



HIGH POWER

1.ELEMENT APPEARANCE

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Model No.	Material	Lighting Color	Lens Color
RT-3535ET20-120	AlGaAs	Non-Visible	Water Clear

2.ABSOLUTE MAXIMUM RATINGS AT Ta=25°C

Characteristic	Symbol	Rating	Unit
Forward direct current	IFM	700	mA
Reverse voltage	VRM	10	V
Operating temperature	Topr	-40 to +85	°C
Storage temperature	Tstg	-40 to +105	°C
Power dissipation	Pd	2	W

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

Characteristic	Symbol	Condition	Min.	Typ.	Max.	Unit
Luminous Flux	Ie	IF=700mA	500		550	mW
Forward voltage	VF	IF=700mA	1.6		2.2	V
Reverse current	IR	VR=5V			10	μA
Peak emission wavelength	λp	IF=700mA	845		855	nm
Spectral band width @ 50%	Δλ	IF=700mA		50		nm
Viewing angle	2θ 1/2	IF=700mA		120		deg.

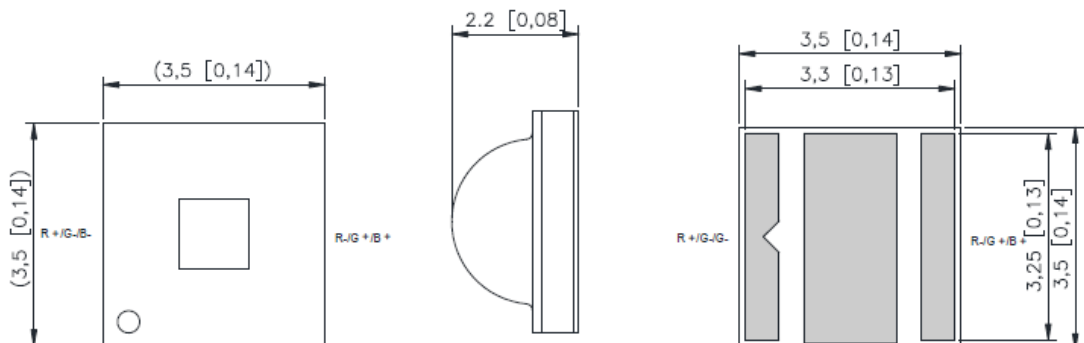
※Luminous Intensity Measurement allowance is ±15%

※Forward voltage Measurement allowance is ±0.1V

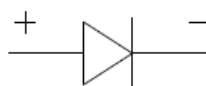
※Peak emission wavelength Measurement allowance is ±1nm

