



INFRARED EMITTING DIODE

1.ELEMENT APPEARANCE

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Model No.	Material	Lighting Color	Resin Color
RT-3030E01-TK	AlGaAs/Si	Non-Visible	Water Clear

2.ABSOLUTE MAXIMUM RATINGS AT Ta=25°C

Characteristic	Symbol	Rating	Unit
Forward direct current	IFM	350	mA
Reverse voltage	VRM	5	V
Operating temperature	Topr	-20 to +80	°C
Storage temperature	Tstg	-35 to +85	°C
Power dissipation	Pd	0.8	W

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

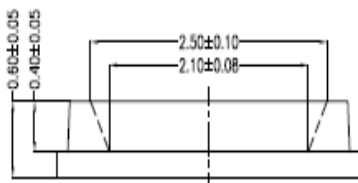
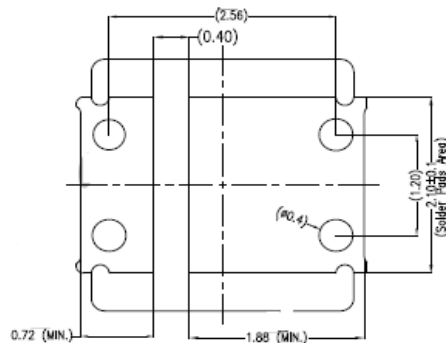
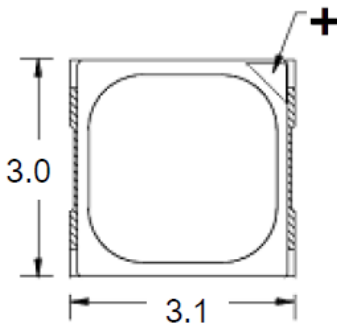
Characteristic	Symbol	Condition	Min.	Typ.	Max.	Unit
Radiant intensity	Ie	IF=170mA	80			mW
Forward voltage	VF	IF=170mA	1.2		1.65	V
Reverse current	IR	VR=20V			1	μA
Peak emission wavelength	λp	IF=170mA		855		nm
Spectral band width @ 50%	Δλ	IF=170mA		50		nm
Viewing angle	2θ 1/2	IF=170mA		120		deg.

※ Radiant Intensity Measurement allowance is ±15%

※ Forward voltage Measurement allowance is ±0.05V

※ Peak emission wavelength Measurement allowance is ±1nm

4.DIMENSIONS UNIT : m/m Tolerance is ±0.25mm unless otherwise specified.

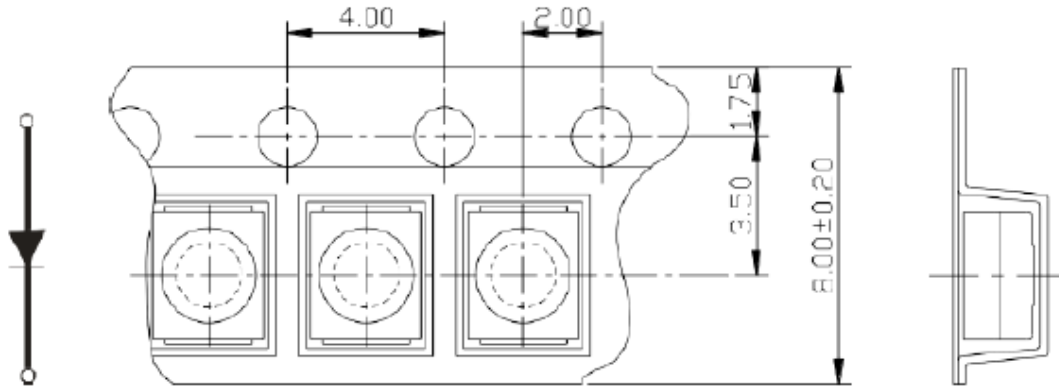




5. Reel:

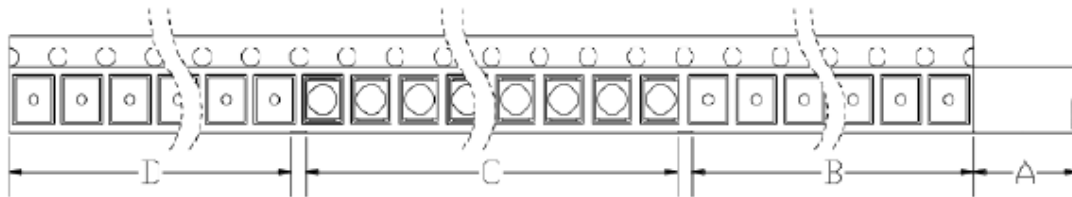
Packing

Carrier Tape



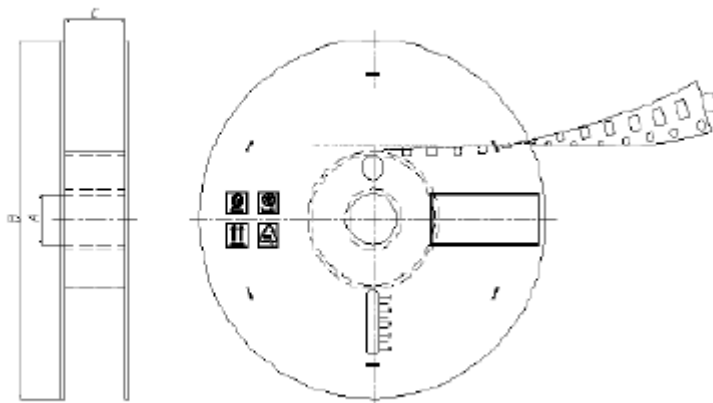
All dimensions in mm, tolerances unless mentioned is ± 0.1 mm.

