

Mini Top LEDs

65-11-GHC-G7T2U2A6E-2T8-AM



Features

Lead (Pb) Free Product - RoHS Compliant

- P-LCC-2 package.
- Colored diffused resin.
- Wide viewing angle 120°.
- Inner reflector and white package.
- MSL : 3
- Qualified AEC-Q102
- Corrosion Robustness Class: B1
- The product itself will remain within RoHS compliant version
- Compliance with EU REACH
- Compliance Halogen Free .(Br <900 ppm ,CI <900 ppm , Br+Cl < 1500 ppm)

Applications

- Automotive interior lighting.
- Ambient light.
- Switches.

Device Selection Guide

Chip Materials	Emitted Color	Resin Color
InGaN	Brilliant Green	Water Clear

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Forward Current	I _F	30	mA
Peak Forward Current (Duty 1/10 @1KHz)	I _{FP}	100	mA
Power Dissipation	P _d	110	mW
Junction Temperature	T _j	125	°C
Operating Temperature	T _{opr}	-40 ~ +100	°C
Storage Temperature	T _{stg}	-40 ~ +110	°C
Thermal Resistance	R _{th J-A}	400	K/W
	R _{th J-S}	180	K/W
ESD (Classification acc. AEC Q101)	ESD _{HBM}	2000	V
	ESD _{MM}	200	V
Soldering Temperature	T _{sol}	Reflow Soldering : 260 °C for 30 sec. Hand Soldering : 350 °C for 3 sec.	

Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I _v	355	---	710	mcd	I _F = 20mA
Viewing Angle	2θ _{1/2}	---	120	---	deg	
Dominant Wavelength	λ _d	523.5	---	533.5	nm	
Forward Voltage	V _F	2.6	---	3.8	V	

Note:

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

Bin Range of Luminous Intensity

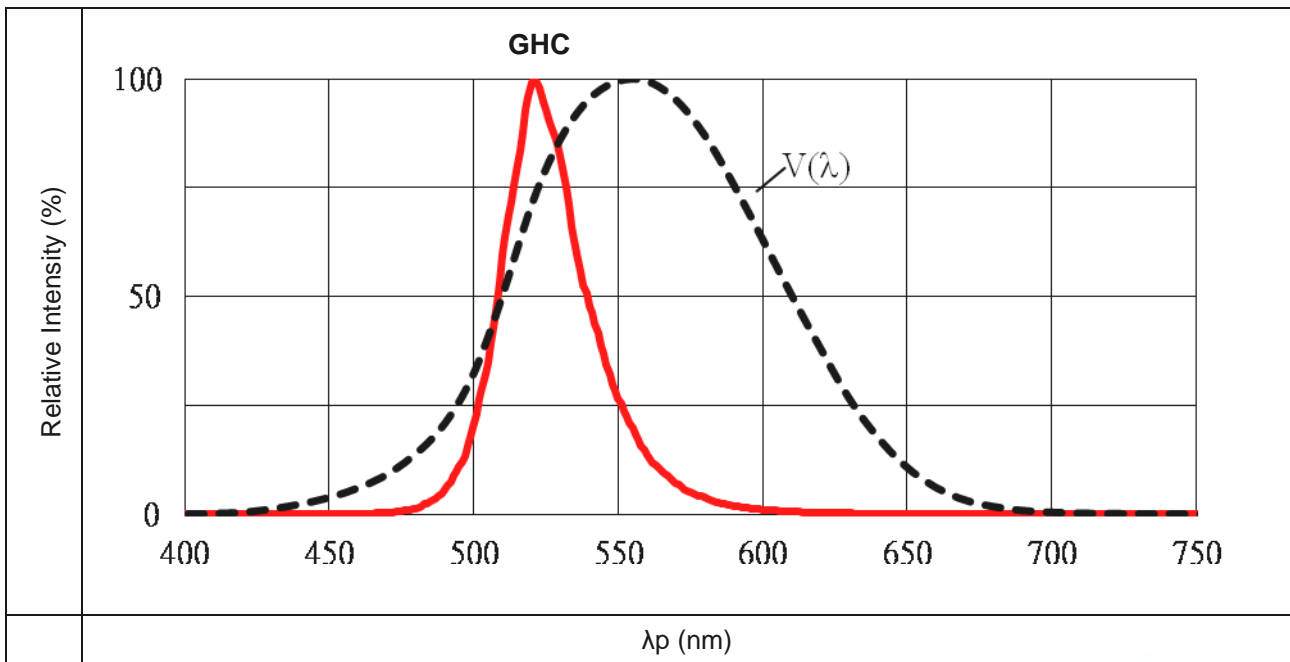
Bin Code	Min.	Max.	Unit	Condition
T2	355	450	mcd	I _F = 20mA
U1	450	560		
U2	560	710		

