

Power Top LEDs

67-31E-SCC-7HCACBG9H-2T8-AM



Features

Lead (Pb) Free Product - RoHS Compliant

- P-LCC-3 package.
- Colored diffused resin.
- Wide viewing angle 120°.
- Inner reflector and white package.
- Qualification according to AEC-Q101 rev C.
- Precondition: Bases on JEDEC J-STD 020D Level 3.
- Automotive reflow profile (IR reflow or wave soldering)

Applications

- Automotive backlighting or indicator: Interior and exterior lighting, Dashboard, switch, reading lamp, audio and video equipments...etc.
- Backlight: LCD, switches, symbol, mobile phone and illuminated advertising.
- Display for indoor and outdoor application.
- Ideal for coupling into light guides.
- Substitution of traditional light.
- General applications.
- Optical indicator.

Device Selection Guide

Chip Materials	Emitted Color	Resin Color
AlGaInP	Reddish Orange	Water Clear

Absolute Maximum Ratings (Ta=25)

Parameter	Symbol	Rating	Unit
Reverse Voltage	V_R	10	V
Forward Current	I_F	70	mA
Peak Forward Current (Duty 1/10 @1KHz)	I_{FP}	100	mA
Power Dissipation	P_d	170	mW
Junction Temperature	T_j	125	
Operating Temperature	T_{opr}	-40 ~ +100	
Storage Temperature	T_{stg}	-40 ~ +110	
Thermal Resistance	$R_{th\ J-A}$	250	K/W
	$R_{th\ J-S}$	150	K/W
ESD (Classification acc. AEC Q101)	ESD_{HBM}	2000	V
	ESD_{MM}	200	V
Soldering Temperature	T_{sol}	Reflow Soldering : 260	for 30 sec.
		Hand Soldering : 350	for 3 sec.

Electro-Optical Characteristics (Ta=25)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I_v	2800	---	4500	mcd	$I_F=70mA$
Viewing Angle	$2\theta_{1/2}$	---	120	---	deg	
Dominant Wavelength	λ_d	610	---	622	nm	
Forward Voltage	V_F	1.9	---	2.9	V	

Note:

1. Tolerance of Luminous Intensity: $\pm 11\%$
2. Tolerance of Dominant Wavelength : $\pm 1nm$
3. Tolerance of Forward Voltage: $\pm 0.1V$

Bin Range of Luminous Intensity

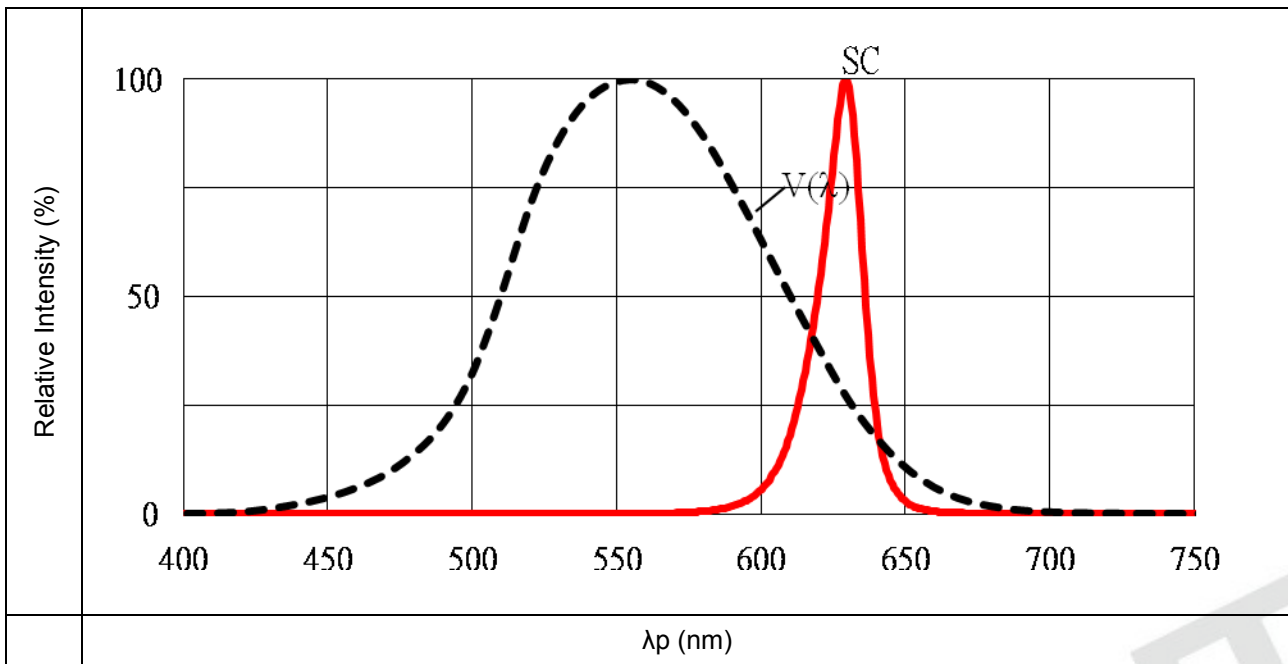
Bin Code	Min.	Max.	Unit	Condition
CA	2800	3550	mcd	I _F =70mA
CB	3550	4500		

