



# RODAN(TAIWAN)LTD.

## INFRARED EMITTING DIODE

### 1.ELEMENT APPEARANCE

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Model No.	Material	Lighting Color	Resin Color
RT4-46ET	AlGaAs/AlGaAs	Non-Visible	Water Clear

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

Characteristic	Symbol	Rating	Unit
Forward direct current	IFM	100	mA
Reverse voltage	VRM	4	V
Operating temperature	Topr	-25 to +85	°C
Storage temperature	Tstg	-25 to +100	°C
Power dissipation	Pd	200	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	Ie	IF= 50 mA	1.8	3.0		mW/sr
Forward voltage	VF	IF= 100 mA		1.5	2.0	V
Reverse current	IR	VR=4V			10	μ A
Peak emission wavelength	λ p	IF=50mA		850		nm
Spectral line half width	Δ λ	IF=50mA		40		nm
Rise time/Fall time	tr/tf	IF=50mA		25/15		ns
Viewing angle	2θ 1/2	IF=50mA		180		deg.

Radiant Intensity Measurement allowance is ±15%

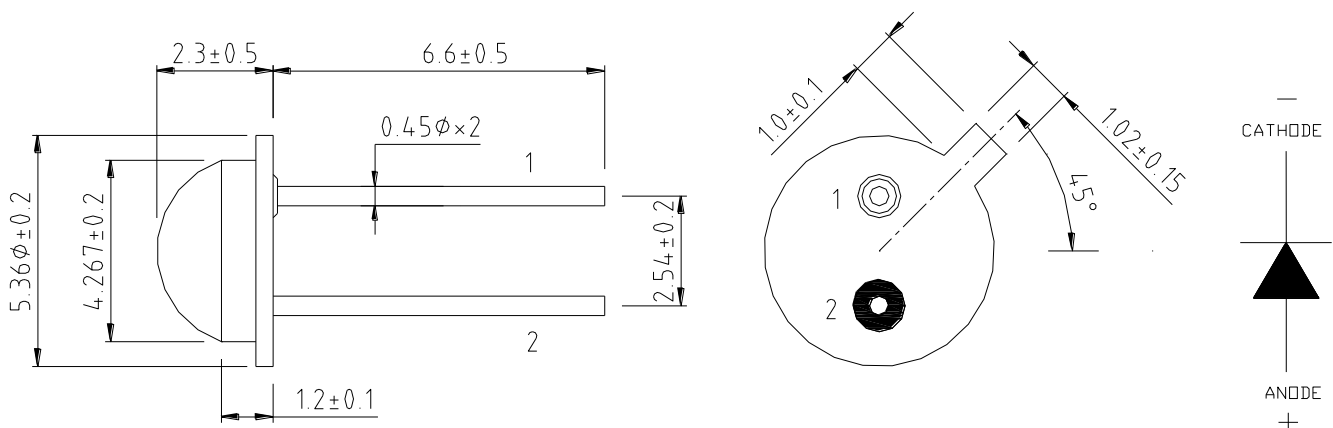
Forward voltage Measurement allowance is ±0.05V

Peak emission wavelength Measurement allowance is ±1nm

### 4.DIMENSIONS UNIT : m/m

SIGN : 1. CATHODE  
2. ANODE

Tolerance is ±0.2mm unless otherwise specified.