Bin Range of Dominant Wavelength

Group	Bin Code	Min.	Max.	Unit	Condition
G7	B13	523.5	525.5	nm	I _F = 20mA
	B14	525.5	527.5		
	B15	527.5	529.5		
	B16	529.5	531.5		
	B17	531.5	533.5		

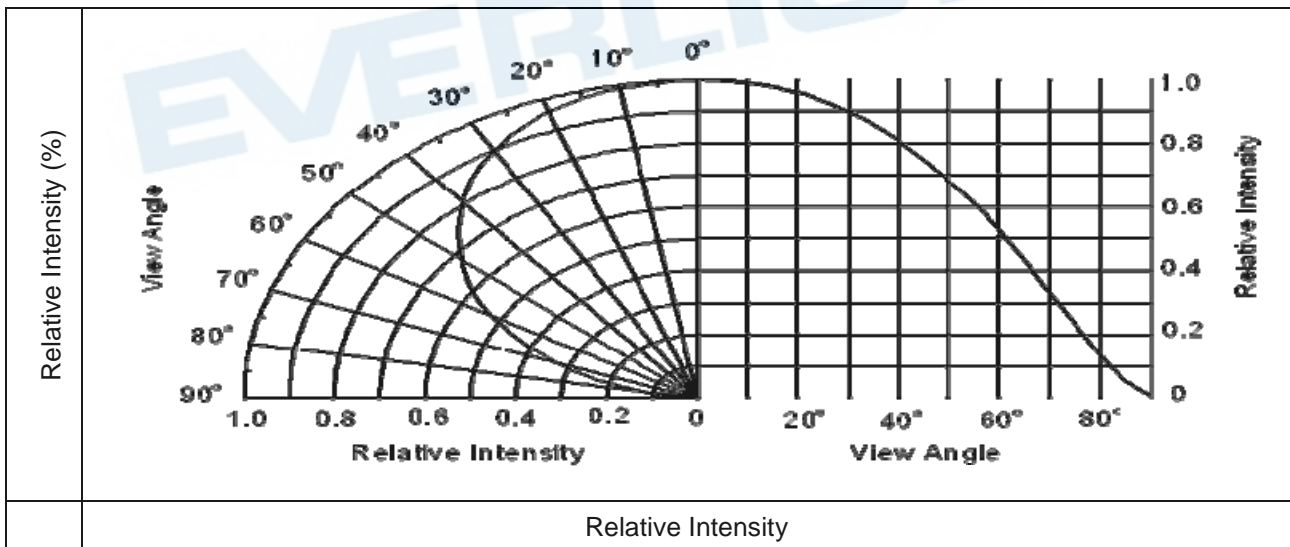
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Typical Electro-Optical Characteristics Curves(Ta=25°C)
Typical Curve of Spectral Distribution

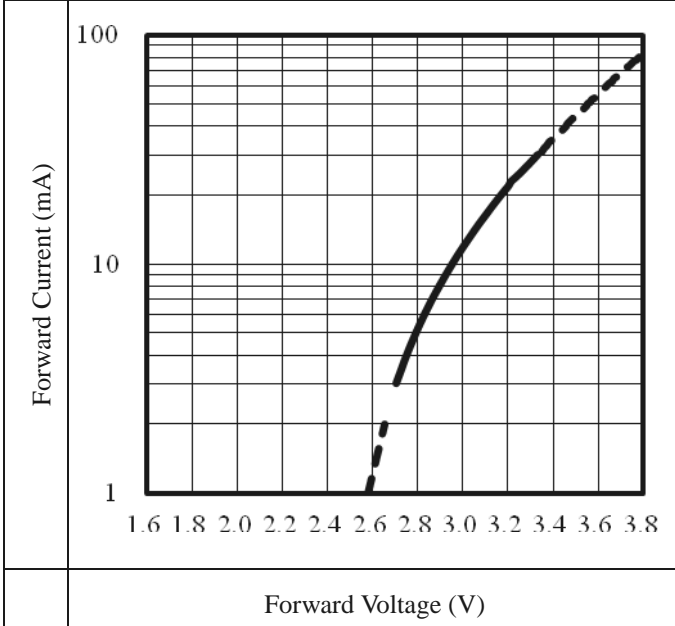


Note: $V(\lambda)$ =Standard eye response curve;

