



RODAN(TAIWAN)LTD.

INFRARED EMITTING DIODE

1.ELEMENT APPEARANCE

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Model No.	Material	Lighting Color	Resin Color
RT5-217KT-BN	AlGaAs/ GaAs	Non-Visible	Water Clear

2.ABSOLUTE MAXIMUM RATINGS AT Ta=25°C

Characteristic	Symbol	Rating	Unit
Reverse voltage	V _{RM}	5	V
Operating temperature	Topr	-25 to +85	°C
Storage temperature	Tstg	-25 to +100	°C
Power dissipation	Pd	85	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 _e	IF=50mA	5	8		mW/sr
Forward voltage	V _F	IF=100mA		1.35	1.7	V
Reverse current	I _R	V _R =4V			10	μA
Peak emission wavelength	λ _p	IF=50mA		940		nm
Spectral band width @ 50%	Δλ	IF=50mA		50		nm
Rise time/Fall time	tr/tf	IF=50mA		2000/1000		ns
Viewing angle	2θ 1/2	IF=50mA		110		deg.

*Measurement Uncertainty of Luminous Intensity : ±15%

*Measurement Uncertainty of Forward Voltage : ±0.05V

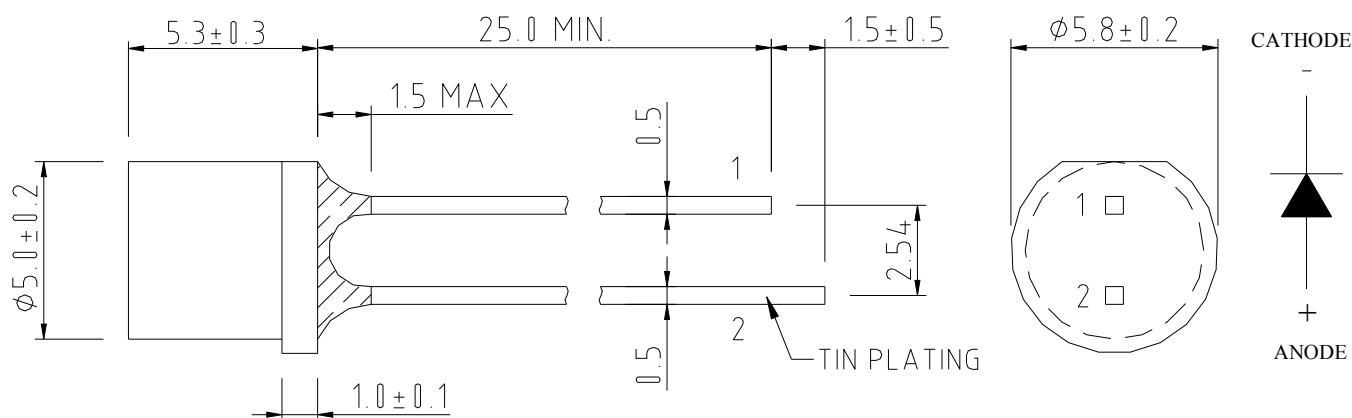
* Peak emission wavelength Measurement allowance is ±0.5nm

