

SMD ■ B

G42-51-Y2C-C0S2T2B0E-3T-AM(EE)



Features

- RoHS compliant
- Chip LED package.
- Colorless clear resin.
- Wide viewing angle X90° Y60°
- Precondition: Bases on JEDEC J-STD 020D Level 3.
- Automotive reflow profile (IR reflow or wave soldering)
- Compliance with EU REACH
- Compliance Halogen Free .(Br <900 ppm ,Cl <900 ppm , Br+Cl < 1500 ppm).

Applications

- Automotive backlighting or indicator: Dashboard, switch, 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.
- Optical indicator.
- General applications.

Device Selection Guide

Chip Materials	Emitted Color	Resin Color
AlGaInP	Brilliant Yellow	Water Clear

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Reverse Voltage	V_R	12	V
Forward Current	$I_{F(MAX)}$	30	mA
Power Dissipation	P_d	71.0	mW
Junction Temperature	T_j	125	°C
Operating Temperature	T_{opr}	-40 ~ +100	°C
Storage Temperature	T_{stg}	-40 ~ +110	°C
Thermal Resistance	$R_{th\ J-A}$	600	K/W
	$R_{th\ J-S}$	400	K/W
ESD	ESD_{HBM}	2000	V
Soldering Temperature	T_{sol}	Max 260 °C	

Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	Iv	224	-----	450	mcd	
Viewing Angle	2θ _{1/2}	-----	90/60	-----	deg	
Peak Wavelength	λ _p	----	591	----	nm	
Dominant Wavelength	λ _d	585.5	----	591.5	nm	I _F =20mA
Spectrum Radiation Bandwidth	Δλ	----	15	----	nm	
Forward Voltage	V _F	1.75	-----	2.35	V	
Reverse Current	I _R	-----	-----	10	μA	V _R =12V

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
S2	224	280	mcd	I _F =20mA
T1	280	355		
T2	355	450		

Bin Range Of Dom. Wavelength

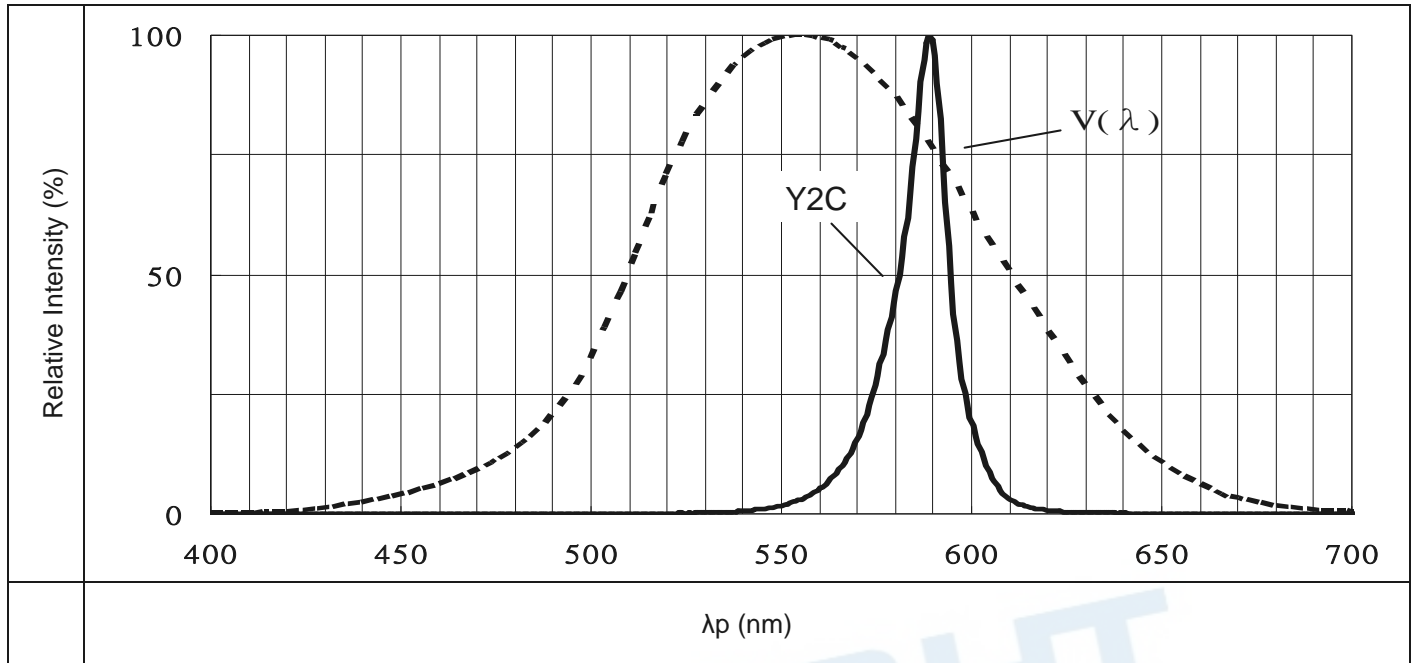
Bin Code	Min.	Max.	Unit	Condition
D3	585.5	588.5	nm	I _F =20mA
D4	588.5	591.5		