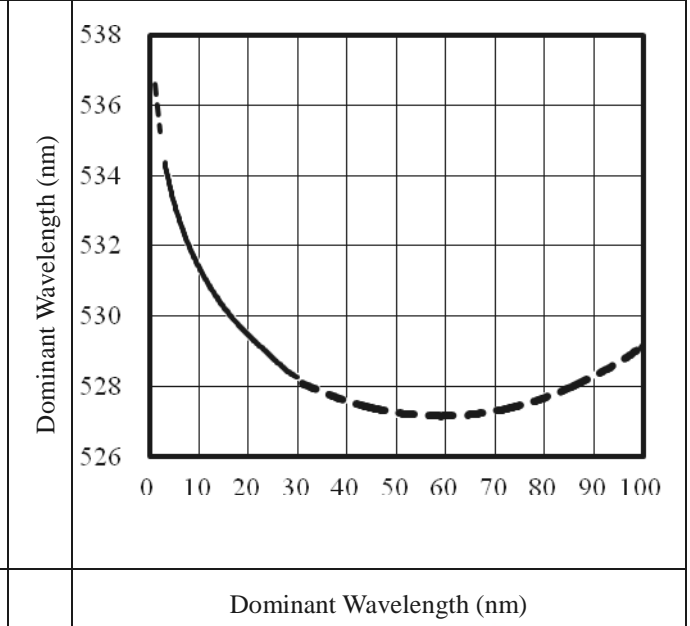
Diagram Characteristics of Radiation



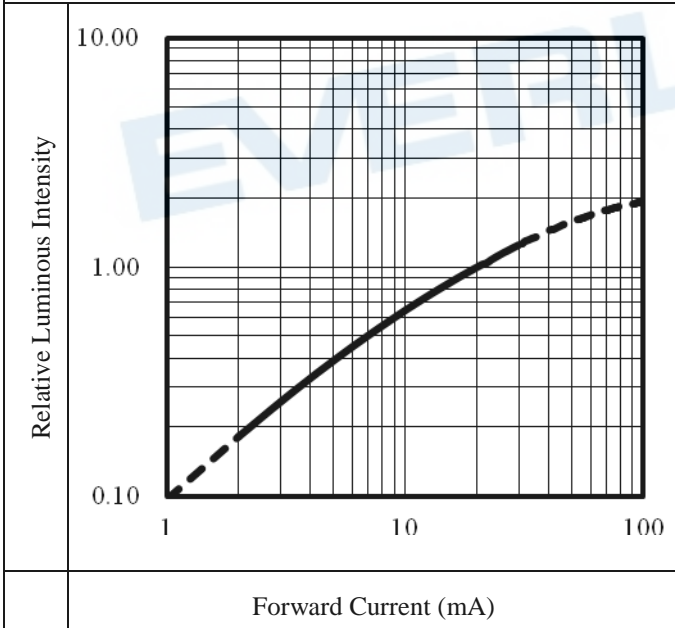
Forward Current vs. Forward Voltage
 (Ta=25°C)



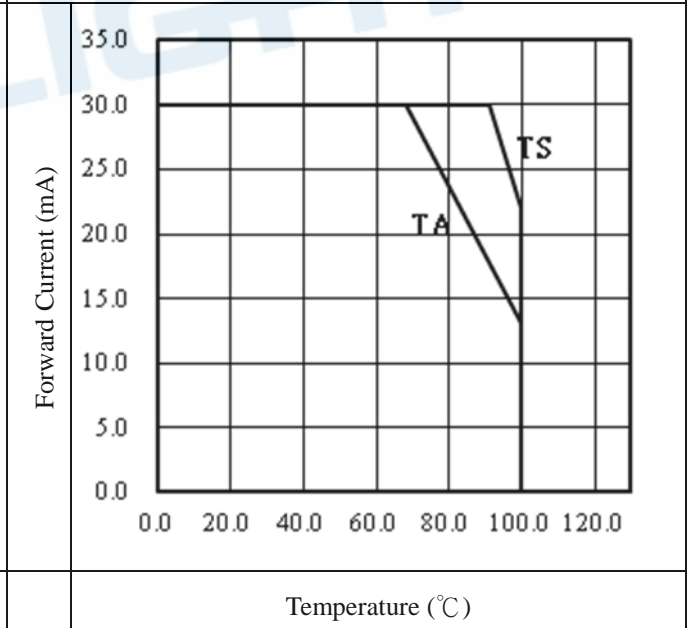
Dominant Wavelength vs. Forward Current
 (Ta=25°C)



