SL-T2835IRC100-L210

DATA SHEET

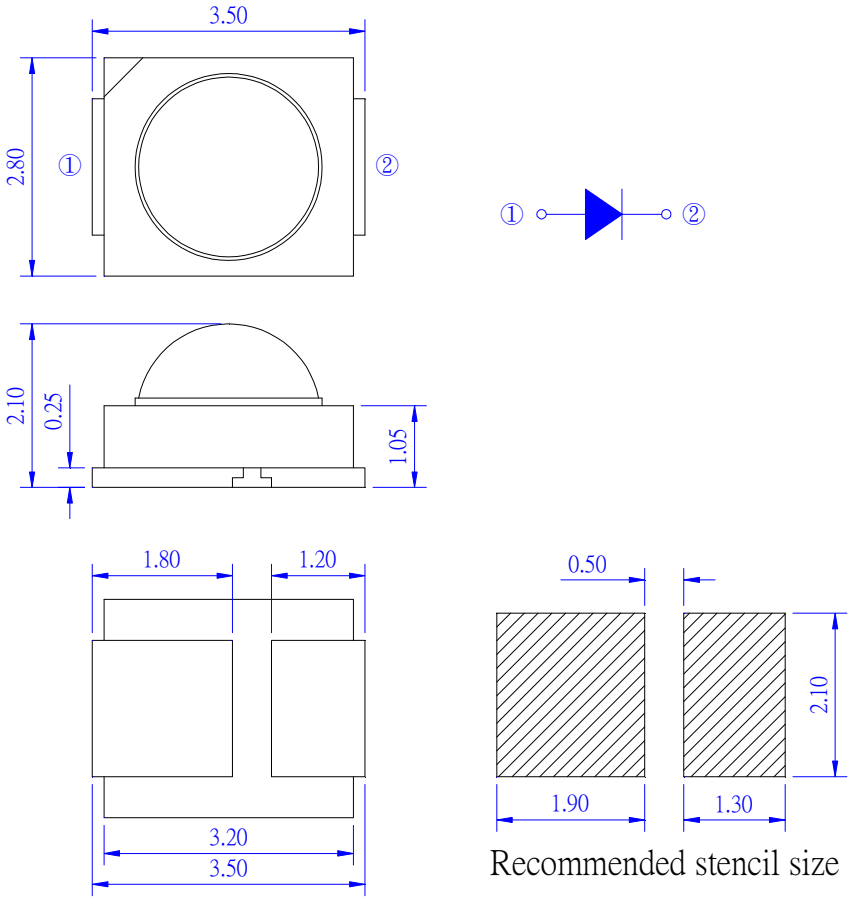
SPEC. NO. : SZ19022005
DATE : 2019/02/20
REV. : A/0

Approved By: Checked By: Prepared By:

Features

- Pb free product—RoHS compliant
- Low power consumption, High efficiency
- Reliable and rugged
- Long life – solid state reliability
- Good spectral matching to Si photo detector

Package Dimension



Part NO.	Chip Material	Lens Color
SL-T2835IRC100-L210	AlGaAs	Water Clear

Notes:

1. All dimensions are in millimeters.
2. Tolerance is ±0.10mm unless otherwise noted.
3. Specifications are subject to change without notice.

Absolute Maximum Ratings at Ta=25℃

Parameter	MAX.	Unit
Power Dissipation	180	mW
Continuous Forward Current	25	mA
Peak Forward Current[*2]	100	mA
Reverse Voltage	5	V
Electrostatic Discharge (HBM)[*3]	4000	V
Moisture Sensitivity Level[*1]	5a	
Operating Temperature	-30℃ to + 85℃	
Storage Temperature	-40℃ to + 100℃	
Reflow Condition	260℃ MAX for 10 Seconds	

1. **Storage:**

(1). Storage requirements before vacuum bag opened: Temperature<30℃, Humidity<65%RH;

(2). Check air leakage and vacuum bag damage before opened. If there is any issue found, check the humidity indicator card immediately after bag opened:

a. If color changes on "10% circle" of the humidity indicator card only and not the circles of 20% and above, components can be used without additional handling;

b. If color changes on both 10% and 20% circles but not the circles of 30% and above, components must be dehumidified according to the conditions of bullet (5);

c. If color changes on 10%, 20%, and 30% circle or above, the product should be returned to the supplier for high temperature dehumidification;

(3). After bag opened, manual soldering or reflow process must follow the following requirements:

a. Complete soldering / reflow within 24 hours;

b. Requirements of working environment: Temperature<30℃, Humidity<60%RH;

(4). If the working condition is outside (3)a requirement, the components must be dehumidified according to the conditions of bullet (5);

(5). Low temperature dehumidification: temperature 60-65℃, at least 24 hours;

(6). Shelf life: 30 days. If it's over 30 days from the production date on the package label, the components must be dehumidified according to the condition of bullet (5). If customer is unable to dehumidify, return components to LIGHT for dehumidification.