Details Of Carrier Tape



A: Empty, B: Leader, Empty, 200mm; C: 2000 Leds Loaded; D: Trailer, Empty, 200mm.

Reel Dimension



Reel Dimensions		
A	77	mm
B	560	mm
C	96	mm

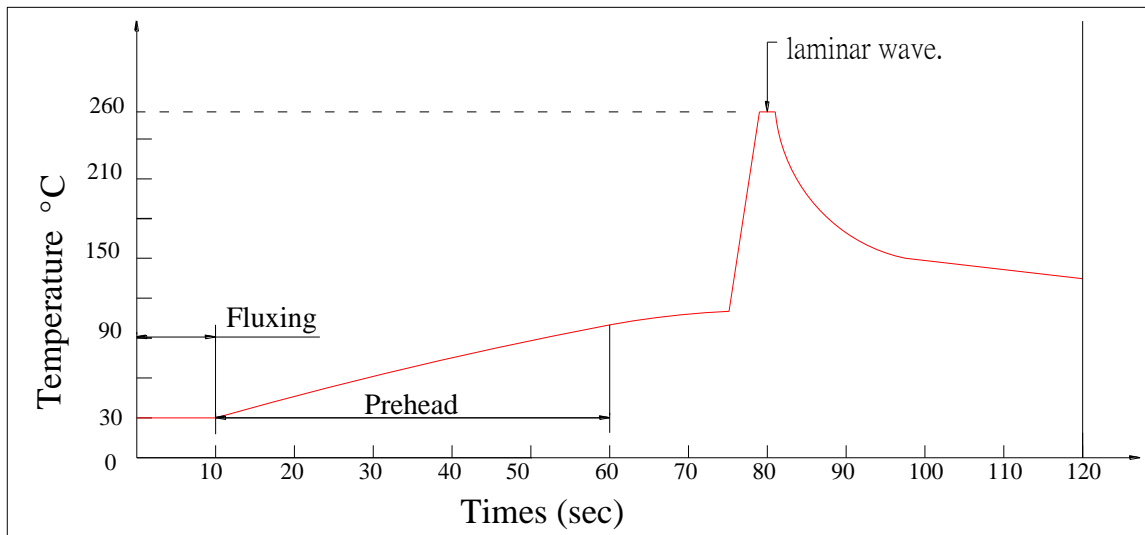


Soldering Profile

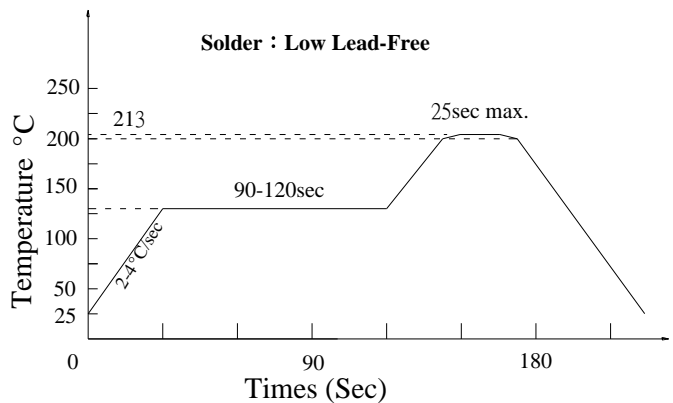
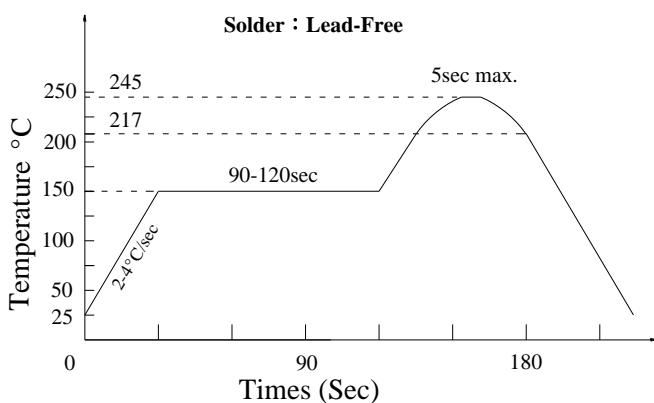
Compliant with the following condition :

- (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=50mA	1000Hrs	Power decay	≤ 30%	60 pcs