



RODAN(TAIWAN)LTD.

HIGH POWER INFRARED EMITTING DIODE

1.ELEMENT APPEARANCE

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Model No.	Material	Lighting Color	Lens Color
RT-HIEW-L1 RT-HIEW-L1S	AlGaAs/AlGaAs	Non-Visible	Water Clear

2.ABSOLUTE MAXIMUM RATINGS AT Ta=25°C

Characteristic	Symbol	Rating	Unit
Forward direct current	I _{FM}	350	mA
Reverse voltage	V _{RM}	5	V
Operating temperature	T _{opr}	-25 to +100	°C
Storage temperature	T _{stg}	-25 to +110	°C
Power dissipation	P _d	770	mW
Lead soldering temperature 260°C for 5sec.			

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

Characteristic	Symbol	Condition	Min.	Typ.	Max.	Unit
Radiant Intensity	I _e	IF=350mA	30	50		mW/sr
Forward voltage	V _F	IF=350mA		1.6	2.2	V
Reverse current	I _R	V _R =4V			10	μA
Peak emission wavelength	λ _p	IF=50mA		850		nm
Spectral width at half height	Δλ	IF=50mA		40		nm
Resistance Junction to Board		IF=350mA		15		°C/W
Viewing angle	2θ 1/2	IF=20mA		140		deg.

Radiant Intensity Measurement allowance is ±15%

Forward voltage Measurement allowance is ±0.05V

Peak emission wavelength Measurement allowance is ±1nm



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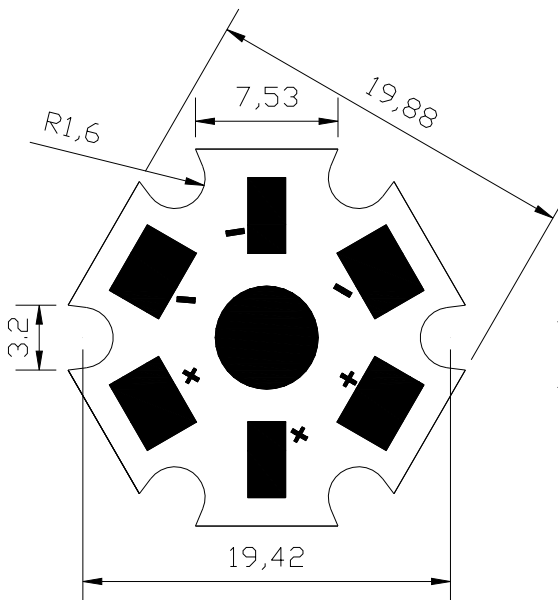
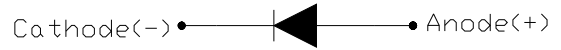
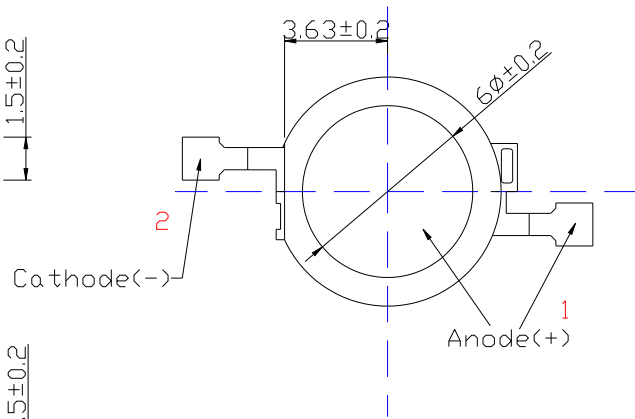
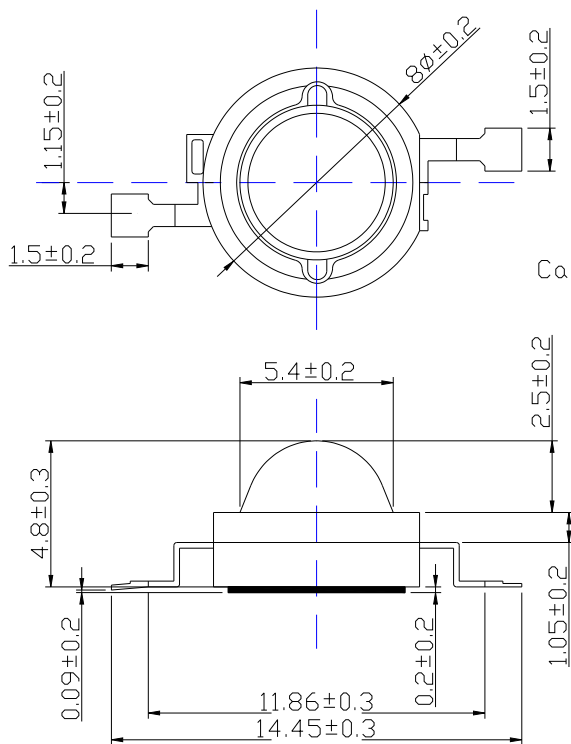
4.DIMENSIONS UNIT : m/m