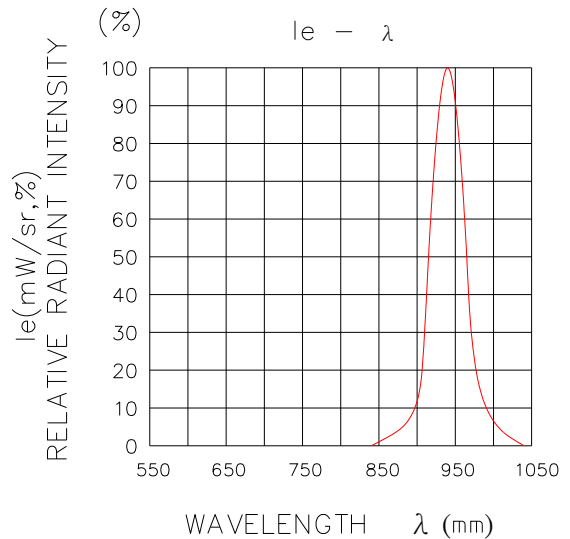
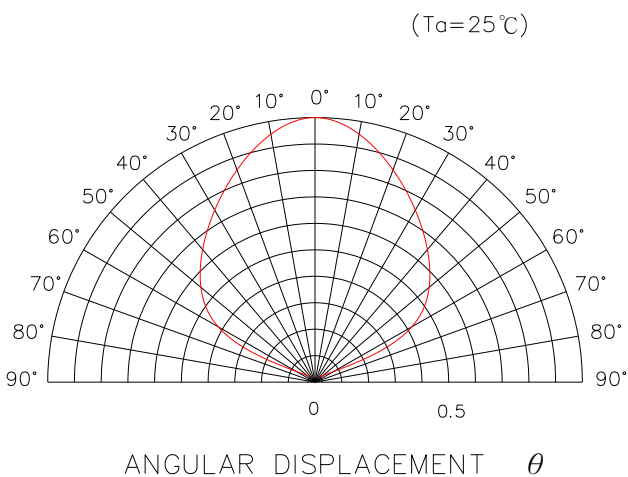
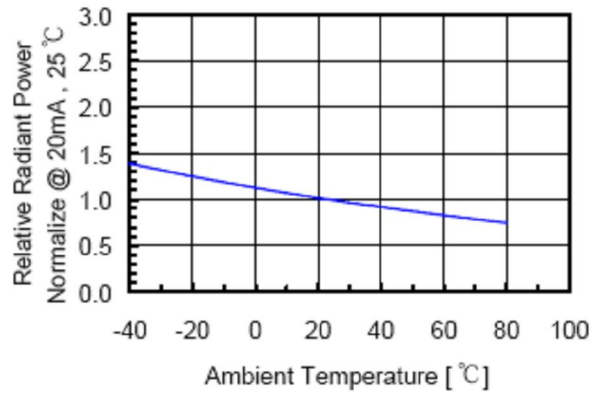
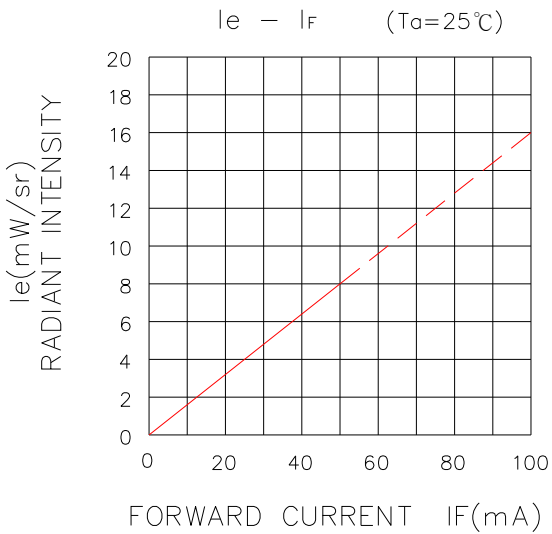
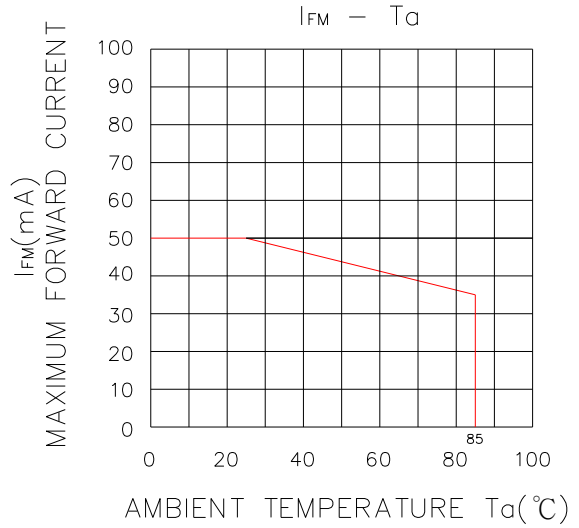
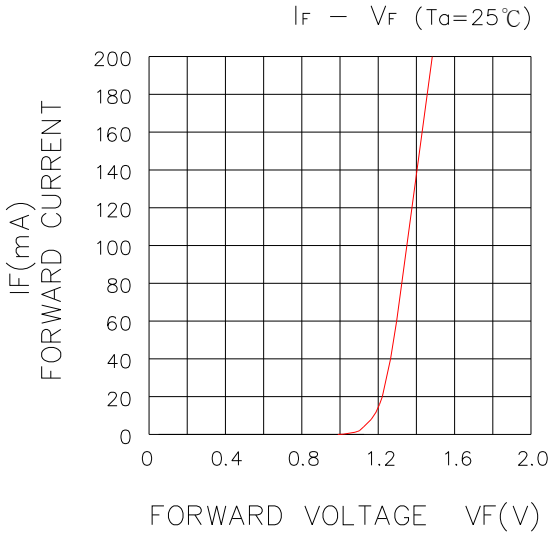
4.DIMENSIONS UNIT : m/m