- Note:
- 1.Tolerance of Luminous Intensity: ±11%
 - 2.Tolerance of Dominant Wavelength ±1nm



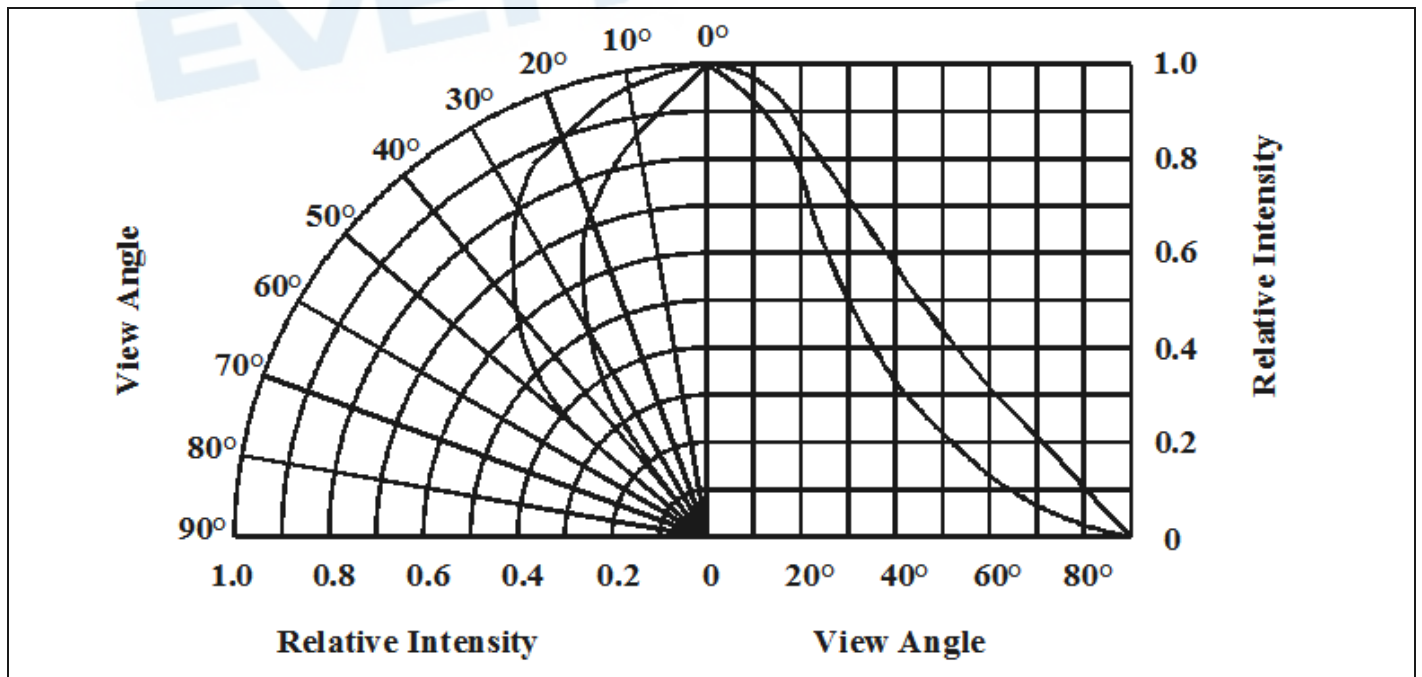
Typical Electro-Optical Characteristics Curves