Bin Range of Dominant Wavelength

Group	Bin Code	Min.	Max.	Unit	Condition
7H	A9	610	613	nm	I _F =70mA
	A10	613	616		
	A11	616	619		
	A12	619	622		

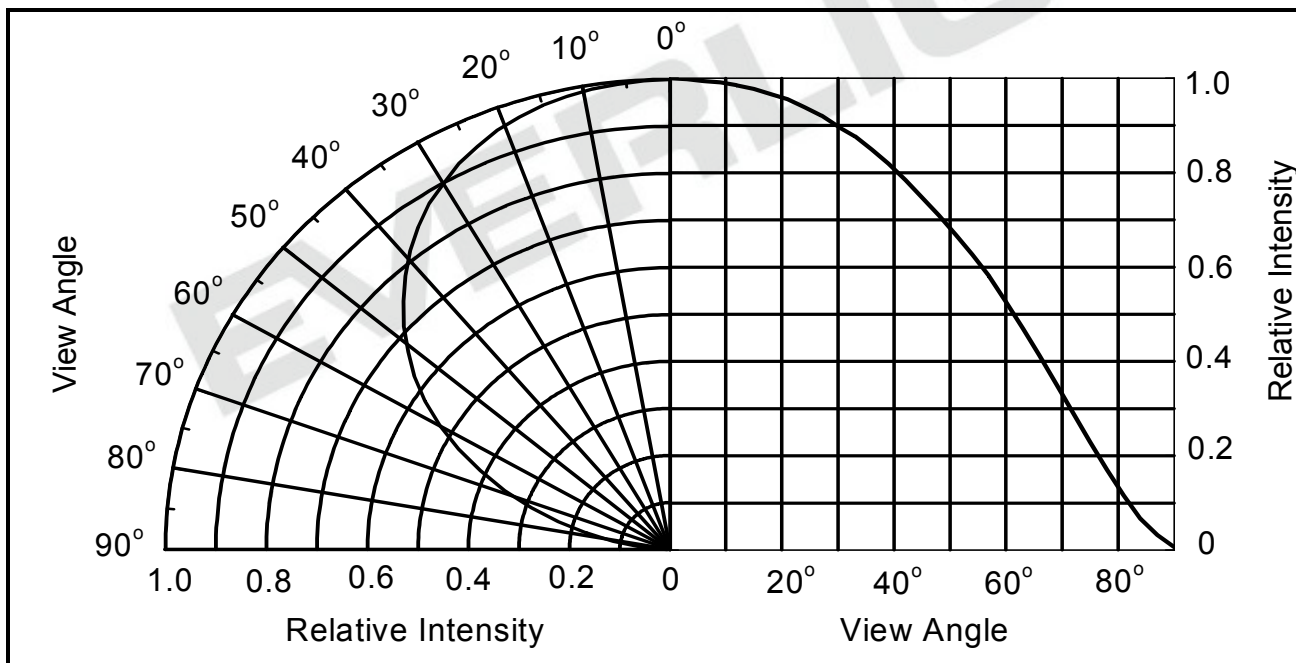
EVERLIGHT

Typical Electro-Optical Characteristics Curves(Ta=25)
Typical Curve of Spectral Distribution