2. **Peak Forward Current:**

Condition for is IFP pulse: Pulse Width≤100μs and duty≤1%.

3. **Caution in ESD:**

Static Electricity and surge damages the LED. It is recommend to use a wrist band or anti-electrostatic glove when handling the LED. All devices, equipment and machinery must be properly grounded.

Electrical Optical Characteristics at Ta=25℃

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Radiant Flux	Po	25	27	29	mW/sr	I_F=100mA[*2]
Viewing Angle(X)	$2\theta_{1/2}$	---	60	---	Deg.	I_F=100mA[*1]
Viewing Angle(Y)		---	60	---		
Peak Wavelength	λp	---	940	---	nm	I_F=100mA
Spectral Line Half- Width	Δλ	---	50	---	nm	I_F=100mA
Forward Voltage	V_F	1.3	1.5	1.8	V	I_F=100mA
Reverse Current	I_R	---	---	10	μA	V_R=5V

Note:

1. $\theta_{1/2}$ is the off-axis angle at which the Radiant Intensity is half the axial Radiant Intensity.
2. The Po guarantee should be added ±15% tolerance.

Typical Electrical / Optical Characteristics Curves
(25℃ Ambient Temperature Unless Otherwise Noted)

Fig.1 Spectral Distrbution

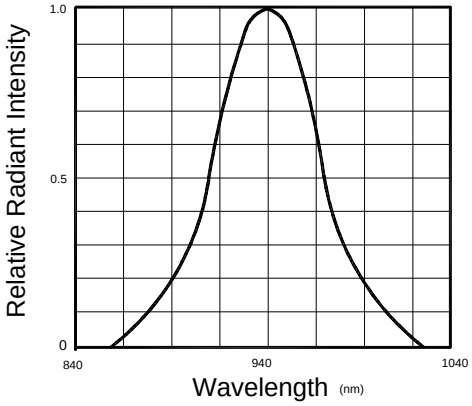


Fig.2 Forward Current Vs Ambient Temperature

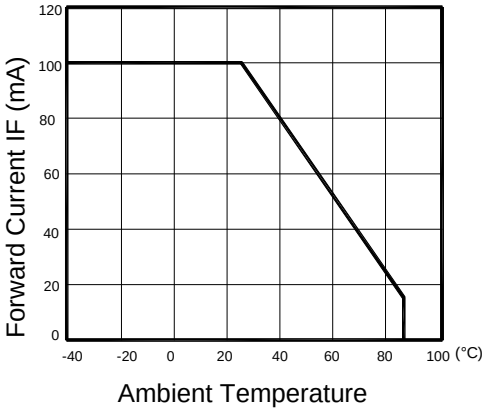


Fig.3 Forward Current Vs Forward Voltage

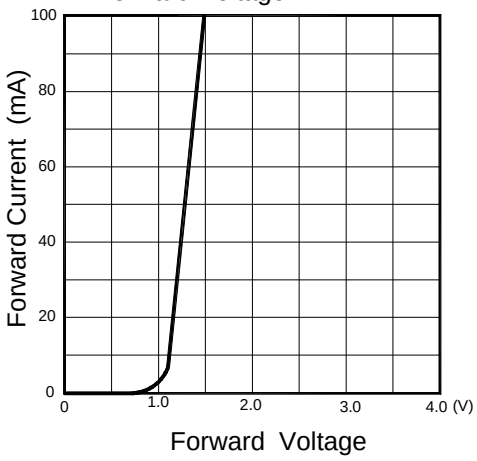


Fig.4 Relative Radiant Intensity Vs Forward Current

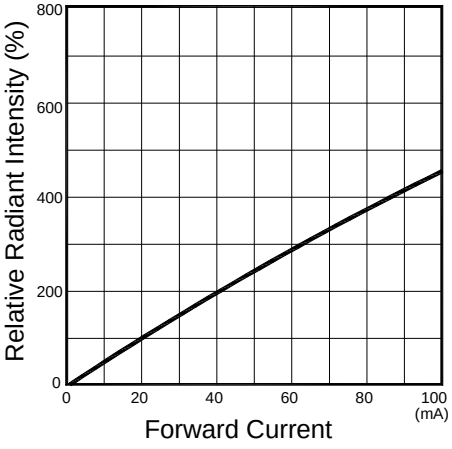


Fig.5 Radiation Diagram (X-axis)