SIGN : 1. ANODE
2. CATHODE

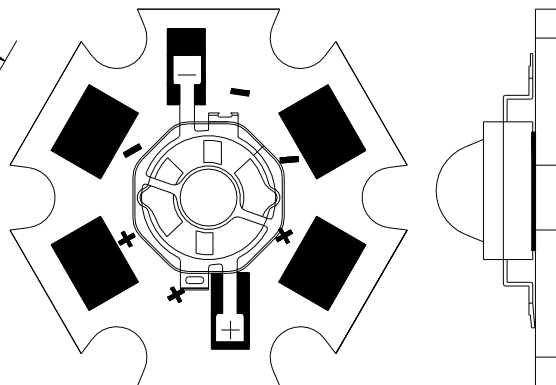
TOLERANCE : $\pm 0.25\text{mm}$

Lambertian

RT-HIEW-L1



RT-HIEW-L1S

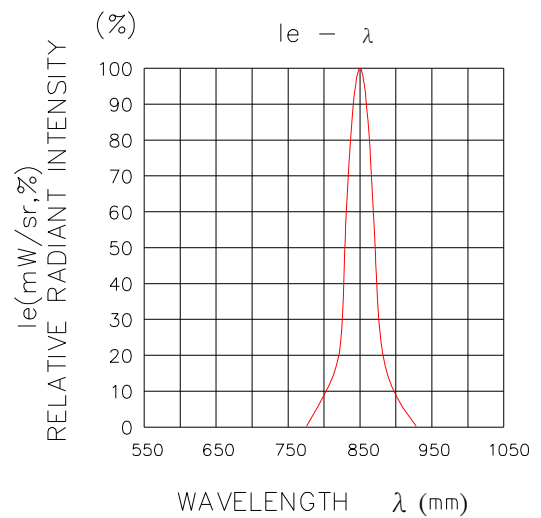