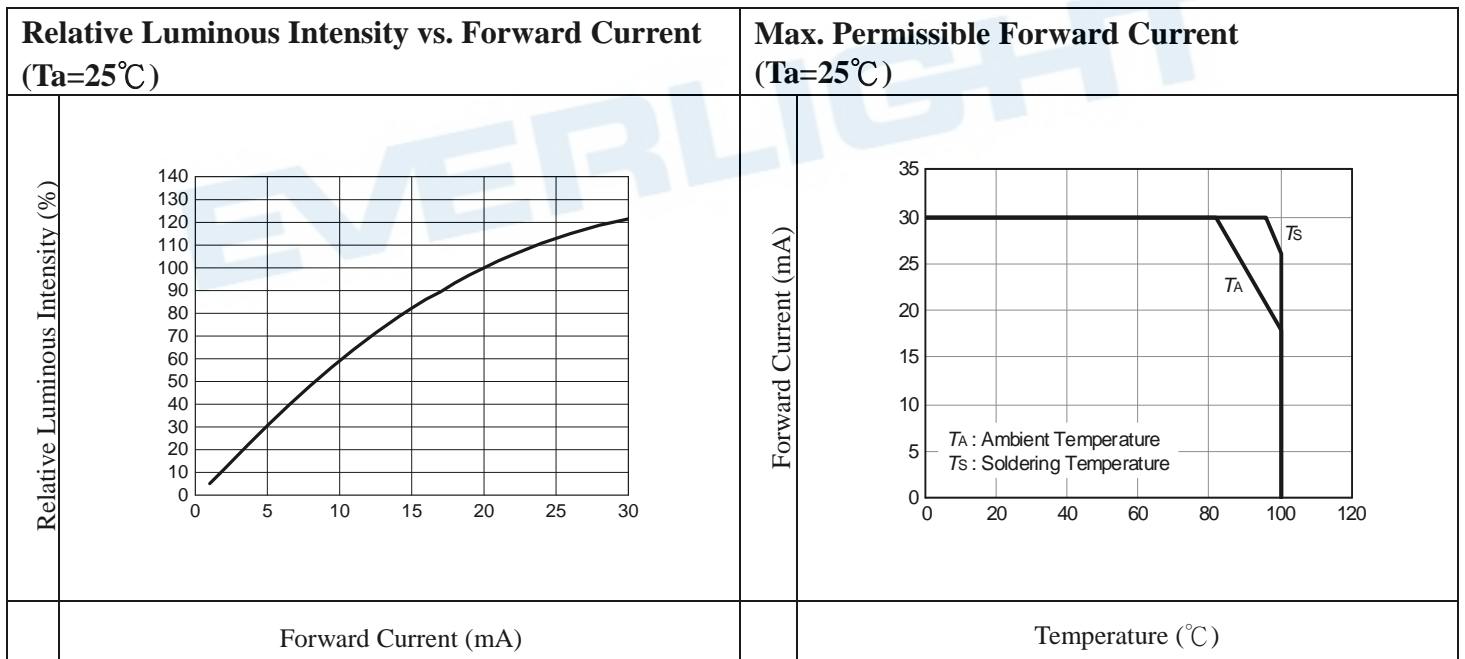
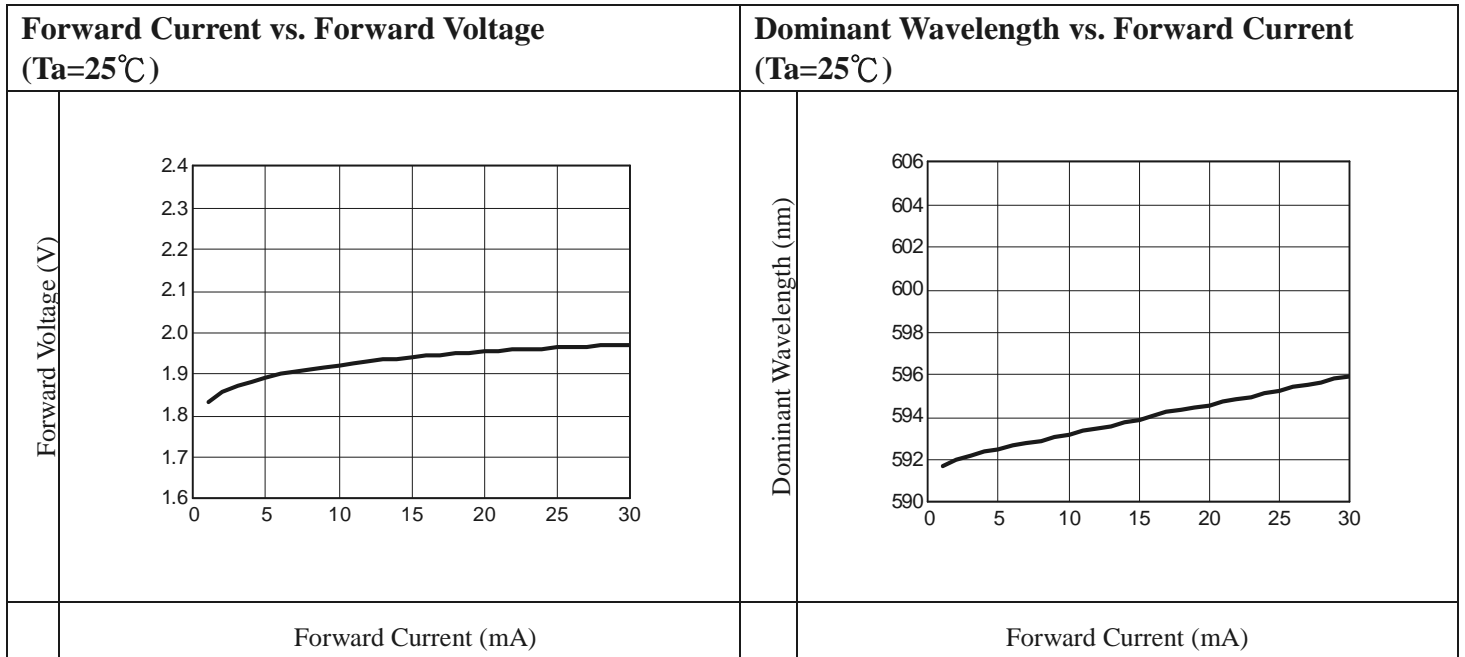
Typical Curve of Spectral Distribution



