



# RODAN(TAIWAN)LTD.

## INFRARED EMITTING DIODE

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### 1.ELEMENT APPEARANCE

DATE : JUN.20.2005.

Model No.	Material	Lighting Color	Resin Color
RT-1027ET	AlGaAs/ AlGaAs	Non-Visible	Water Clear

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

Characteristic	Symbol	Rating	Unit
Pulse forward current (t[10us)	IMP	1	A
Forward direct current	IFM	100	mA
Reverse voltage	VRM	5	V
Operating temperature	Topr	-25 to +75	
Storage temperature	Tstg	-25 to +100	
Power dissipation	Pd	200	mW
Lead soldering temperature (5mm from body ) 260 for 5sec.			

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

Characteristic	Symbol	Condition	Min.	Typ.	Max.	Unit
Radiant intensity	Ie	IF=50mA	160	280		mW/sr
Forward voltage	VF	IF=100mA		1.6	2.0	V
Reverse current	IR	VR=4V			10	μ A
Peak emission wavelength	p	IF=50mA		850		nm
Spectral band width @ 50%	Δ	IF=50mA		42		nm
Rise time/Fall time	tr/tf	IF=50mA		25/15		ns
Viewing angle	2 1/2	IF=50mA		10		deg.

Radiant Intensity Measurement allowance is ±15 %

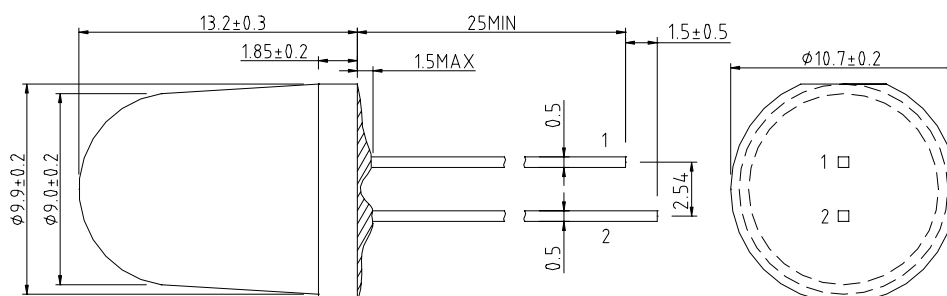
Forward voltage Measurement allowance is ±0.05V

Peak emission wavelength Measurement allowance is ±1nm

### 4.DIMENSIONS UNIT : m/m

SIGN : 1.CATHODE

2.ANODE

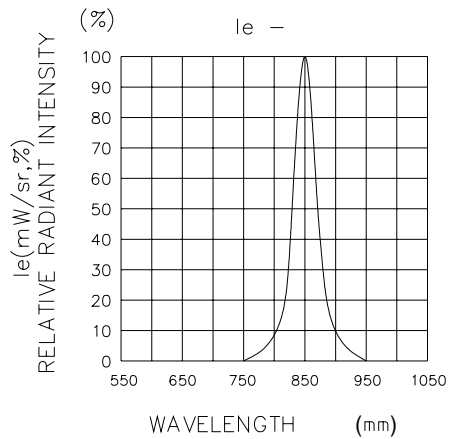
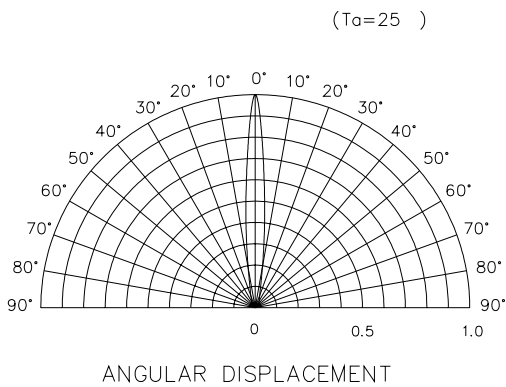
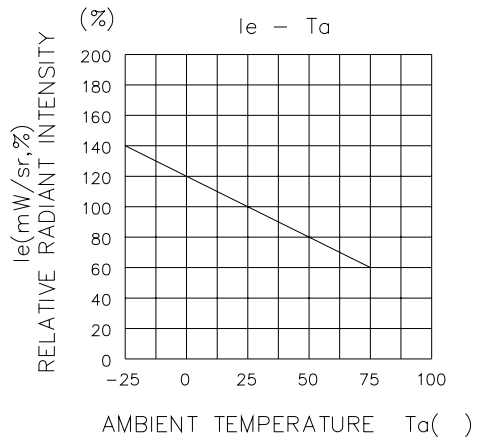
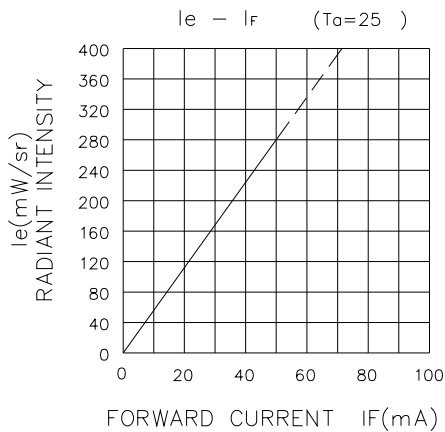
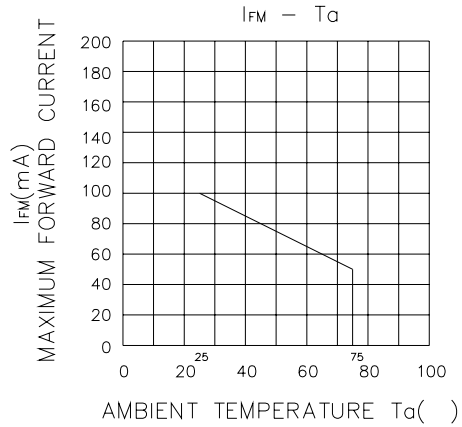
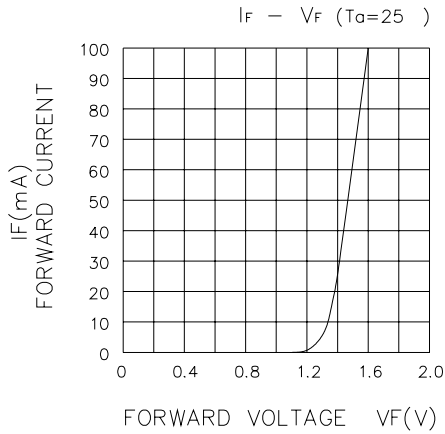