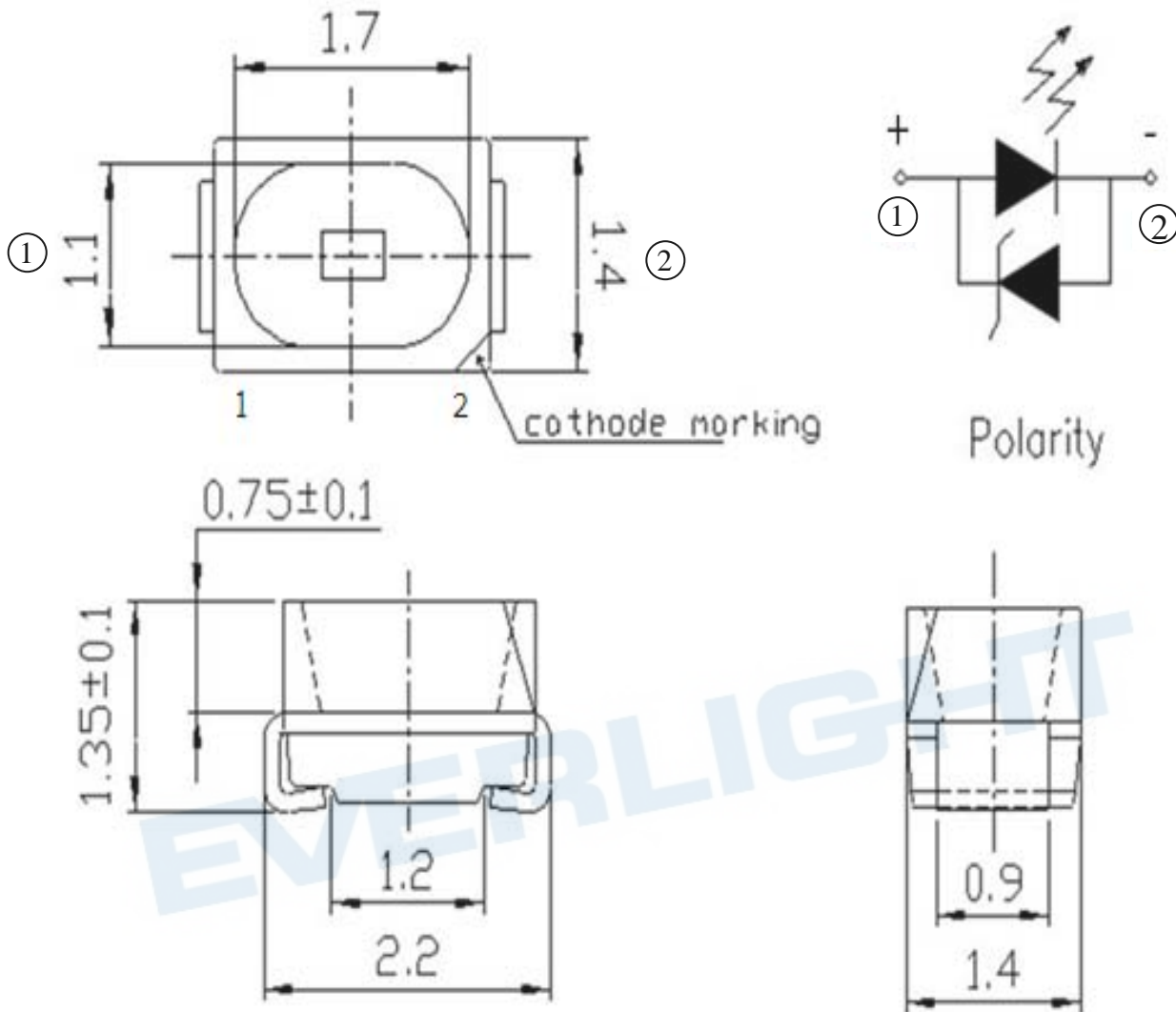
Relative Luminous Intensity vs. Forward Current
 (Ta=25°C)



