

SL-T3838IRC01A-L230

DATA SHEET

SPEC.NO. : SZ19092001
DATE : 2021/04/28
REV. : A/2

Approved By:

Checked By:

Prepared By:

Features

- ◆ Pb free product—RoHS compliant
- ◆ IR light source with high efficiency
- ◆ Low thermal resistance
- ◆ Center of spectral emission at 850nm
- ◆ Radiant angle: 90°

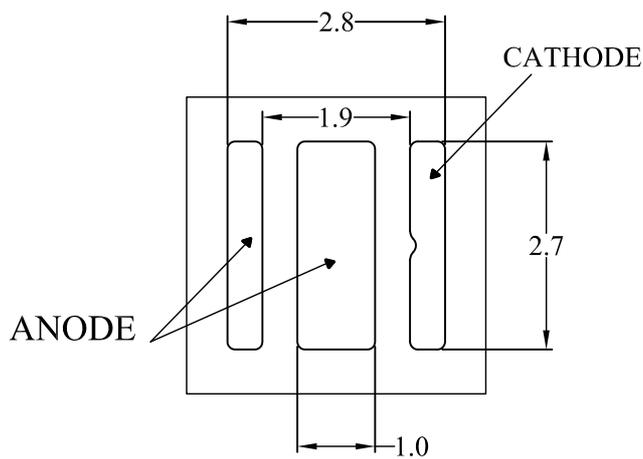
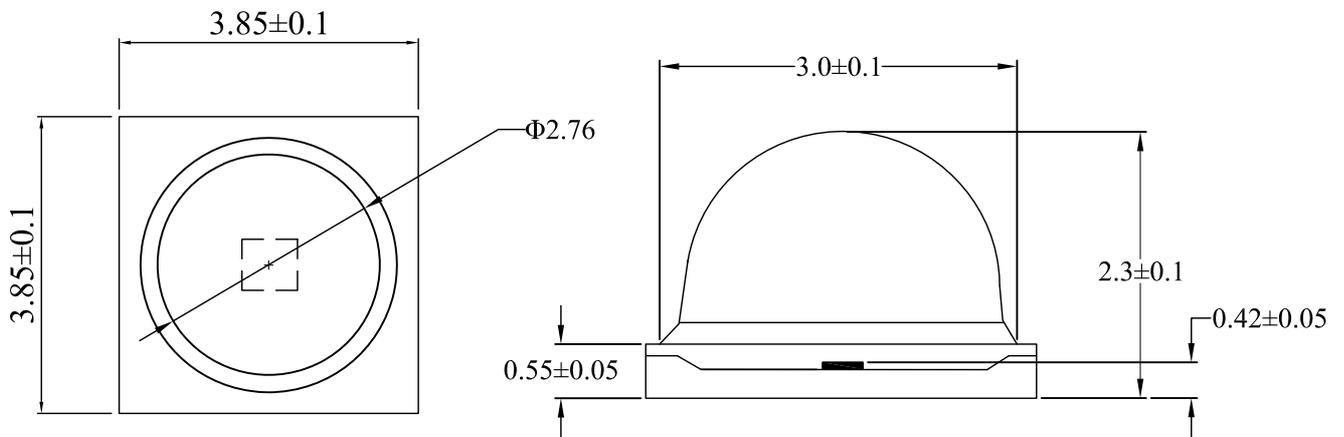
Applications

- ◆ Infrared Illumination for cameras
- ◆ Surveillance system
- ◆ Machine vision systems
- ◆ Eye tracking systems

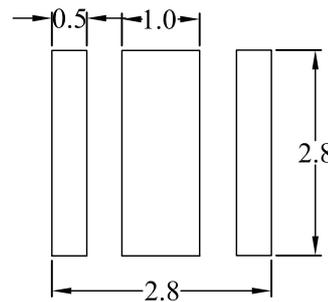
Safety Advices

Depending on the mode of operation, these devices emit highly concentrated non visible infrared light which can be hazardous to the human eye. Products which incorporate these devices have to follow the safety precautions given in IEC 60825-1 and IEC 62471.