SIGN : 1.CATHODE

2.ANODE

Tolerance is ±0.25mm unless otherwise specified.







Soldering Profile

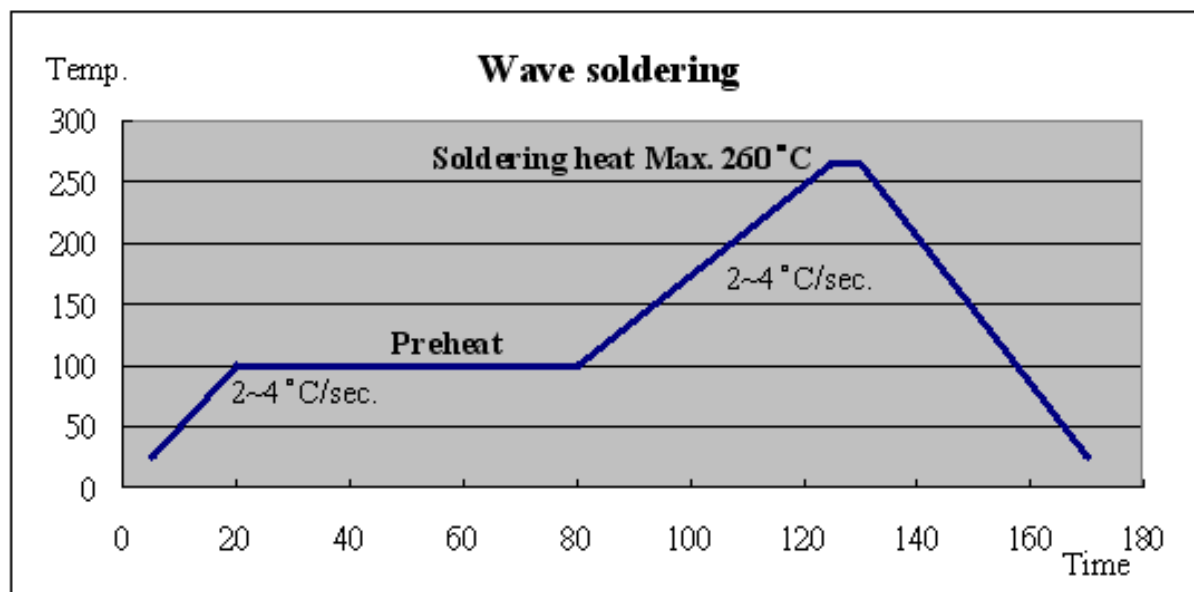
Compliant with the following condition :

(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 (30W 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 (5min) ~100°C (5min)	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