Max. Permissible Forwarded Current



Package Dimension



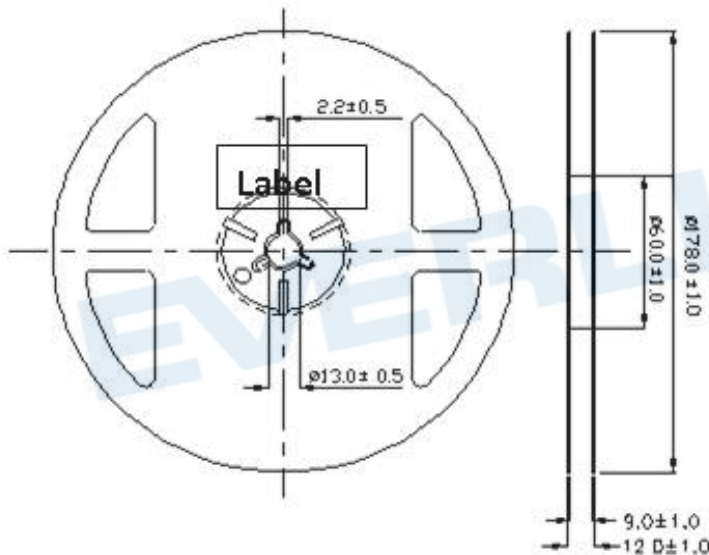
Note: Tolerances unless mentioned ± 0.1 mm. Unit = mm