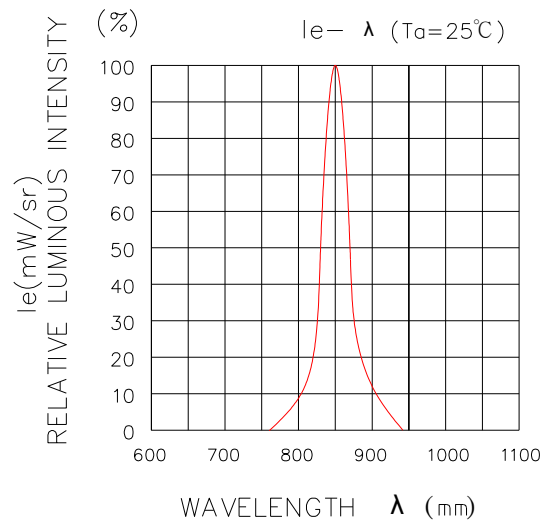
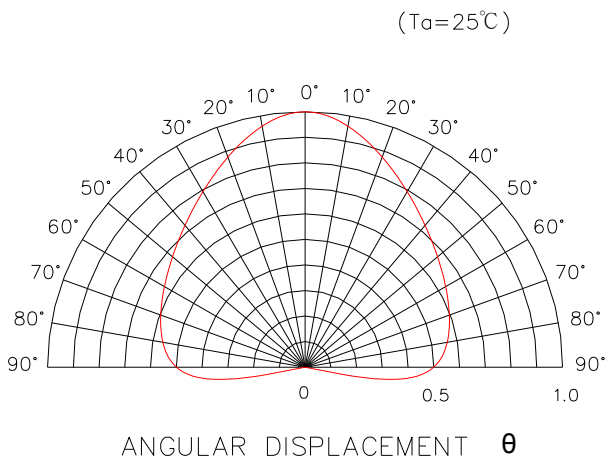
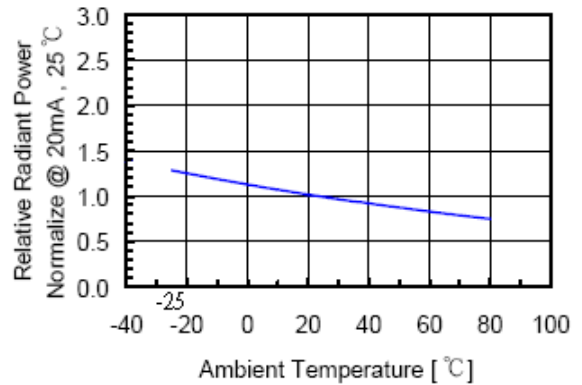
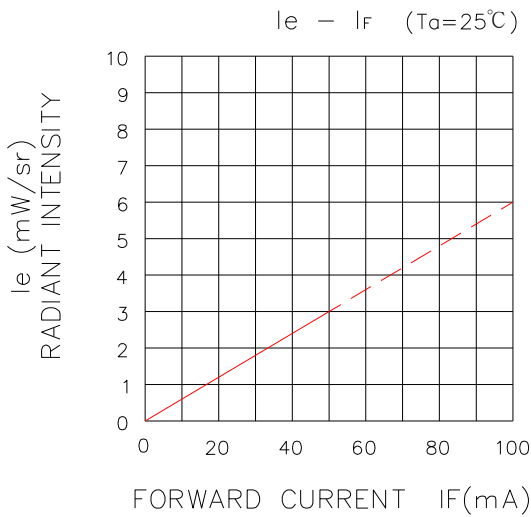
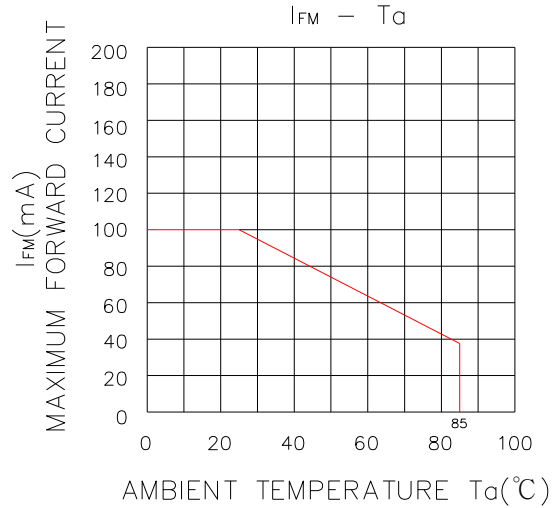
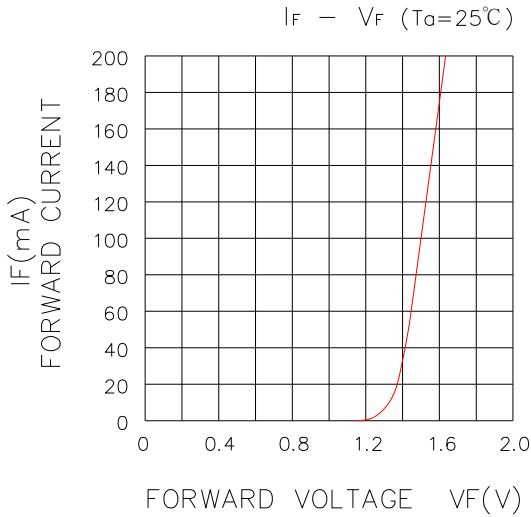




