



HIGH POWER

1.ELEMENT APPEARANCE

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Model No.	Material	Lighting Color	Lens Color
RT-M3535ET20J-PL	AlGaAs	Non-Visible	Water Clear

2.ABSOLUTE MAXIMUM RATINGS AT Ta=25°C

Characteristic	Symbol	Rating	Unit
Forward direct current	IFM	1000	mA
Reverse voltage	VRM	5	V
Operating temperature	Topr	-40 to +85	°C
Storage temperature	Tstg	-40 to +100	°C
Power dissipation	Pd	2.1	W

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

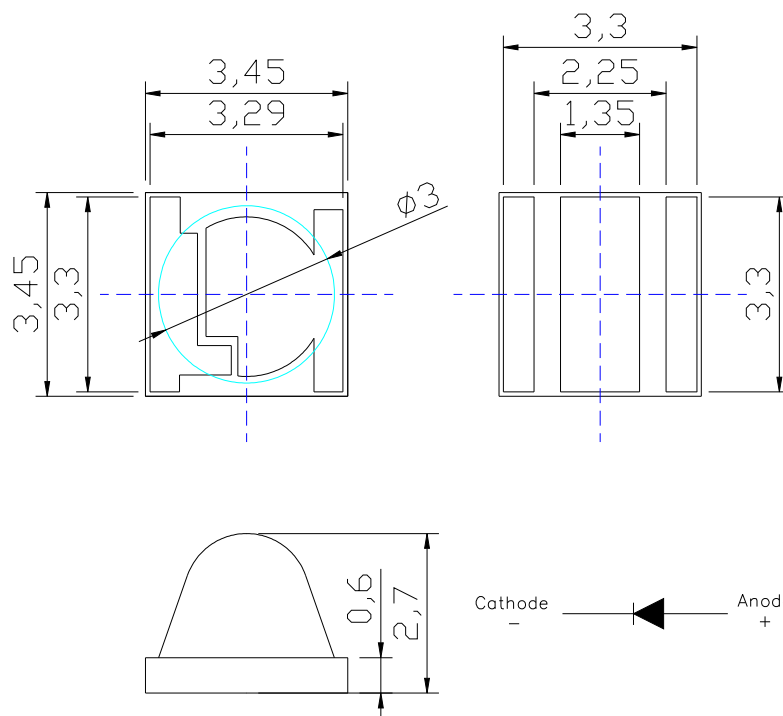
Characteristic	Symbol	Condition	Min.	Typ.	Max.	Unit
Luminous Flux	ψ_v	IF=1000mA		600		mW
Forward voltage	VF	IF=1000mA		1.6	2.1	V
Reverse current	IR	VR=5V			10	μ A
Peak emission wavelength	λ_p	IF=1000mA		855		nm
Spectral band width @ 50%	$\Delta\lambda$	IF=1000mA		25		nm
Viewing angle	2 θ 1/2	IF=1000mA		90		deg.