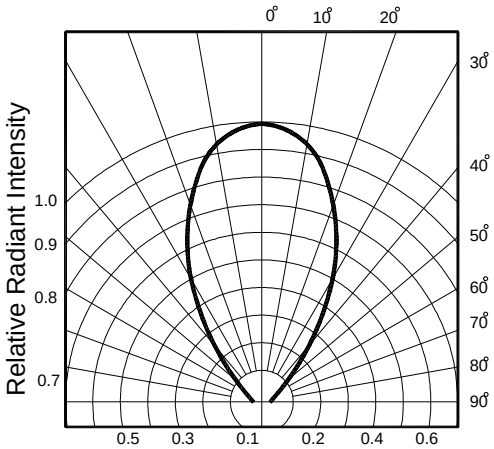
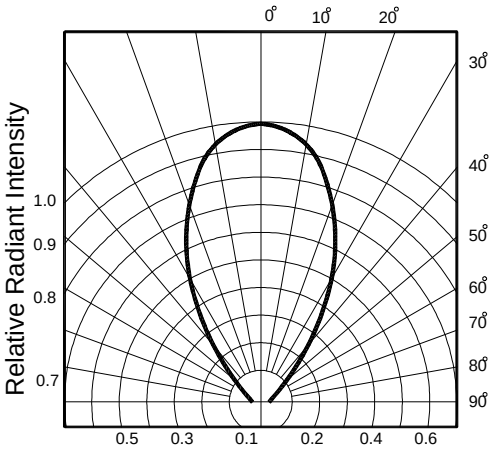


Fig.6 Radiation Diagram (Y-axis)



Reliability Test

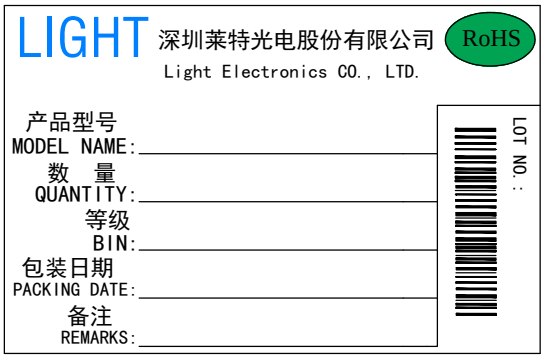
Test Item	Test Condition	Test Time	Quantity	Ac/Re
Life Test	Ta=25°C IF=20mA	1000hrs	22PCS	0/1
High Temperature High Humidity Storage	Ta=60°C RH=85%	1000hrs	22PCS	0/1
High Temperature Storage	Ta=100°C	1000hrs	22PCS	0/1
Low Temperature Storage	Ta=-40°C	1000hrs	22PCS	0/1
Temperature Cycling	100°C～25°C～-40°C～25°C 30min 5min 30min 5min	100Cycles	22PCS	0/1
Thermal Shock	-40°C～100°C 15min 15min Transfer Time: 10 sec	100Cycles	22PCS	0/1
Reflow	Ta=260°C max T=10 sec	2 times	22PCS	0/1

The Judgement Criteria for Reliability Test Result

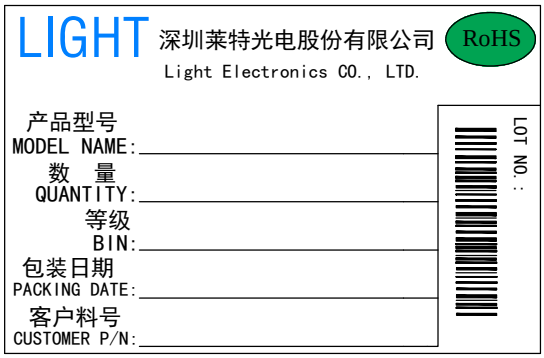
Test item	Symbol	Test Condition	Criteria for Judgement
Forward Voltage	V_F	I_F=20mA	≤Initial Value*1.2
Reverse Current	I_R	V_R=5V	≤10μA
Radiant Intensity	Ie	I_F=20mA	≥Initial Value*0.7