4.DIMENSIONS UNIT : m/m TOLERANCE : ± 0.25mm

Package Dimensions

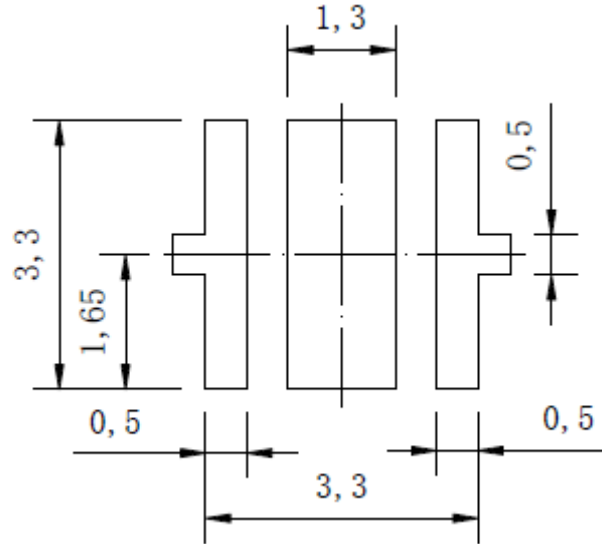


Equivalent circuit diagram



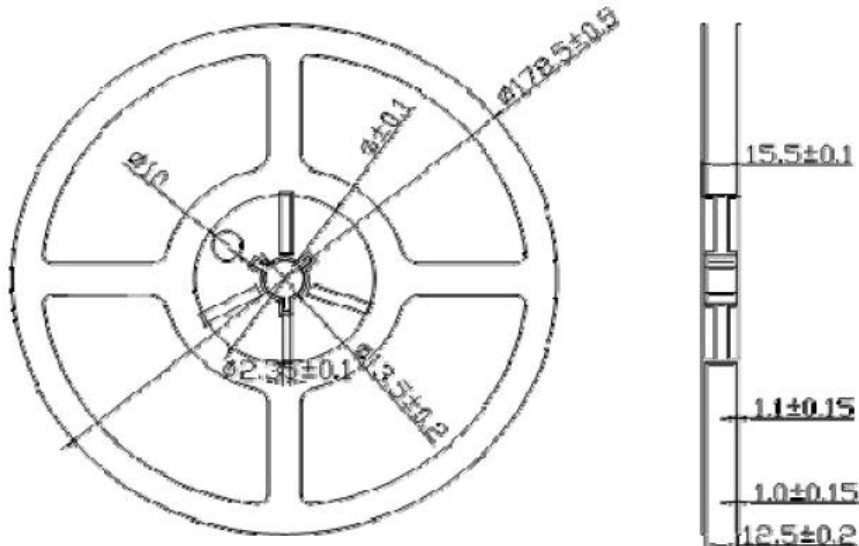


5. Recommended size of pad





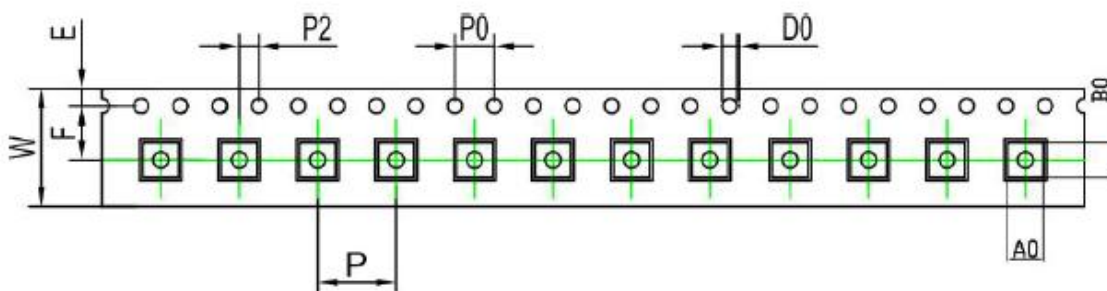
6. Reel Dimensions :



Package: 1000Pcs/Reel

Carrier Tape Dimensions: Loaded Quantity 1000 pcs Per Reel

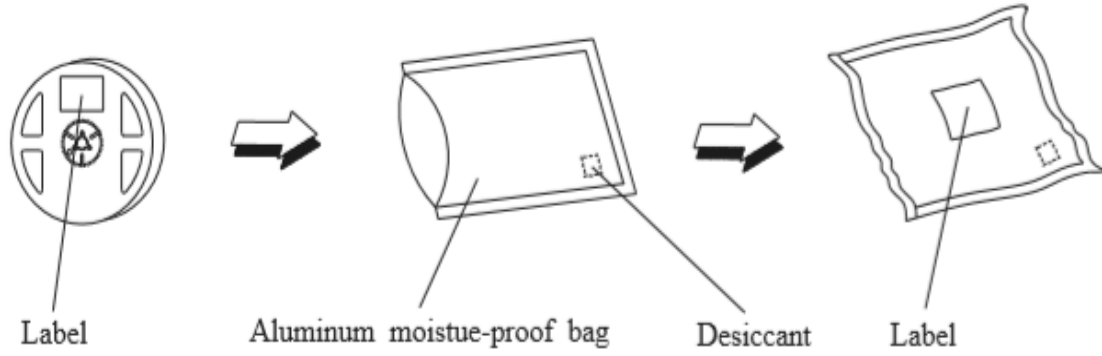
Progressive direction and Dimensions:



symbol	A0	B0	K0	P0	P	P2
Spec	3.90 ± 0.1	3.90 ± 0.1	2.48 ± 0.1	4.00 ± 0.10	8.0 ± 0.1	2.00 ± 0.10
symbol	W	T	E	F	DO	D1
Spec	12.0 ± 0.3	0.2 ± 0.05	1.75 ± 0.10	5.5 ± 0.1	$1.50^{+0.1}_{-0}$	1.50 ± 0.10



Moisture Resistant Packaging :

