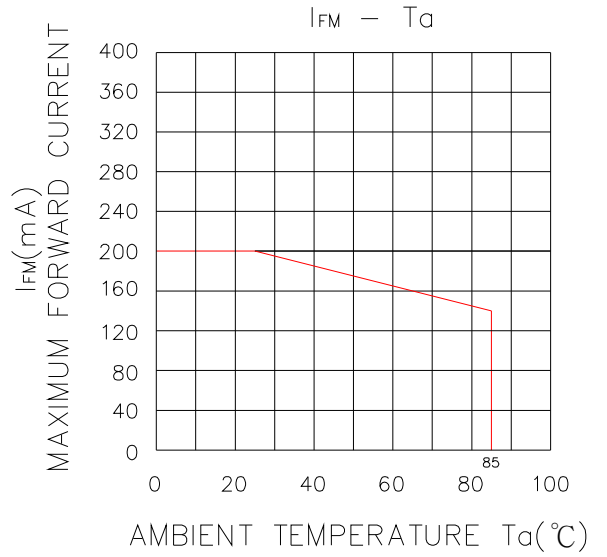
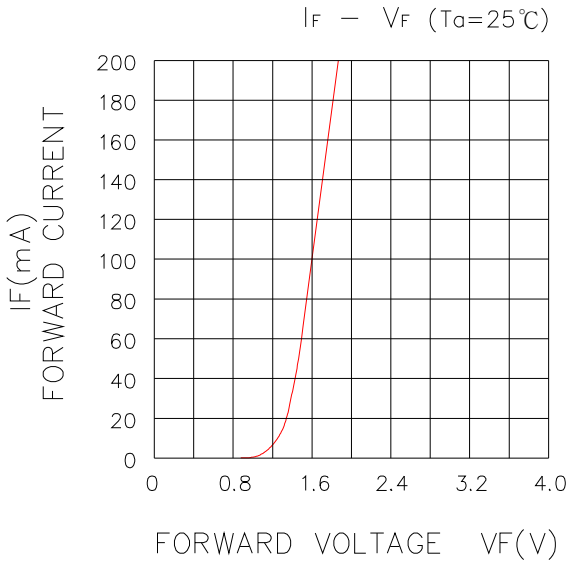
### 4.DIMENSIONS UNIT : m/m

SIGN : 1.CATHODE

Tolerance is ±0.25mm unless otherwise specified.

2.ANODE







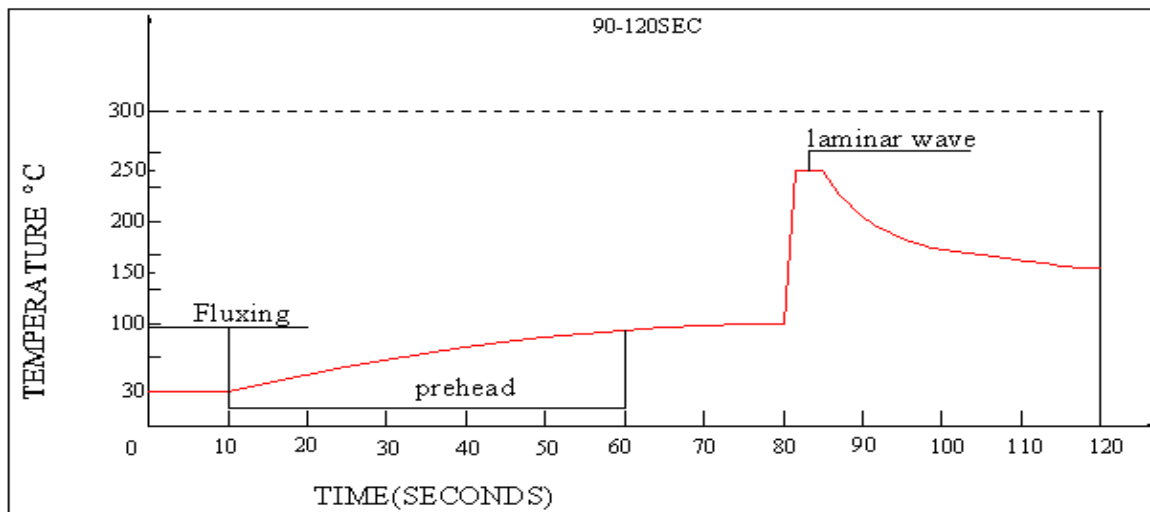
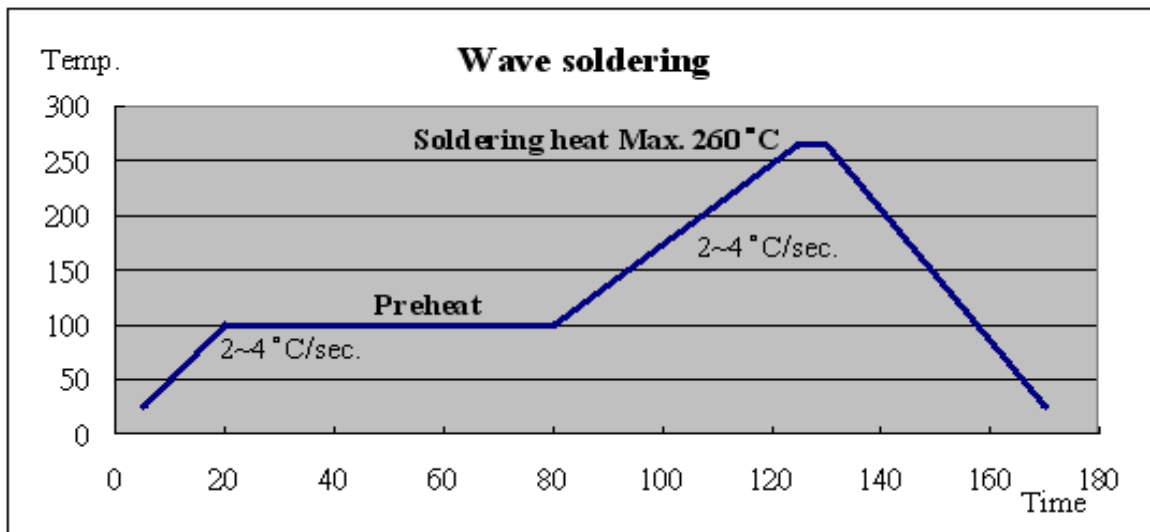
## Soldering Profile

### Compliant with the following condition :

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

Shape	Lead Frame Type / Holder 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 : 5 sec MAX. 4.Distance : 3 mm MIN (From solder joint to case).
Reflow soldering	NO
Shape	SMD Type
Hand soldering	1.Temp.at tip of iron : 300 °C MAX. 2.Soldering time : 3 sec MAX.
DIP soldering	1.Preheat temp. : 120-150 °C , 60-120 sec. 2.Bath temp. : 260 °C MAX. 3.Bath time : 5 sec
Reflow soldering	1.Preheat temp. : 150-180 °C , 120 sec MAX. 2.Peak temp. : 260 °C MAX. 3.Peak time : 10 sec MAX.

### wave soldering profile :





## 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=50mA	1000Hrs	Power decay	≤30%	60 pcs