Note: $V(\lambda)$ =Standard eye response curve; $I_F = 20\text{mA}$

Diagram Characteristics of Radiation

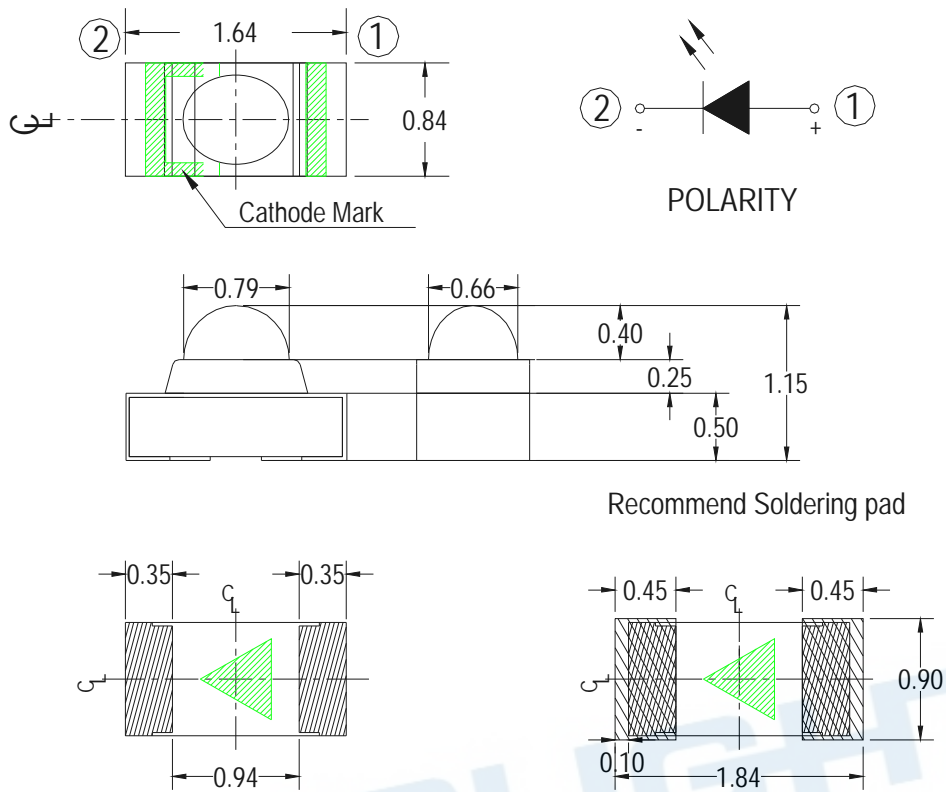




Relative Luminous Intensity vs. Junction Temperature		Relative Forward Voltage vs. Junction Temperature	
Relative Luminous Intensity (%)		Relative Forward Voltage (%)	
	Junction Temperature (°C)		Junction Temperature (°C)
Note: $f(T_j) = (I_v / I_v(25^\circ\text{C})) * 100$; $I_F = 20\text{mA}$		Note: $\Delta V_F = V_F - V_F(25^\circ\text{C}) = f(T_j)$; $I_F = 20\text{mA}$	

EVERLIGHT

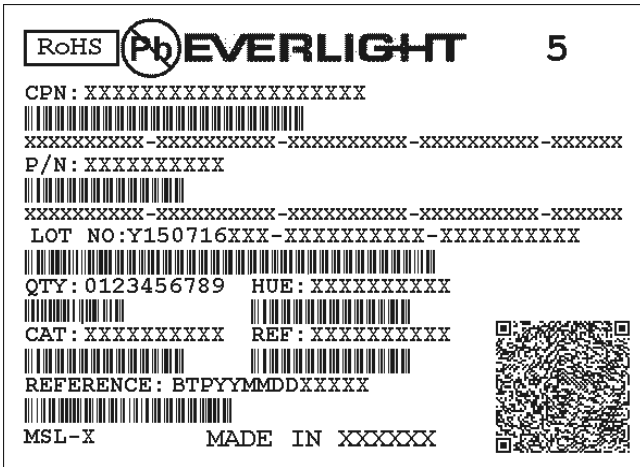
Package Dimension



Suggested pad dimension is just for reference only.
 Please modify the pad dimension based on individual need.