Package Dimension



Recommended Soldering Pattern:



Part NO.	Chip Material	Lens Color
SL-T3838IRC01A-L230	AlGaAs	WaterClear

Notes:

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

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	MAX.	Unit
Power Dissipation	PD	2300	mW
Continuous Forward Current	IF	1000	mA
Peak Forward Current	IFp	3000	mA
Reverse Voltage	VR	5	V
Electrostatic Discharge (HBM)	ESD	2000	V
Operating Temperature	Topr	-40 to + 85	°C
Storage Temperature	Tstg	-55 to + 100	°C
IR Reflow Temperature	Tsol	Max.260°C for 10sec Max.	---
Thermal Resistance (junction to leadframe)	Rth(j-L)	11	°C/W
Junction Temperature	Tj	130	°C
Silicone Refractive Index	---	1.43	---

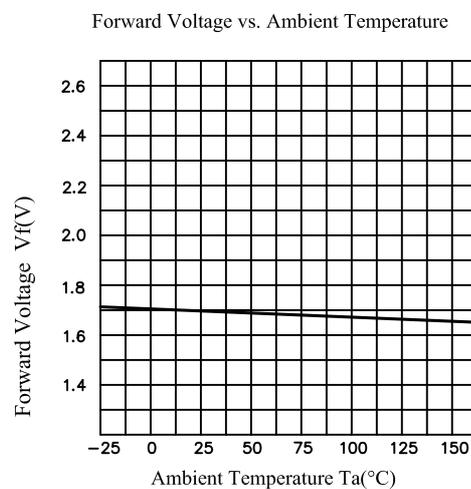
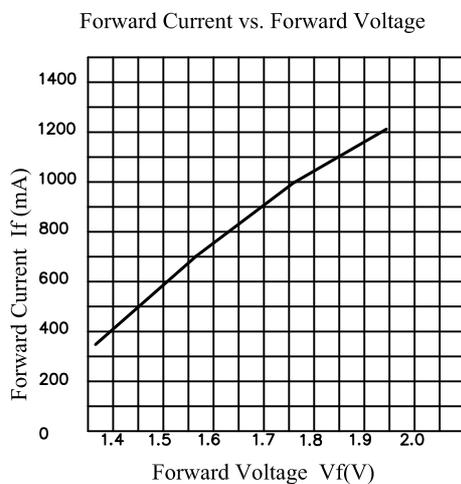
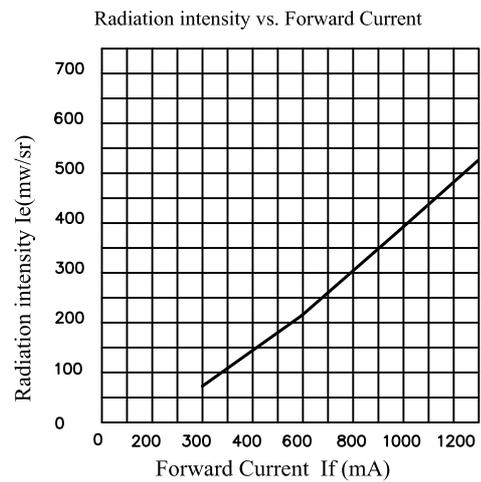
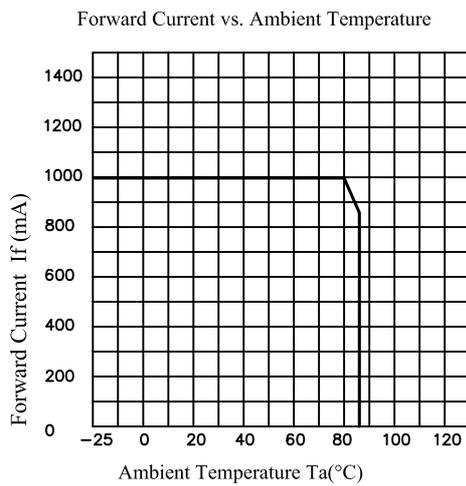
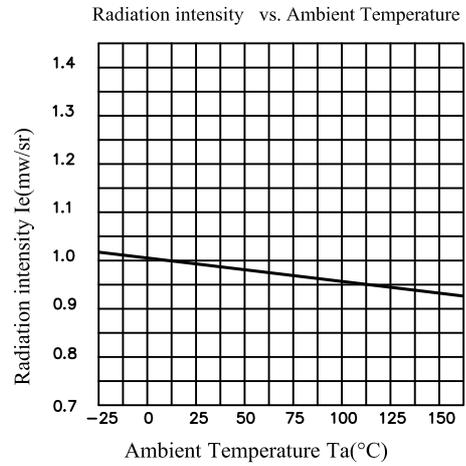
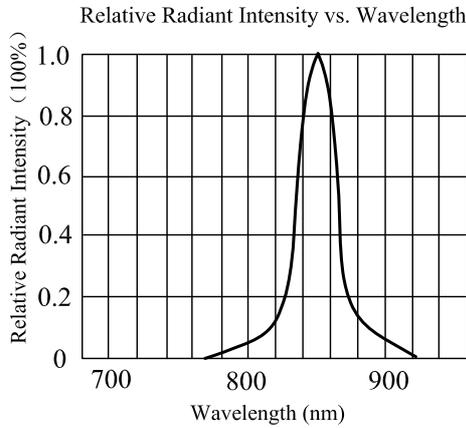
Electrical Optical Characteristics at Ta=25°C