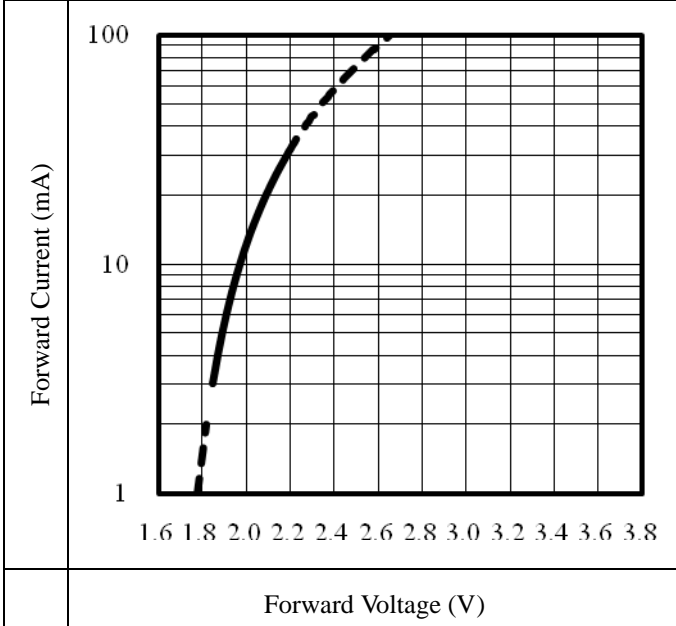


Note: V(λ)=Standard eye response curve;

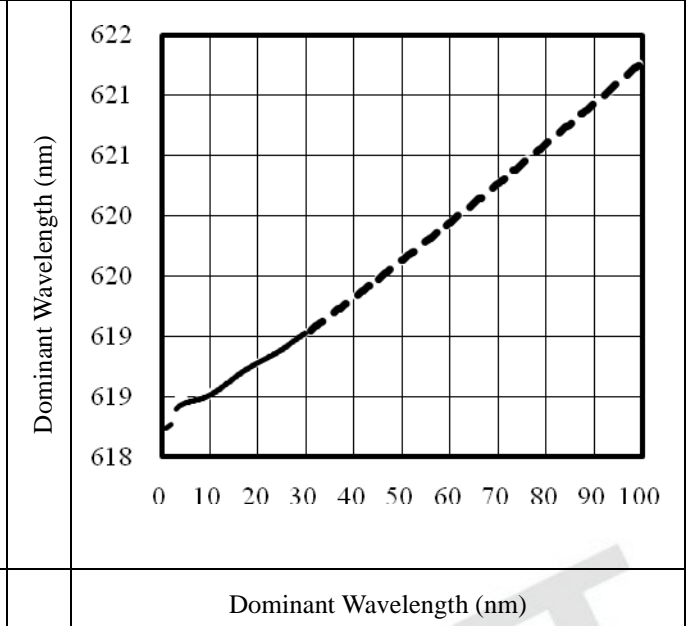
Diagram Characteristics of Radiation



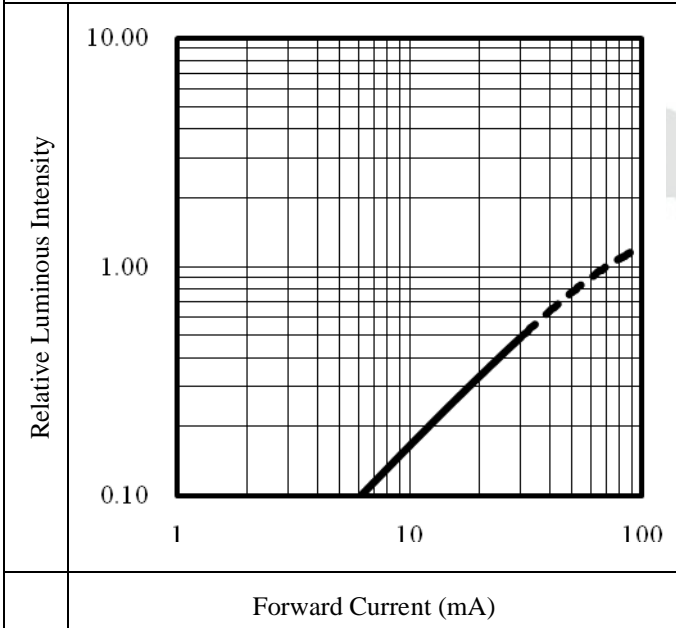
Forward Current vs. Forward Voltage
 (Ta=25 °C)