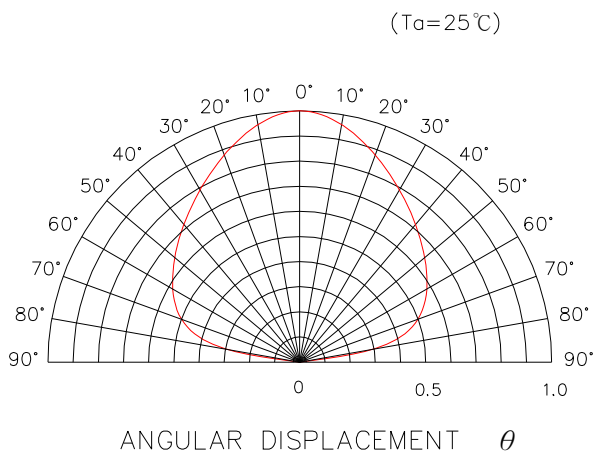
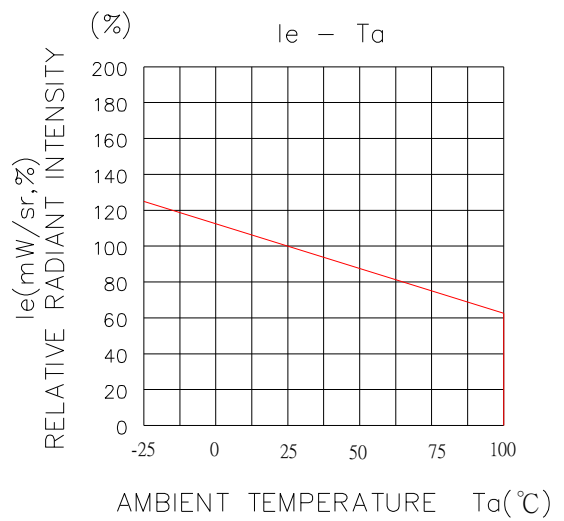
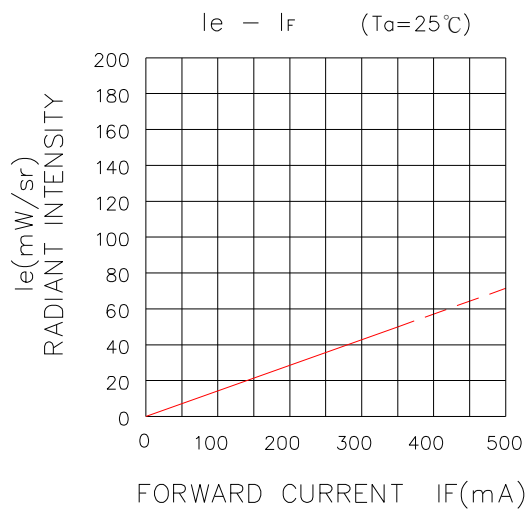
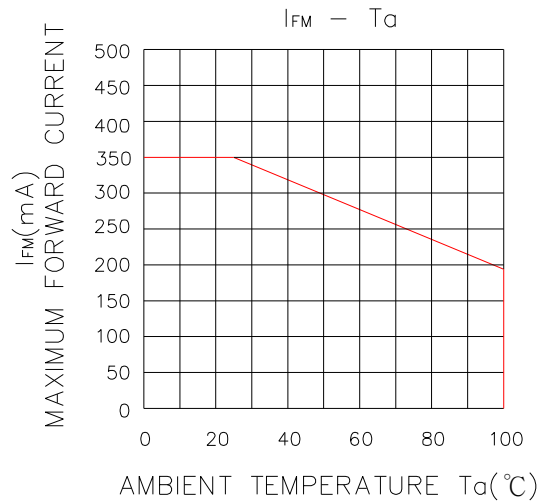
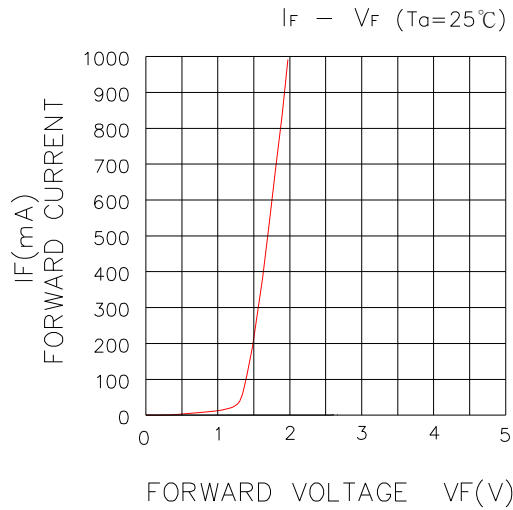