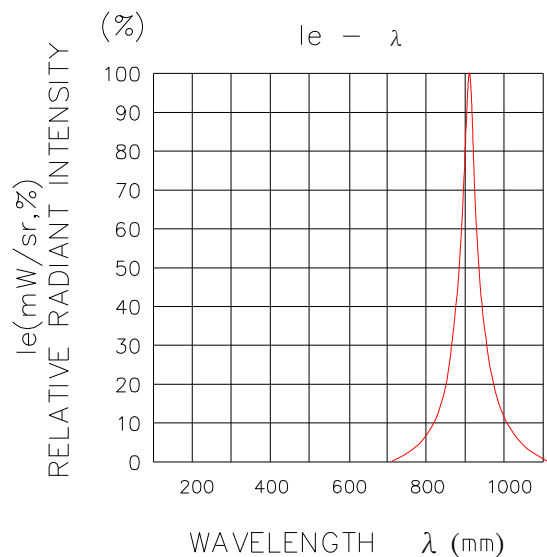
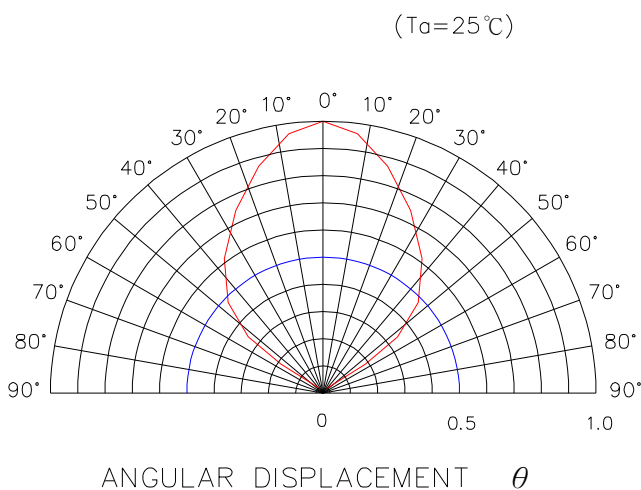
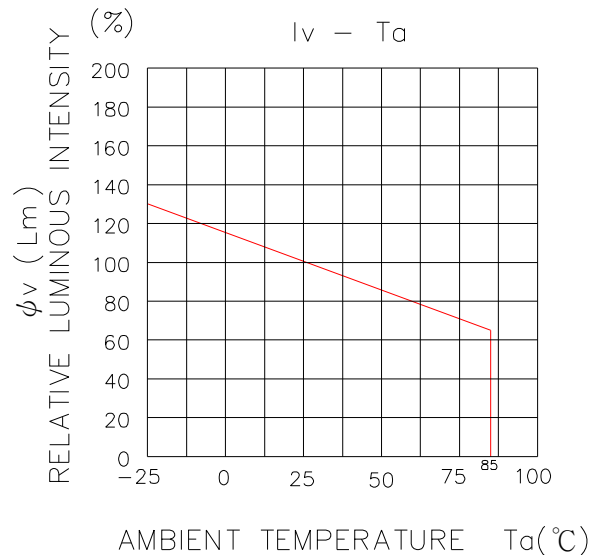
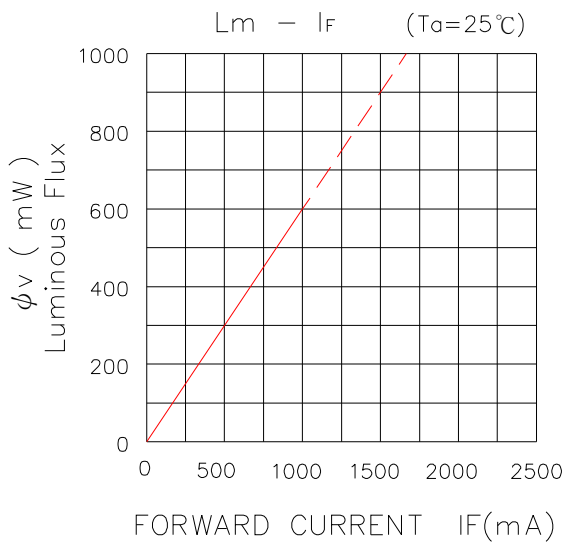
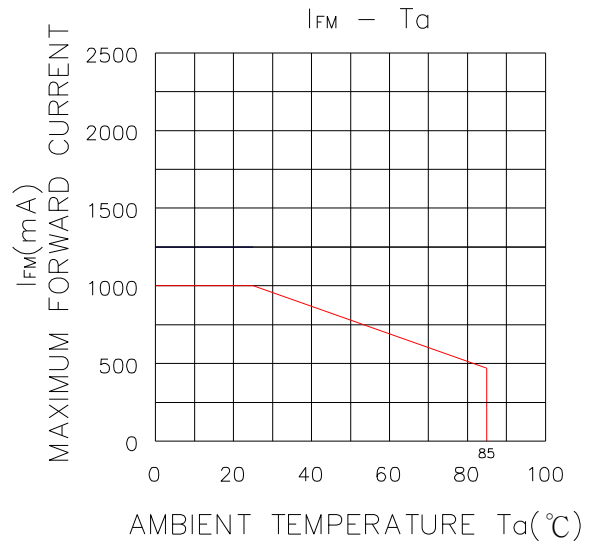
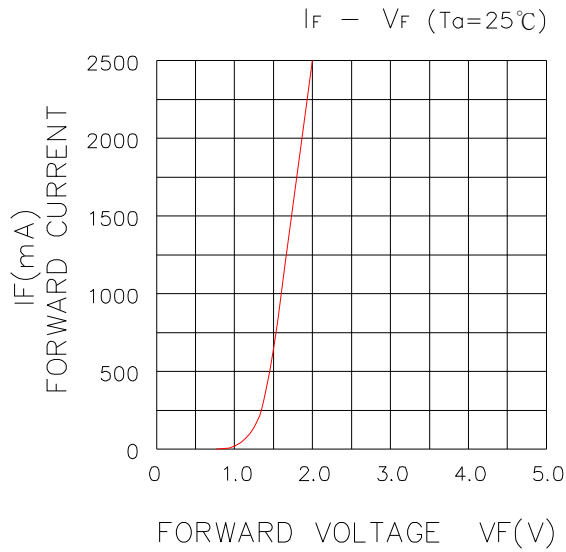
※Luminous Intensity Measurement allowance is $\pm 15\%$