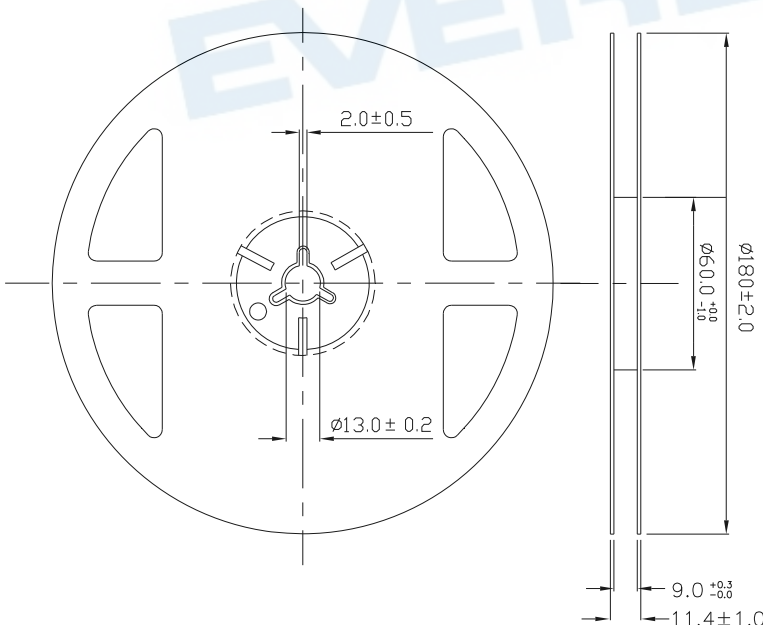
Note: Tolerances unless mentioned ± 0.1 mm. Unit = mm

Label Explanation



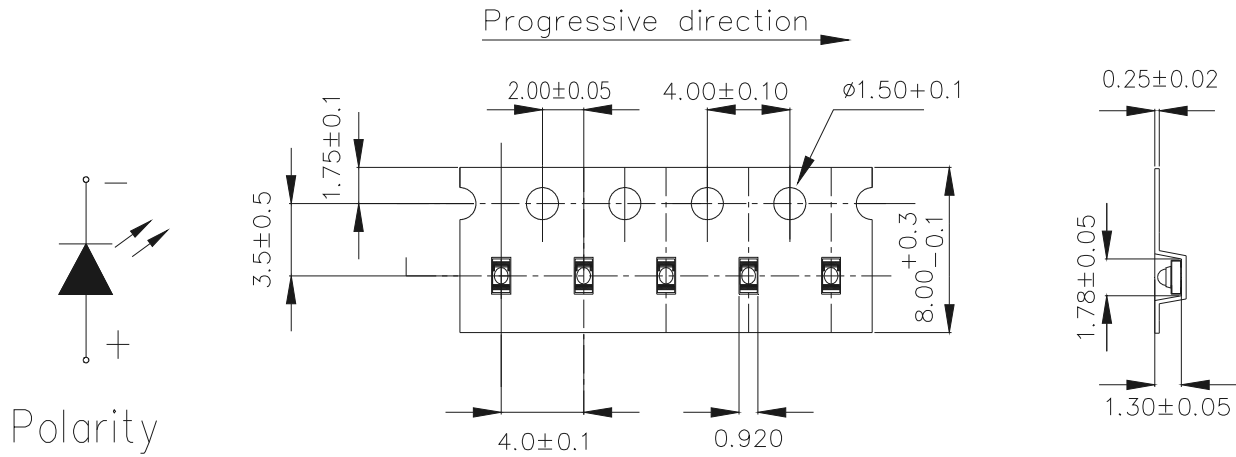
- CPN: Customer's Product Number
- P/N: Product Number
- QTY: Packing Quantity
- CAT: Luminous Intensity Rank
- HUE: Chromaticity Coordinates & Dom. Wavelength Rank
- REF: Forward Voltage Rank
- LOT No: Lot Number

