



INFRARED EMITTING DIODE

1.ELEMENT APPEARANCE

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Model No.	Material	Lighting Color	Resin Color
RT5-137ET-A	AlGaAs/ GaAs	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	5	V
Operating temperature	Topr	-40 to +85	°C
Storage temperature	Tstg	-40 to +100	°C
Power dissipation	Pd	170	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=50mA	BIN.2	50	~	75	mW/sr
			BIN.3	75	~	113	
			BIN.4	113	~	170	
Forward voltage	VF	IF=100mA	1.3	1.6	2.0	V	
Reverse current	IR	VR=4V			10	μA	
Peak emission wavelength	λp	IF=50mA		850		nm	
Spectral band width @ 50%	Δλ	IF=50mA		42		nm	
Rise time/Fall time	tr/tf	IF=50mA		25/15		ns	
Viewing angle	2θ 1/2	IF=50mA		20		deg.	

*Radiant Intensity Measurement allowance is ±15%

*Forward voltage Measurement allowance is ±0.05V

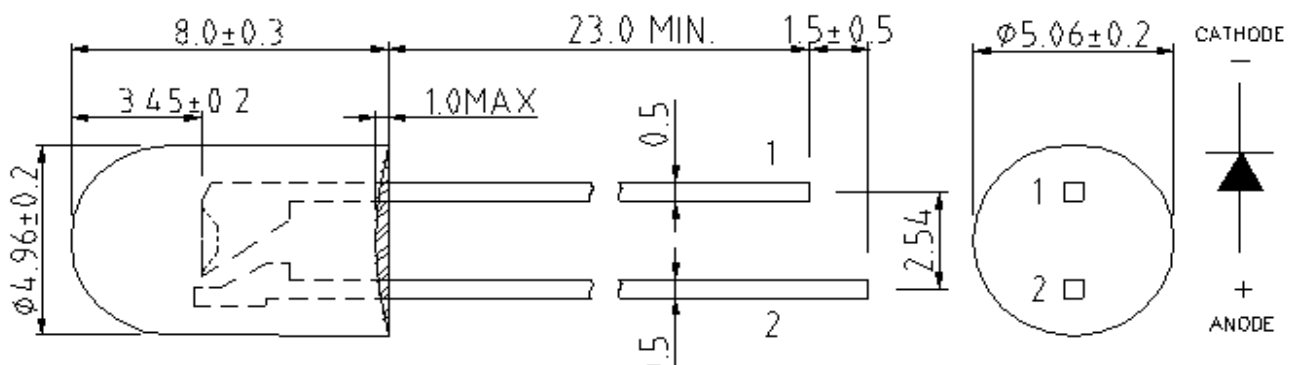
*Peak emission wavelength Measurement allowance is ±0.5nm