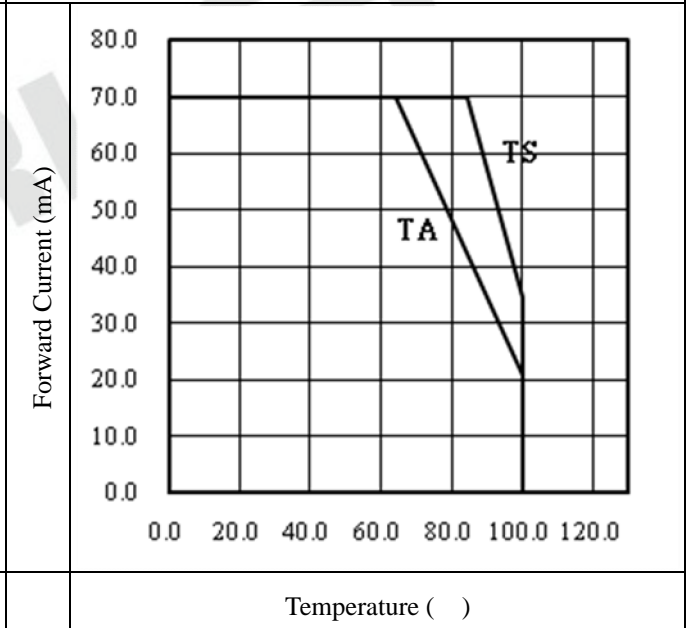
Dominant Wavelength vs. Forward Current
 (Ta=25 °C)



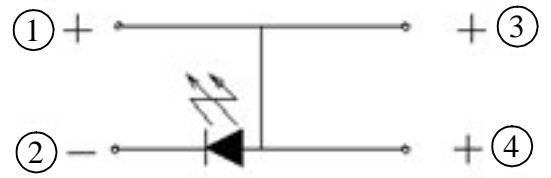
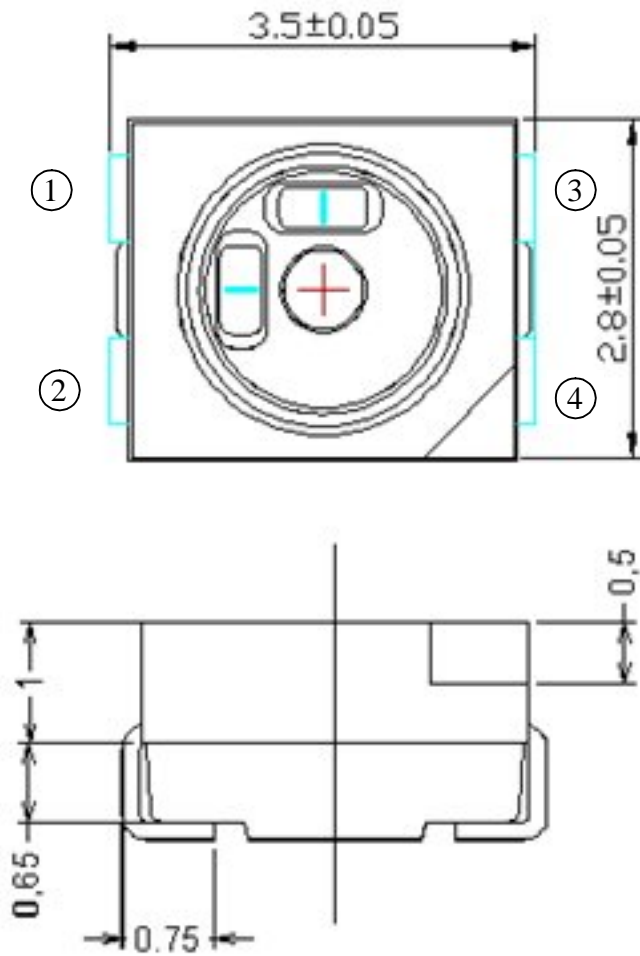
Relative Luminous Intensity vs. Forward Current
 (Ta=25 °C)