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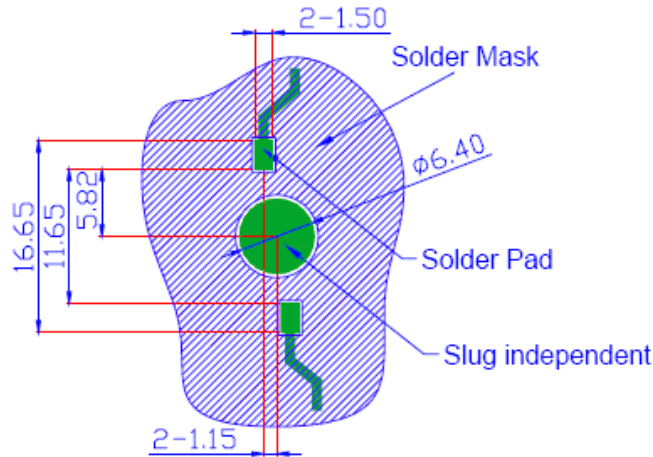
Reliability Test Items

CONDITIONS :

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

NO.	ITEM	Condition	Time/Cycle	Sample Q'ty	Ac/Re
1	Soldering Heat Test	260°C±5°C	5 sec/ 1 cycle	30 pcs	0/1
2	Temperature Cycle	$-25^{\circ}\text{C} \times 30\text{min}$ ↑ ↓ 5min $100^{\circ}\text{C} \times 30\text{min}$	100 cycle	30 pcs	0/1
3	Thermal Shock	$-10^{\circ}\text{C} \times 5\text{ min}$ ↑ ↓ 10 sec $100^{\circ}\text{C} \times 5\text{ min}$	100cycle	30 pcs	0/1
4	High Temp. Storage	100°C	1000 Hrs	30 pcs	0/1
5	Low Temp. Storage	-25°C	1000 Hrs	30 pcs	0/1
6	DC Operating Life	IF=350mA@25°C	1000 Hrs	30 pcs	0/1
7	High Temp. High Humidity Storage Test	Ta=85°C ,RH 85%	1000Hrs	30 pcs	0/1

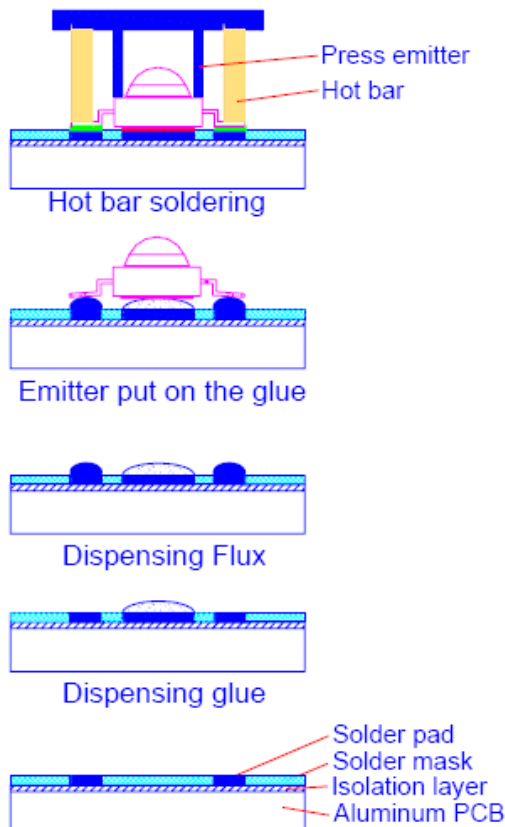
Recommended Solder Pad Desing



Note:

1. All dimensions are in mm.
2. The drawings are not to scale
3. Solder pad can't be connected to slug.

Recommend Solder Steps



Notes:

1. Aluminum PCB material with a thermal conductivity greater than 2.0 W/mK.
2. Solder pad can't be connected to slug.
3. The Thermal glue should be as thin as possible for better heat conductivity.
4. During any assembly process touching lens is avoided. This will cause pollution or scratch on the surface of lens.
5. Thermal glue with a thermal conductivity greater than 1.0 W/mK and the thickness must be less than 100µm.