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**Model : RT4-46ET**

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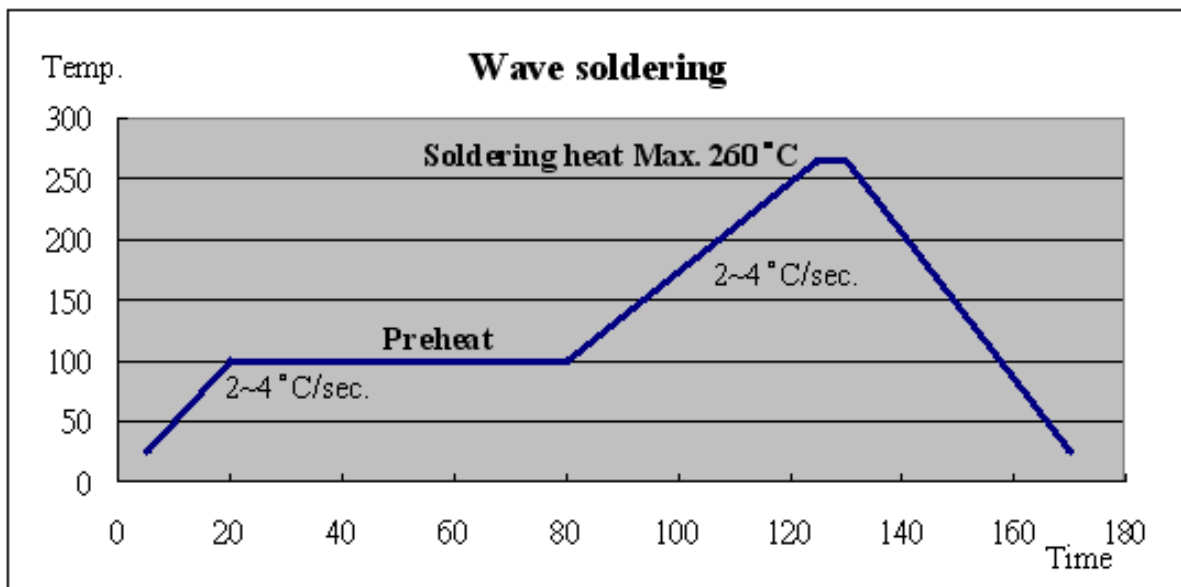
## Soldering Profile

### 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. 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.

### Lamp wave soldering profile :





## Reliability Test Items

### CONDITIONS :

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

NO.	Item	Condition	Time/Cycle	Number of Damaged
1	Soldering Heat Test	260°C	5 sec	0/60
2	Thermal Shock	0°C (15min) ~100°C (15min)	20 cycle	0/60
3	High Temp. Storage	100°C	1000 Hrs	0/60
4	Low Temp. Storage	-25°C	1000 Hrs	0/60
5	Temperature Cycle Test	-25°C ~85°C	100 Cycles, 200Hrs	0/60
6	High Temp. High Humidity Test	85°C, 85% RH	1000Hrs	0/60
7	Operation Life Test	IF=50mA	1000Hrs	0/60