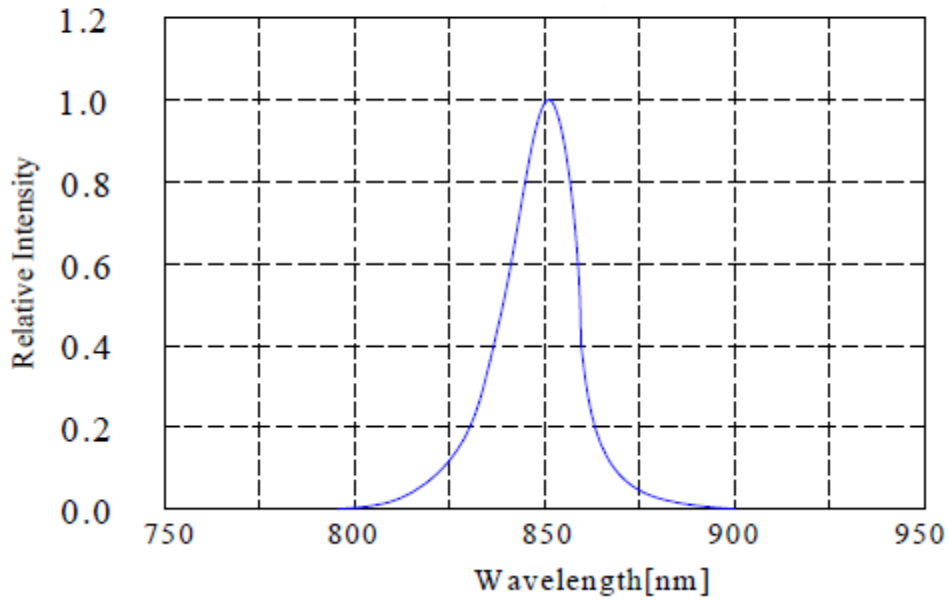




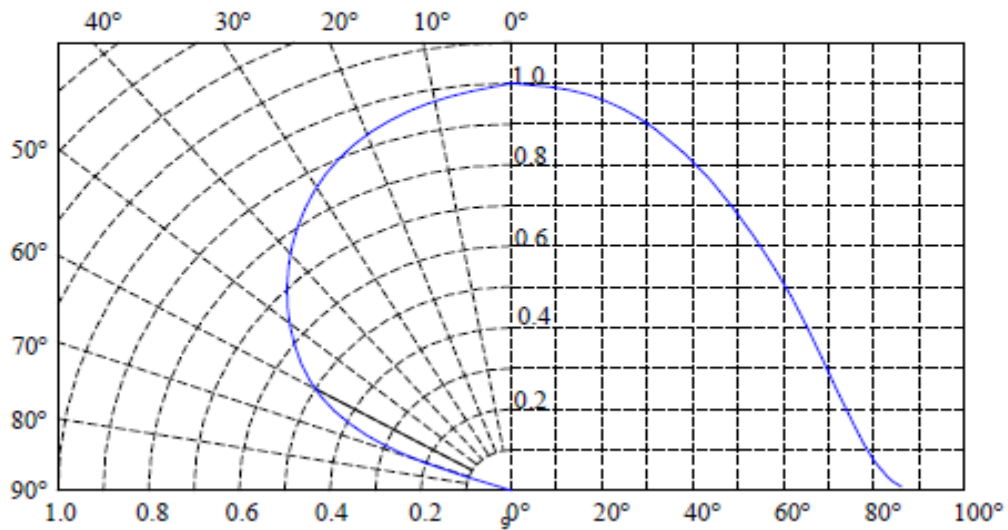
Typical Characteristic Curves

Typical spectral distribution

Relative Intensity vs. Wavelength (Ta=25°C)



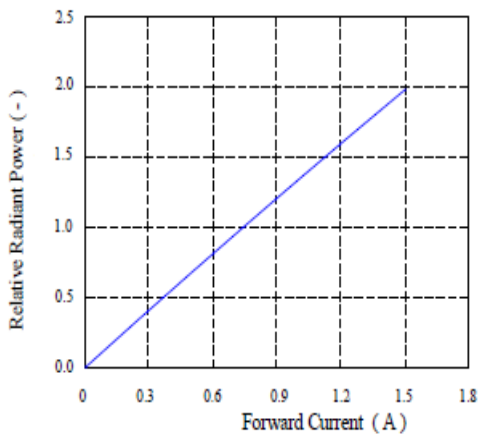
Typical Light-Emitting Angle Radiation Pattern





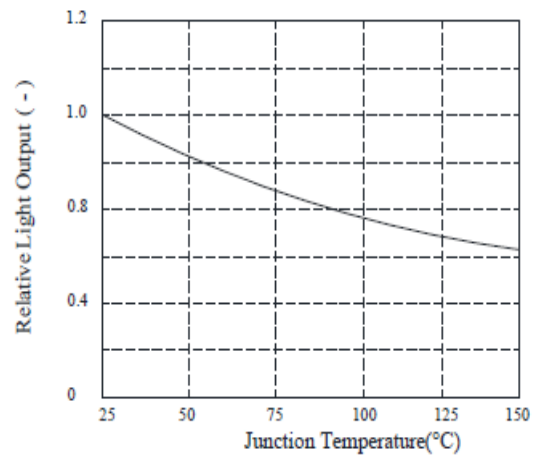
Relative Luminous Intensity VS Forward Current

Relative Radiant Power Vs. Forward Current (Ta=25°C)