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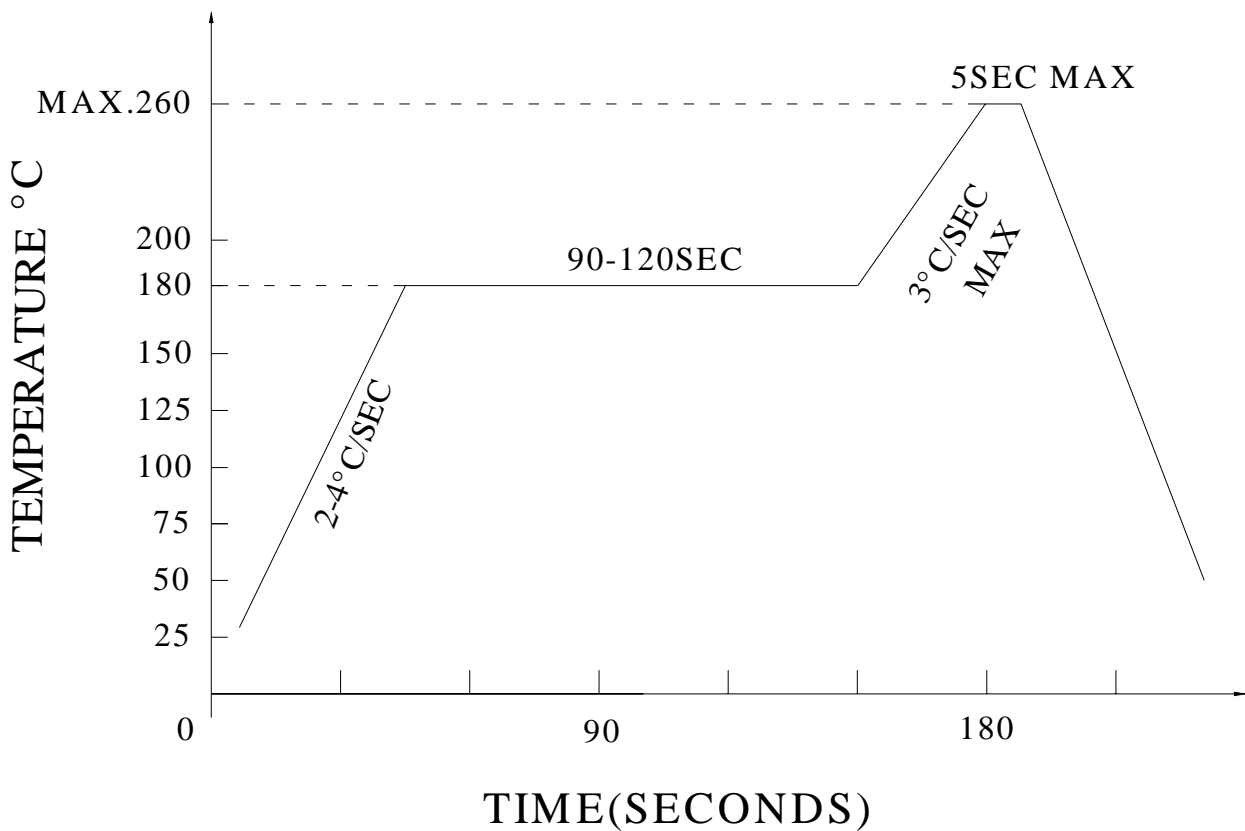


## Lamp Condition

In the automatic mounting of LAMP LED to the L/F, any bending, expanding, and pulling forces against the LAMP LED should be minimized to prevent the electrical failures or mechanical damaged.

## Reflow Soldering and Temperature Profile

The LAMP LED is designed for the reflow soldering process. Too high temperature or too large temperature gradient may cause the electrical and optical failures.





## 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	5 sec	0/60
2	Thermal Shock	0 (15sec) ~100 (15sec)	20 cycle	0/60
3	High Temp. Storage	100	1000 Hrs	0/60
4	Low Temp. Storage	-25	1000 Hrs	0/60
5	Operation Temperature Cycle Test	-25 ~75	100 Cycles , 200Hrs	0/60
6	High Temp. High Humidity Test	60 , 90% RH	1000Hrs	0/60
7	Operation Life Test	Room Temp.50mA	1000Hrs	0/60