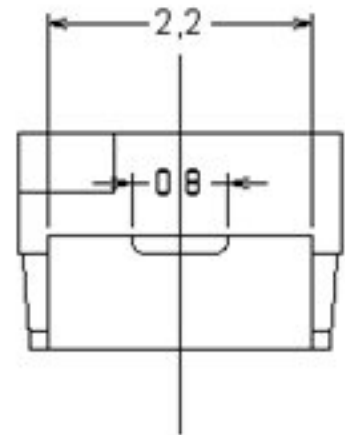
Max. Permissible Forwarded Current



Package Dimension



Polarity



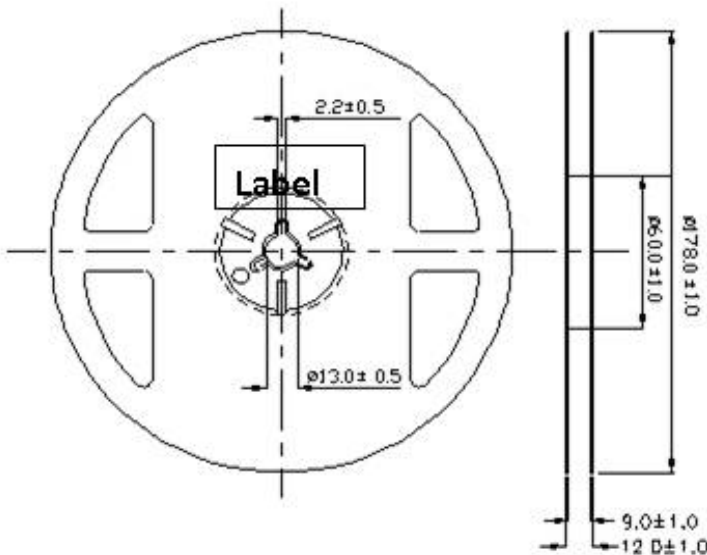
Note: Tolerances unless mentioned ± 0.1 mm. Unit = mm

**Moisture Resistant Packing Materials
 Label Explanation**

- CPN: Customer's Product Number
- P/N: Product Number
- QTY: Packing Quantity
- CAT: Luminous Intensity Rank
- HUE: Dom. Wavelength Rank
- REF: Forward Voltage Rank
- LOT No: Lot Number