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

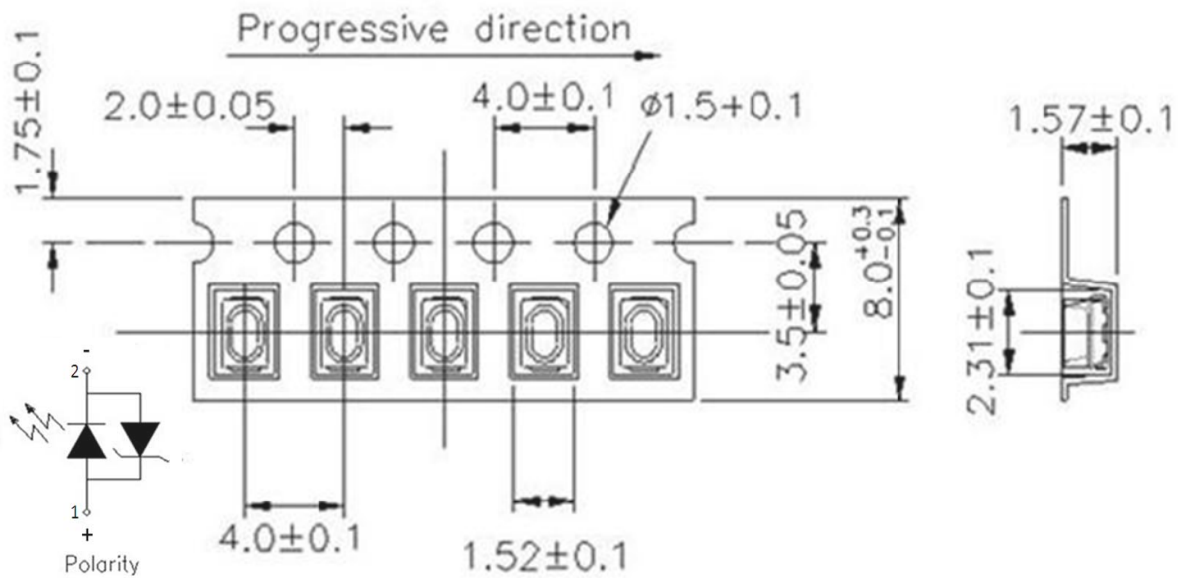


Reel Dimensions



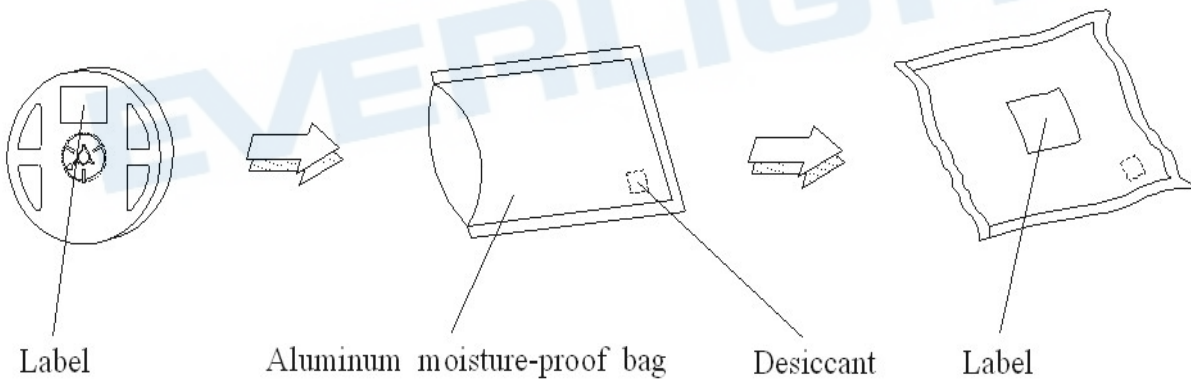
Note: Tolerances unless mentioned ± 0.1 mm. Unit = mm

Carrier Tape Dimensions: Loaded Quantity 2000 pcs Per Reel



- Note:
1. Tolerances unless mentioned ± 0.1 mm. Unit = mm
 2. Minimum packing amount is 250/500/1000/2000 pcs per reel