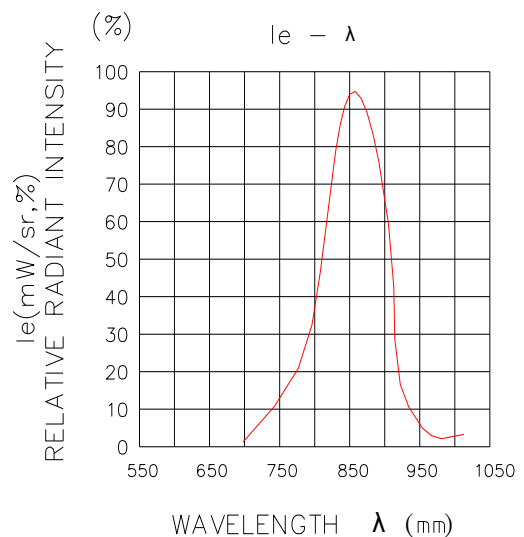
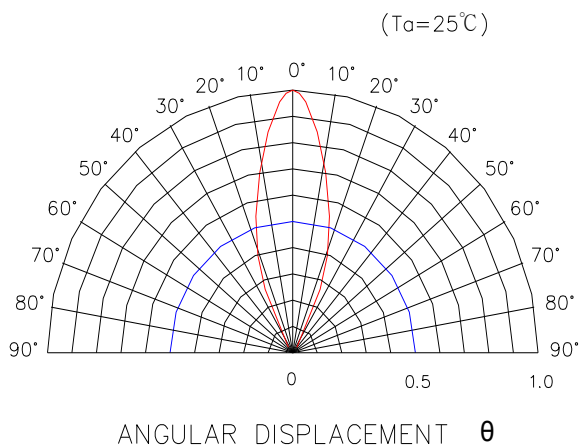
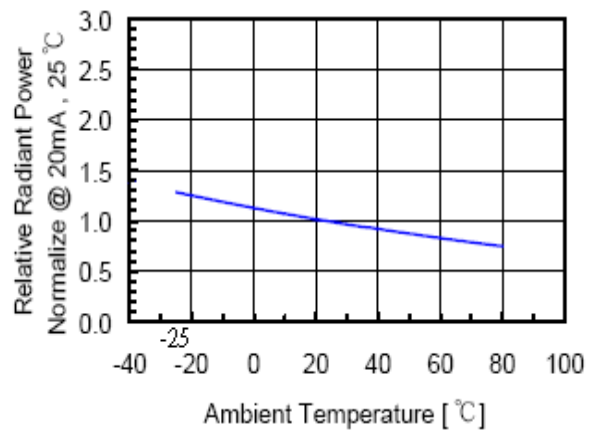
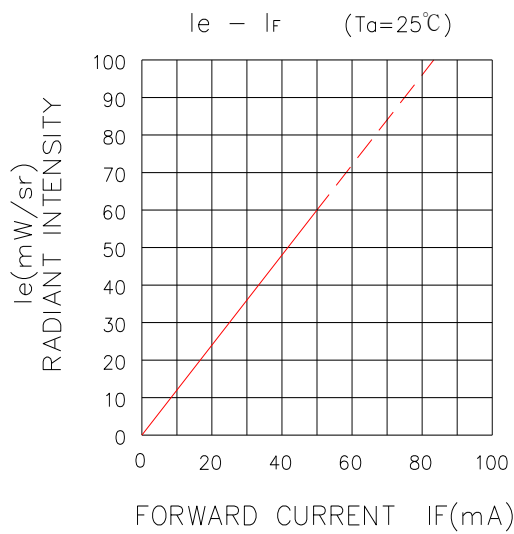
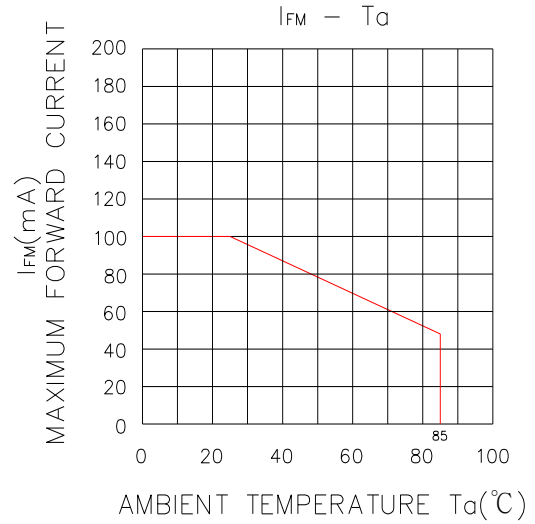
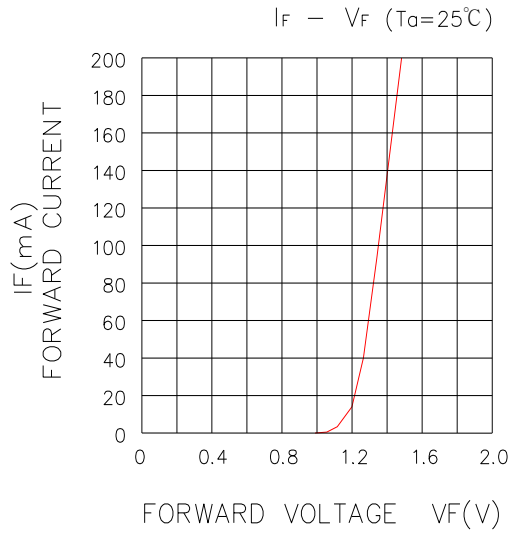
4.DIMENSIONS UNIT : m/m

SIGN : 1.CATHODE

Tolerance is ±0.25mm unless otherwise specified.