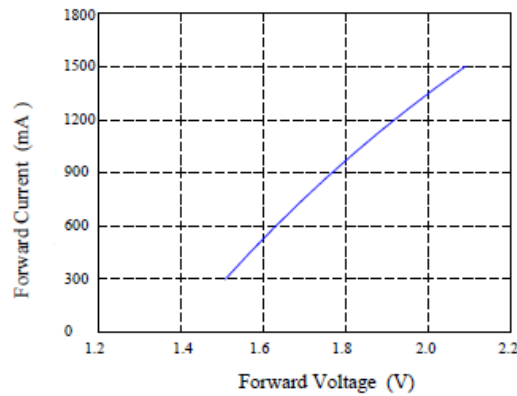
Relative Luminous Intensity VS Junction Temperature

Light Output Vs. Junction Temperature



Forward Current VS Forward Voltage

Forward Current Vs. Forward Voltage (Ta=25°C)



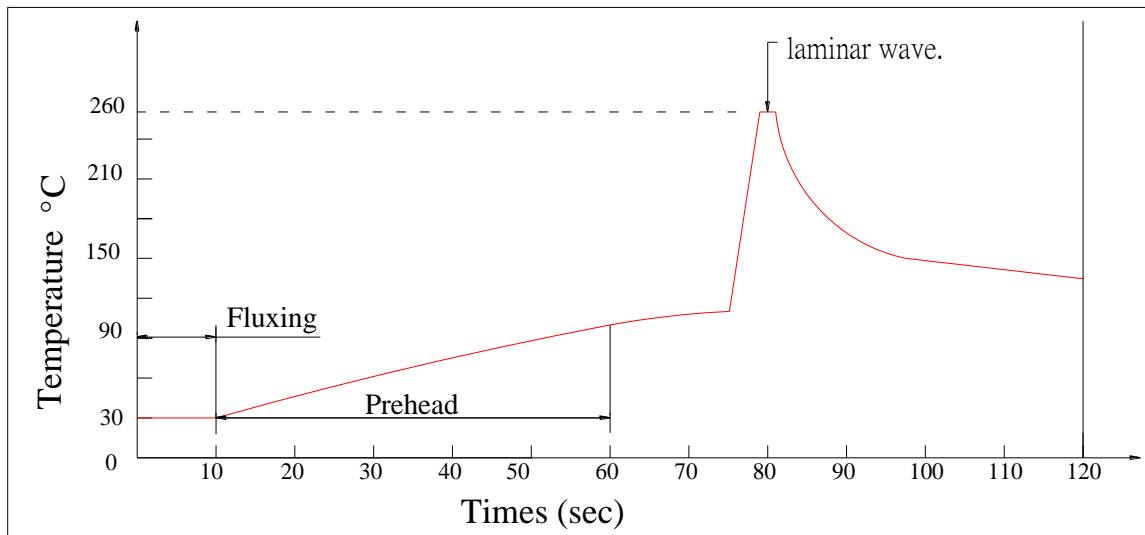


Soldering Profile

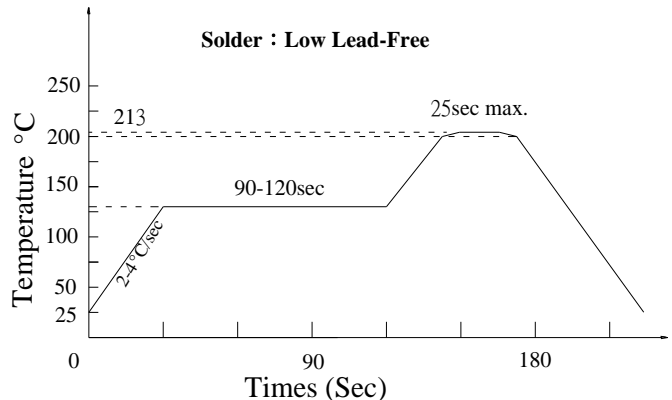
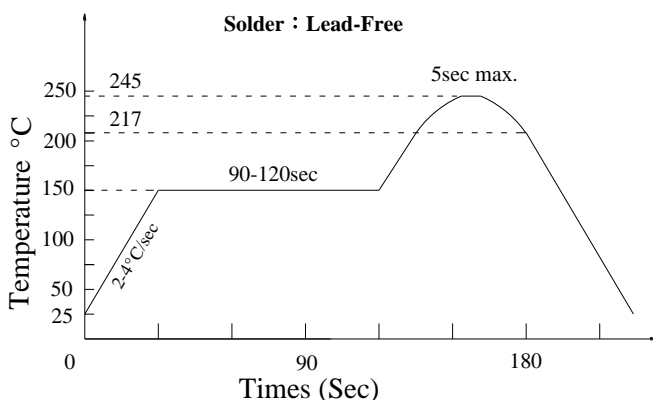
Compliant with the following condition :

- (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=350mA	1000Hrs	Power decay	≤30%	60 pcs