※Forward voltage Measurement allowance is $\pm 0.1V$

※Peak emission wavelength Measurement allowance is $\pm 1nm$

4.DIMENSIONS UNIT : m/m TOLERANCE : $\pm 0.25mm$





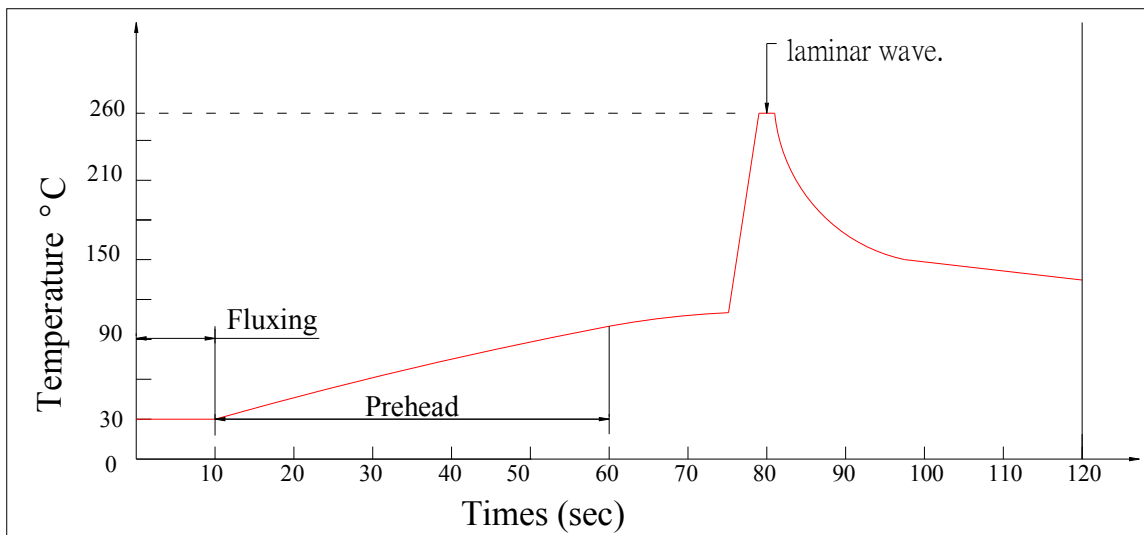


Soldering Profile

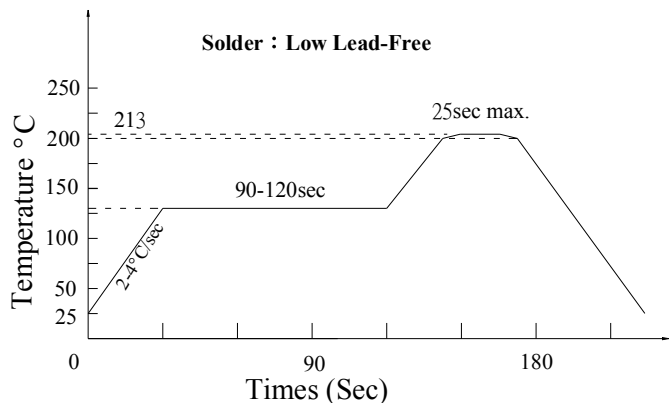
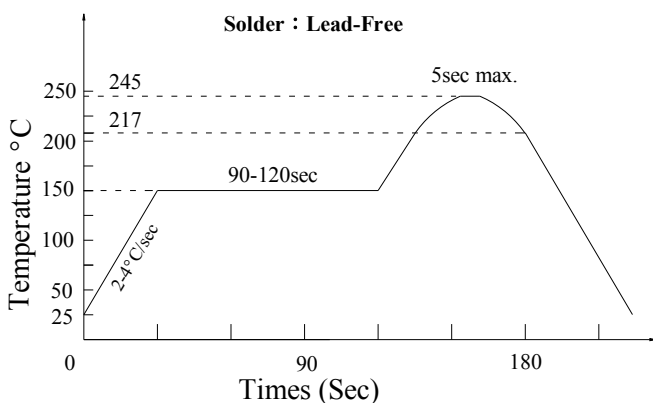
Compliant with the following condition :

- (1) Leaded quantity of product below 100 ppm
- (2) Lead-free process

Shape	Lead Frame 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 : 3 sec max. 4.Distance : 3 mm MIN (From solder joint to case)
Recommended soldering profile	1.Preheat temp. : 100 °C , 50 sec max. 2.Peak temp. : 260 °C max. 3.Peak time : 3 sec max. 4.Duration above: 200°C , 3 sec max.