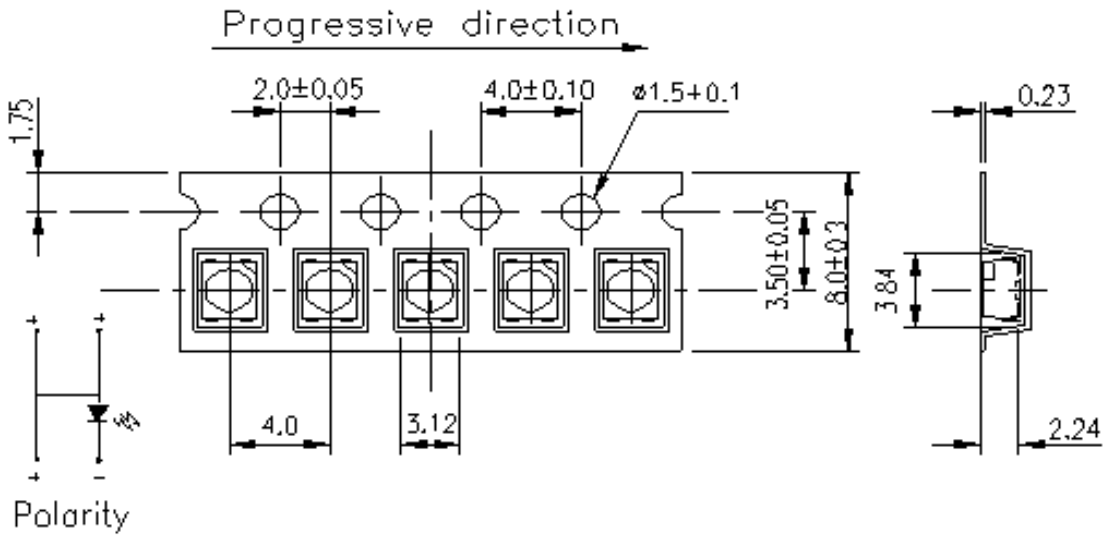


Reel Dimensions



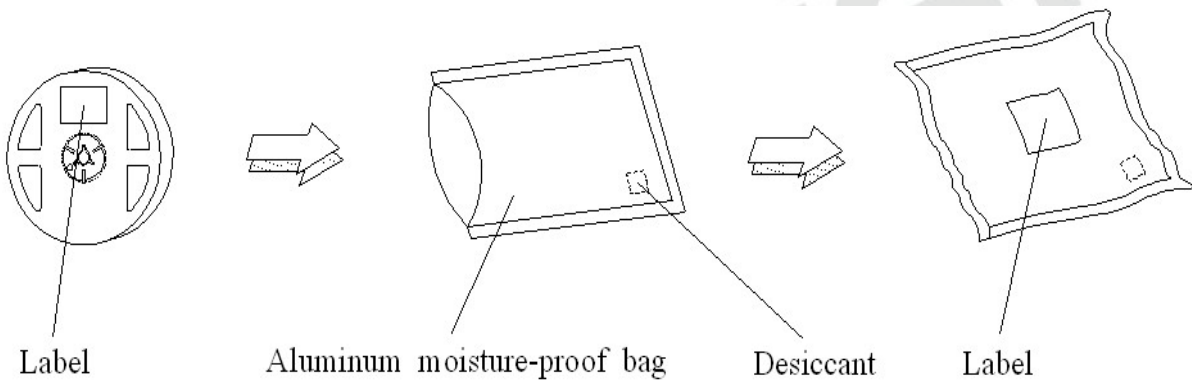
Note: Tolerances unless mentioned ± 0.1 mm. Unit = mm

Carrier Tape Dimensions: Loaded Quantity 2000 pcs Per Reel



- Note:
1. Tolerances unless mentioned ± 0.1 mm. Unit = mm
 2. Minimum packing amount is 250/500/1000 pcs per reel