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Total Radiated Power	Po	---	810	---	mW	IF=1000mA
Radiant Intensity	Ie	350	400	---	mW/sr	IF=1000mA
Viewing Angle	2θ _{1/2}	---	90	---	Deg.	IF=1000mA
Peak Wavelength	λp	---	850	---	nm	IF=1000mA
Spectral Line Half- Width	Δλ	---	45	---	nm	IF=1000mA
Forward Voltage	V _F	---	1.7	2.3	V	IF=1000mA
Reverse Current	I _R	---	---	10	μA	V _R =5V

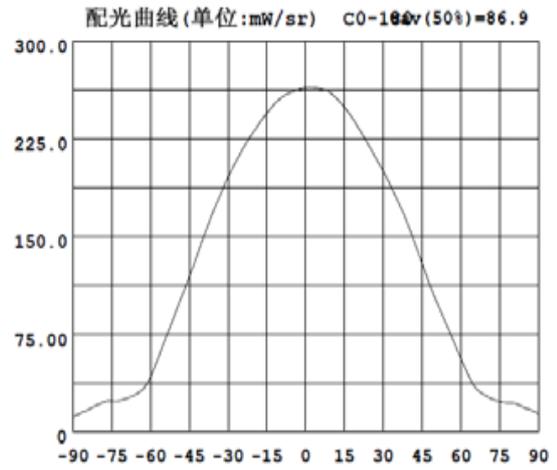
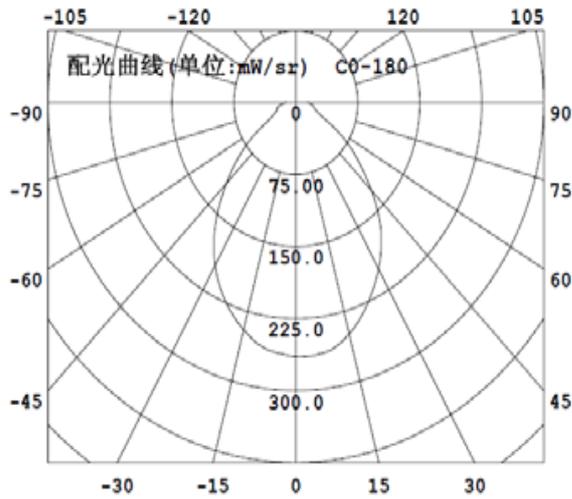
Note:

1. Point sources of the amount of radiation per unit time in a given direction within the unit solid Angle radiated energy.
2. θ_{1/2} is the off-axis angle at which the Radiant Intensity is half the axial Radiant Intensity.
3. The Po and Ie guarantee should be added ±15% tolerance.