Label Explanation

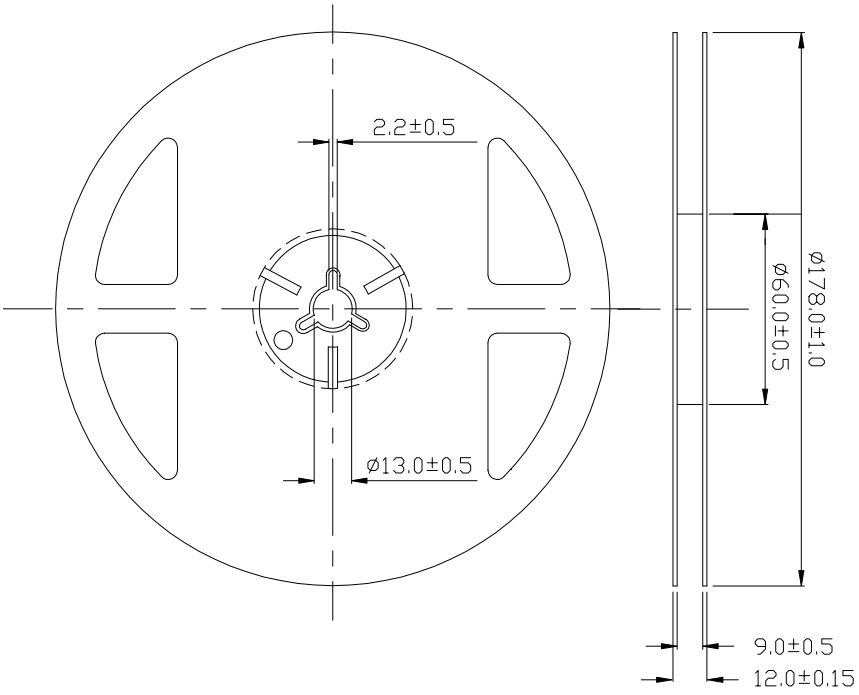
LIGHT Universal Label
(Reel Label)



Customer Defined Label
(Aluminum Moisture Proof Bag Label)