Moisture Resistant Packing Process

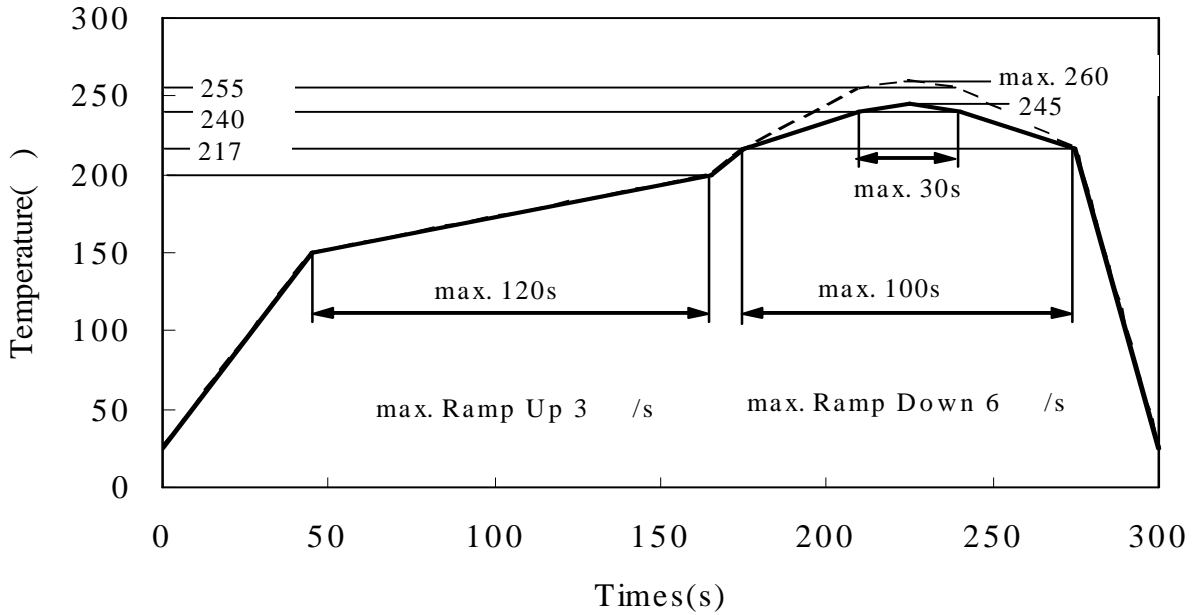


Note: Tolerances unless mentioned ± 0.1 mm. Unit = mm

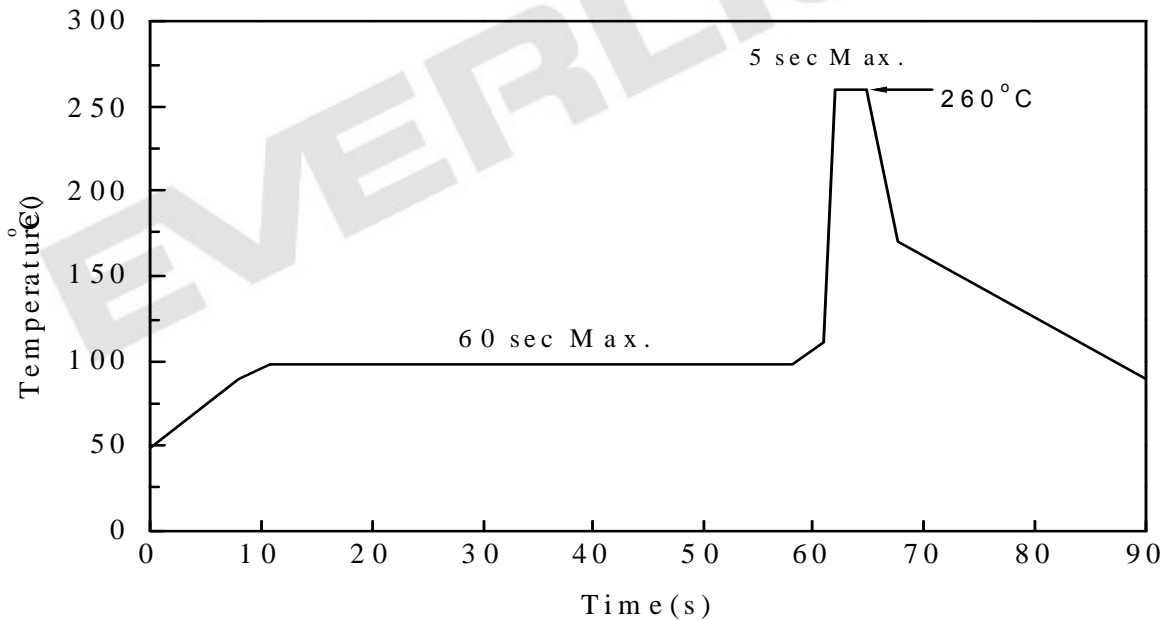
Precautions for Use

1. Soldering Condition (Reference: IPC/JEDEC J-STD-020D)

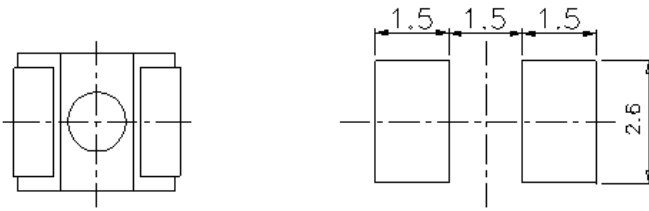
a. IR reflow



b. Wave soldering reflow



(B) Recommend soldering pad



Note: Tolerances unless mentioned $\pm 0.1\text{mm}$. Unit = mm

2. Current limiting

A resistor should be used to limit current spikes that can be caused by voltage fluctuations. Otherwise damage could occur.

3. Storage

- 3.1 Moisture proof bag should only be opened immediately prior to usage.
- 3.2 Environment should be less than 30 °C and 60% RH when moisture proof bag is opened.
- 3.3 After opening the package MSL Conditions stated on page 1 of this spec should not be exceeded.
- 3.4 If the moisture sensitivity card indicates higher than acceptable moisture, the component should be baked at min. 60deg +/-5deg for 24 hours.

4. Iron Soldering

Hand soldering is not recommended for regular production. These guidelines are for rework only. Soldering iron tip should contact each terminal no more than 3 sec at 350 °C, using soldering iron with nominal power less than 25W. Allow min. 2 sec. between soldering intervals.

5. Usage

Do not exceed the values given in this specification.

Application Restrictions

High reliability applications such as military/aerospace, automotive safety/security systems, and medical equipment may require different product. If you have any concerns, please contact Everlight before using this product in your application. This specification guarantees the quality and performance of the product as an individual component. Do not use this product beyond the specification described in this document.

Revision History:

Rev.	Modified date	File modified contents
1	2014/07/07	Public edition