SMD Type		
Profile Feature	Solder : Lead-Free	Solder : Low Lead-Free
Preheat temp	150-180 °C , 4°C/sec max. 120 sec max.	130-170 °C , 4°C/sec max. 120 sec max.
Peak temp	245 °C max. , 5 sec max.	213 °C max. , 25 sec max.
Duration above	217 °C , 60 sec max.	200 °C , 40 sec max.





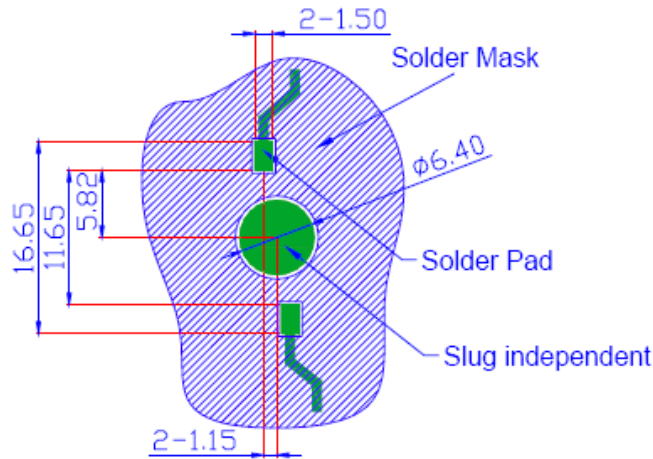
Reliability Test Items

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 / Short	0 / 1	60 pcs
2	Thermal Shock	0°C (5min) ~100°C (5min)	20 Cycles	Open / Short	0 / 1	60 pcs
3	High Temp. Storage	100°C	1000 Hrs	Open / Short	0 / 1	60 pcs
4	Low Temp. Storage	-40°C	1000 Hrs	Open / Short	0 / 1	60 pcs
5	Temperature Cycle Test	-40°C~85°C	100 Cycles , 200Hrs	Open / Short	0 / 1	60 pcs
6	High Temp. High Humidity Test	60°C , 90% RH	1000Hrs	Open / Short	0 / 1	60 pcs
7	DC Operation Life Test	IF=1000mA	1000Hrs	Power decay	≤30%	60 pcs

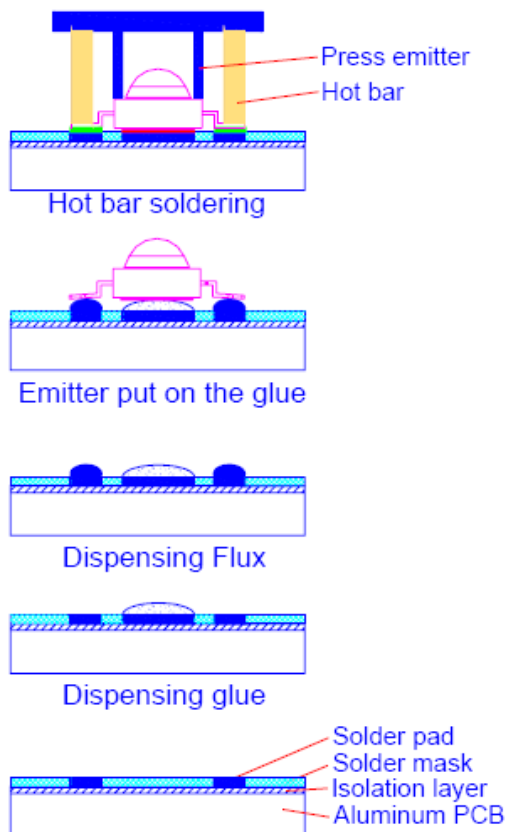
Recommended Solder Pad Design



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.



Instruction for HP

Handling of Silicone LEDs
silicone leds 的操作導引

Notes for handling of silicone LEDs
silicone leds 的操作導引注意事項

- Avoid touching the silicone LEDs especially by sharp tools such as Tweezers.
避免接觸 silicone LEDs 特別是鋒利的器具例如:鑷子
- Please do not use a force of over 3kgf impact or pressure on the surface of silicone LEDs.
請不要使用超過 3 公斤的力量衝擊或擠壓 silicone lens.
- Please do not mold over the silicone LEDs with another resin. (epoxy, urethane, etc)
請不要在 silicone LEDs 上形成另一個樹脂(環氧基樹脂、胺基甲酸乙酯 等)
- Please store the LEDs away from dusty areas or seal the product against dust.
請把 LED 儲存在遠離灰塵多的區域或密封產品來對抗灰塵
- Avoid leaving fingerprints on the surface of silicone LEDs.
避免留下指紋在 LED 表面上