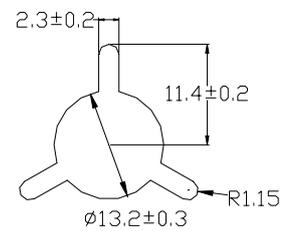
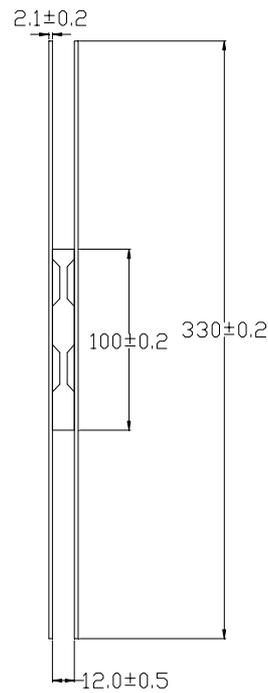
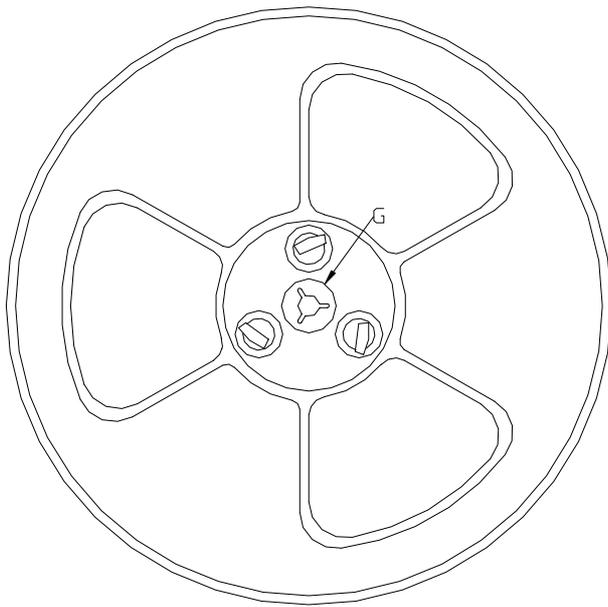
Typical Electrical / Optical Characteristics Curves (25°C Ambient Temperature Unless Otherwise Noted)