Moisture Resistant Packing Process

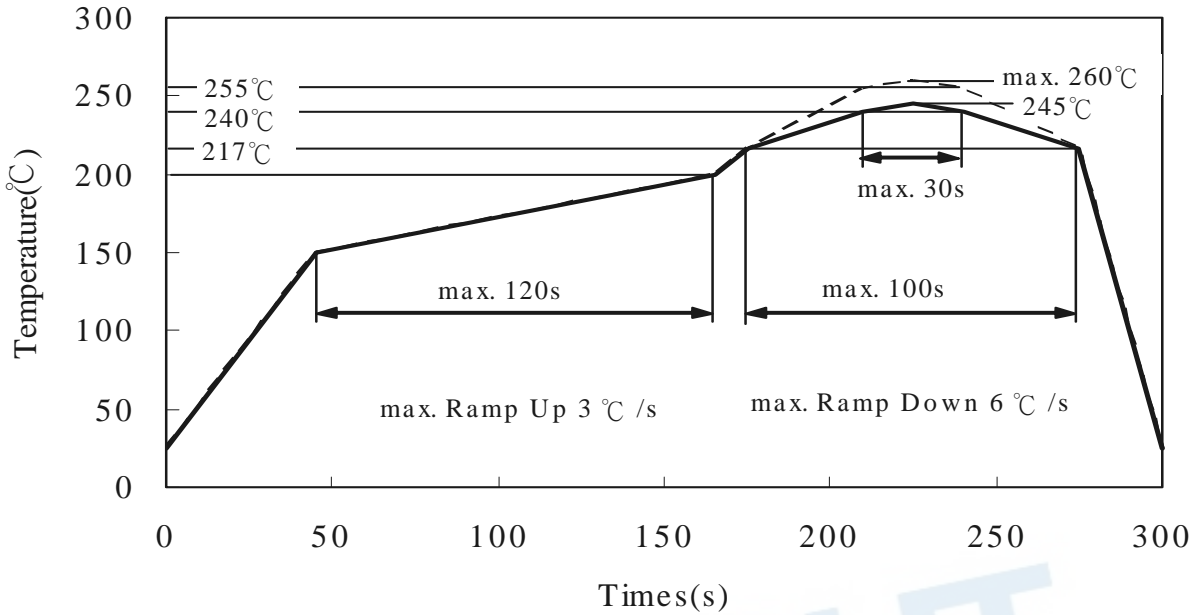


Note: Tolerances unless mentioned ± 0.1 mm. Unit = mm

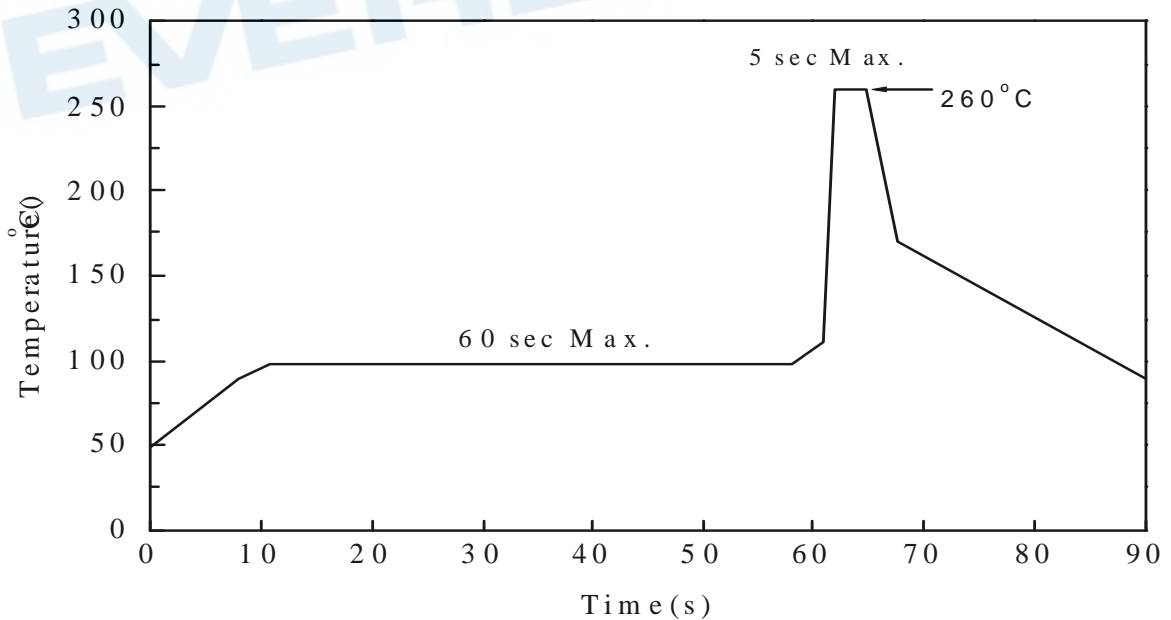
Precautions for Use

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

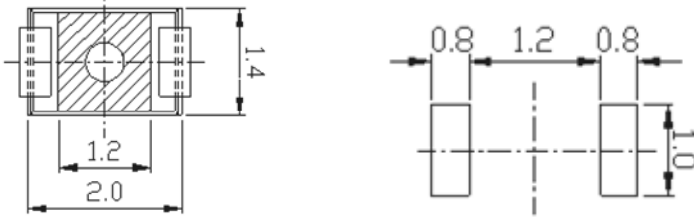
a. IR reflow



b. Wave soldering reflow



(B) Recommend soldering pad



Note: Tolerances unless mentioned ± 0.1 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.

Sulfur Test Criteria

Products	Failure Criteria
Exterior Lighting products	Luminous Flux +/-20%, forward voltage +/-10%, color coordinates x,y +/-0.01, color wavelength +/- 2 nm Visual defect issue following Everlight's inspection criteria
Interior lighting products	Luminous Flux +/-30% or +/-50% for some application, forward voltage +/-10%, color coordinates x,y +/-0.02, color wavelength +/- 2 nm Visual defect issue following Everlight's inspection criteria

H2S test	Grade A0	Grade A1	Grade B0	Grade B1
Class A	Pass ΔIV , $\Delta Color$, ΔVF criteria No Corrosion	Pass ΔIV , $\Delta Color$, ΔVF criteria Corrosion without the impact on reliability and lifetime		
Class B			Pass ΔIV , $\Delta Color$, ΔVF criteria No Corrosion	Pass ΔIV , $\Delta Color$, ΔVF criteria Corrosion without the impact on reliability and lifetime

Condition for H2S and FMG	Description	
	H2S	FMG
Class A	15 ppm with duration 336 h at 40 °C and 90% RH	Duration 500 h at 25 °C and 75% RH. H2S concentration: 10ppb SO2 concentration: 200ppb NO2 concentration: 200ppb Cl2 concentration: 10ppb
Class B	10 ppm with duration 500 h at 25 °C and 75% RH	

Grade for H2S Test	Description
0	No Corrosion
1	Corrosion without the impact on reliability and lifetime

单击下面可查看定价，库存，交付和生命周期等信息

[>>Everlight \(亿光\)](#)