2.ANODE







Soldering Profile

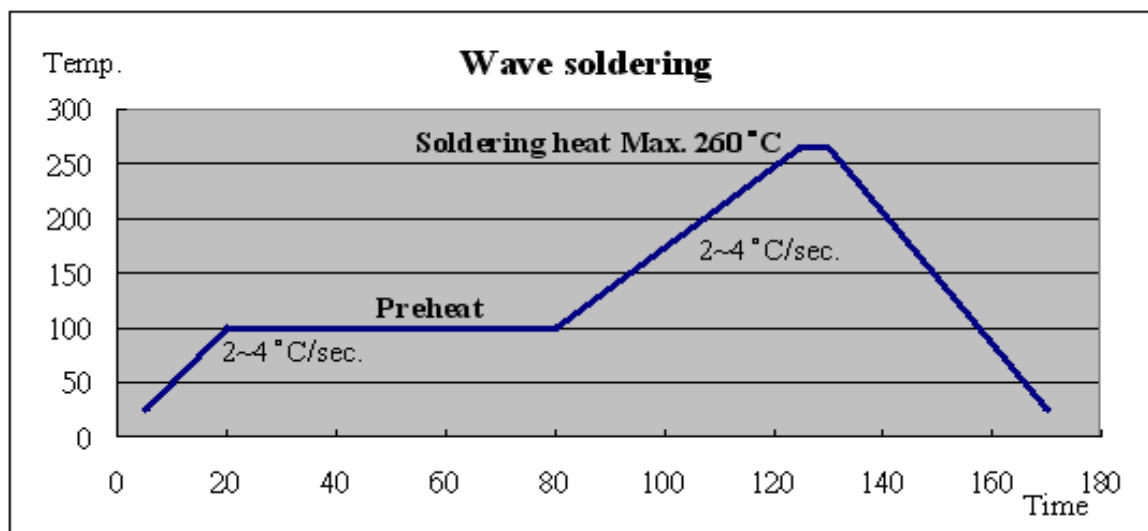
Compliant with the following condition :

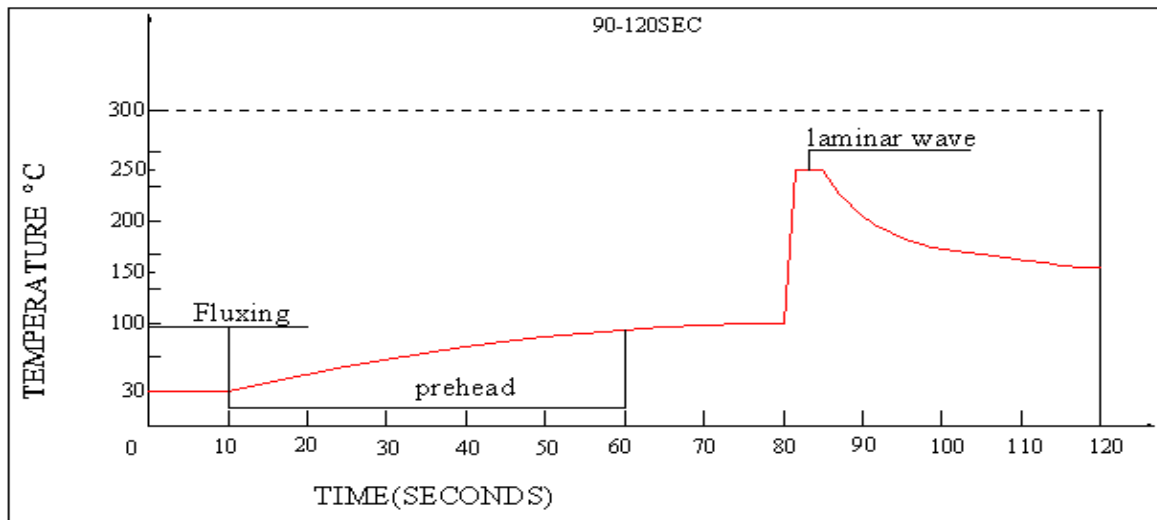
(1) Leaded quantity of product below 100 ppm

(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