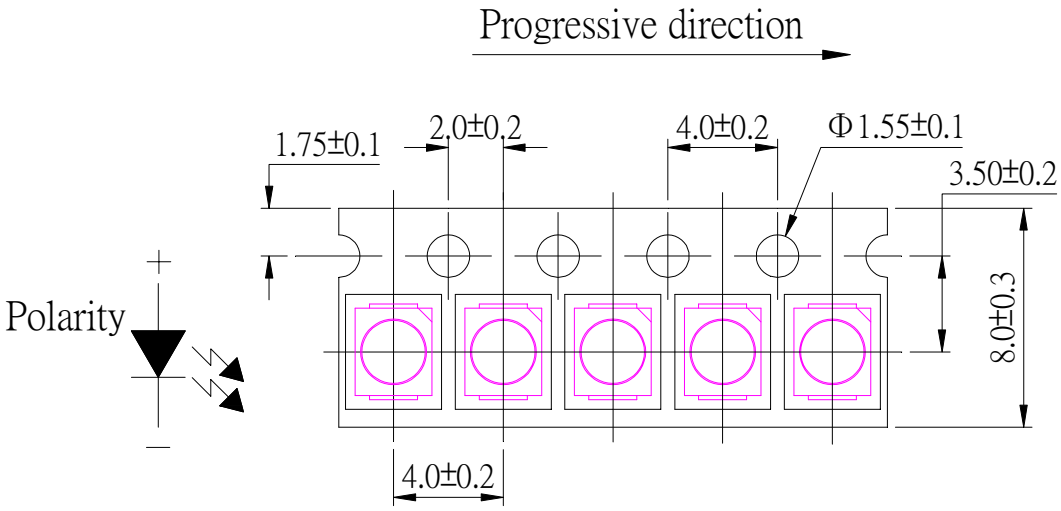


Reel Dimensions



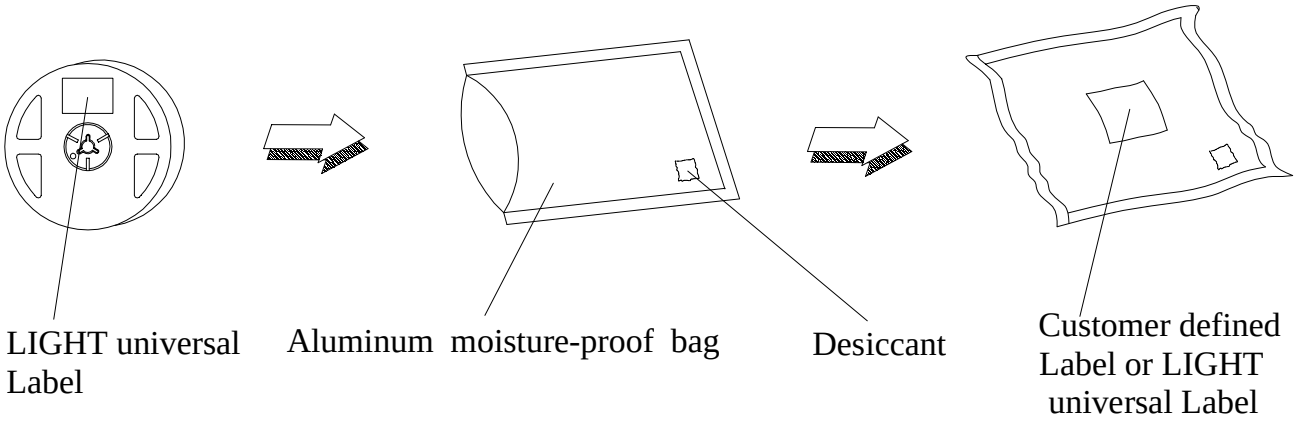
Note: Tolerance unless mentioned is ±0.2mm; Unit = mm

Carrier Tape Specifications (Loaded Quantity: 2000pcs/reel)

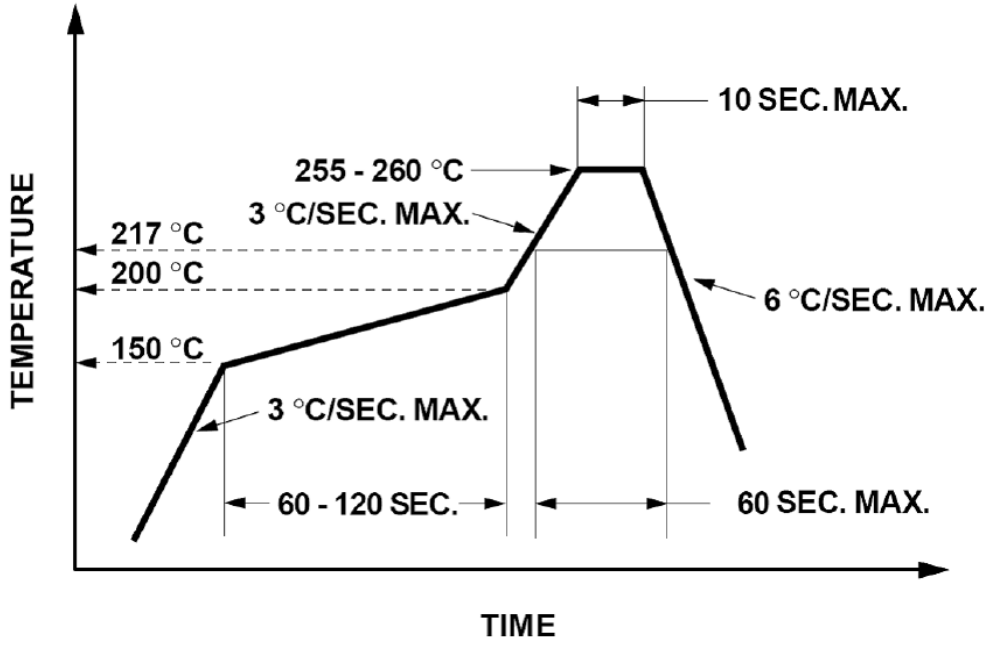


Note: Tolerance unless mentioned is ±0.1mm; Unit = mm

Moisture Resistant Packaging



Suggest IR Reflow Condition For Lead Free



1. Reflow soldering should not be done more than two times.
2. When soldering, do not put stress on the LEDs during heating.

Soldering iron

1. When hand soldering, the temperature of the iron must less than 300℃ for 3 seconds.
2. The hand solder should be done only once.

Repairing

Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used (as below figure). It should be confirmed beforehand whether the characteristics of LEDs will or will not be damaged by repairing.