Distribution Curve Flux



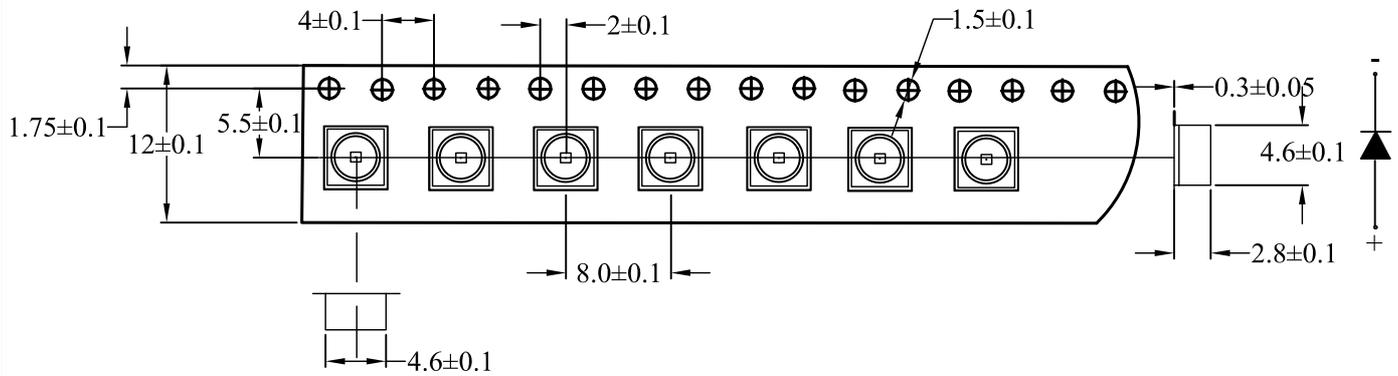
Reel Dimensions



G 区放大图

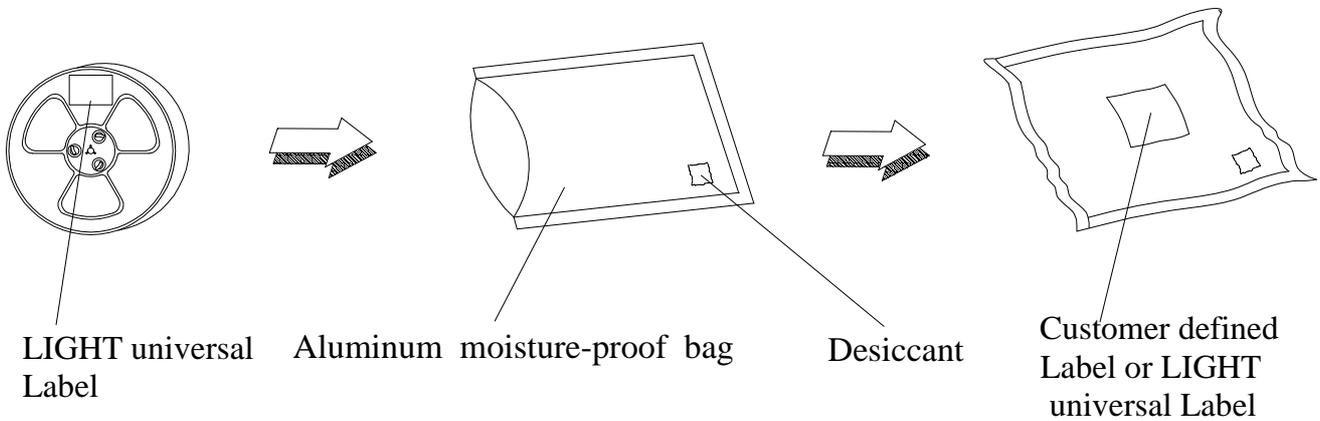
Note: Tolerance unless mentioned is $\pm 0.2\text{mm}$; Unit = mm

Carrier Tape Specifications (Loaded Quantity: 3000pcs/reel)

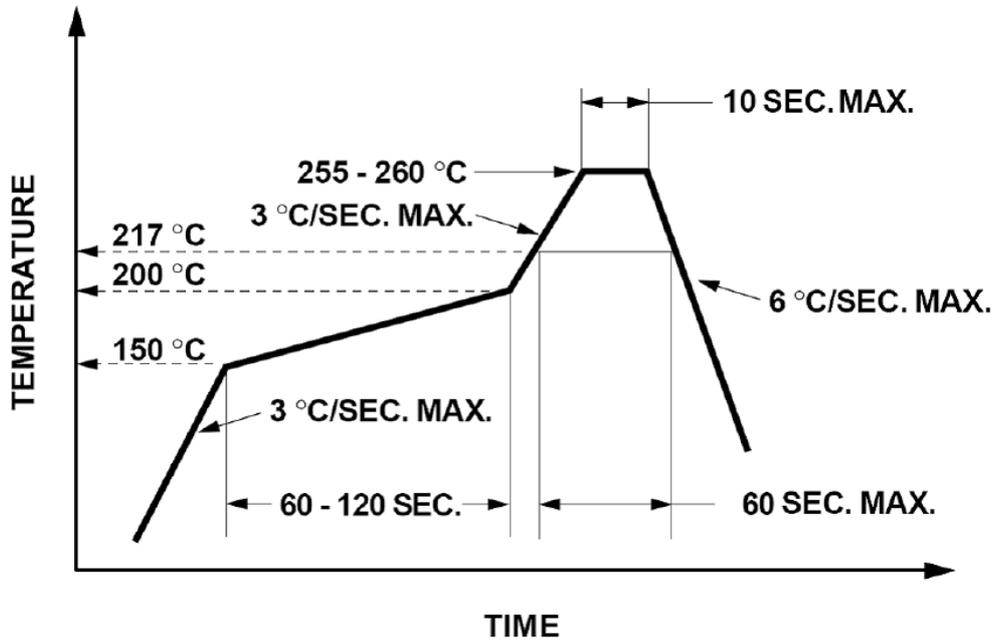


Note: Tolerance unless mentioned is ± 0.1 mm; Unit = mm

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 350°C for 5 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.