Reel Dimensions

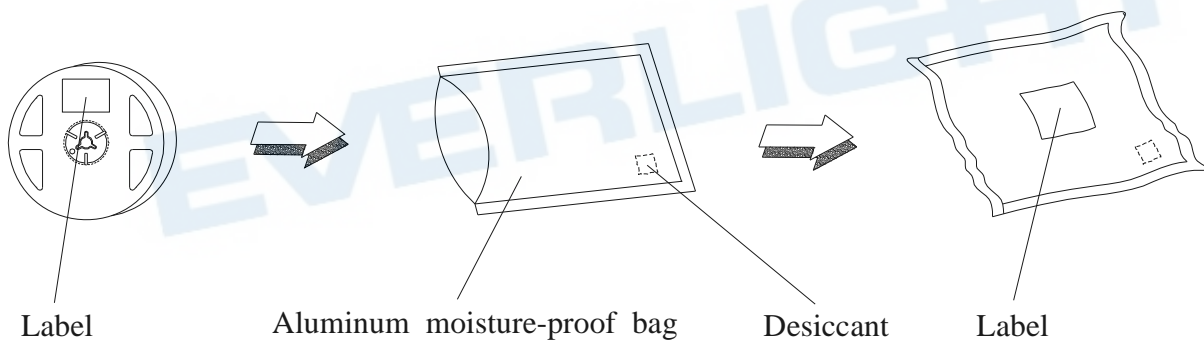


Note: The tolerances unless mentioned is $\pm 0.1\text{mm}$,Unit = mm

Carrier Tape Dimensions: Loaded quantity 3000 PCS per reel



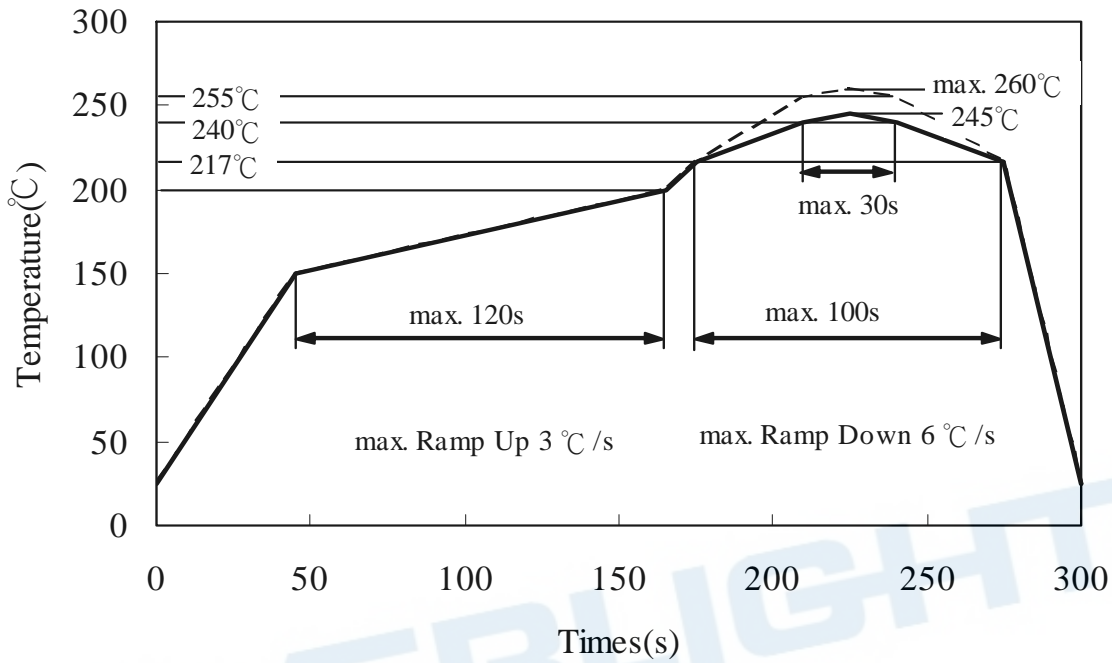
Moisture Resistant Packaging



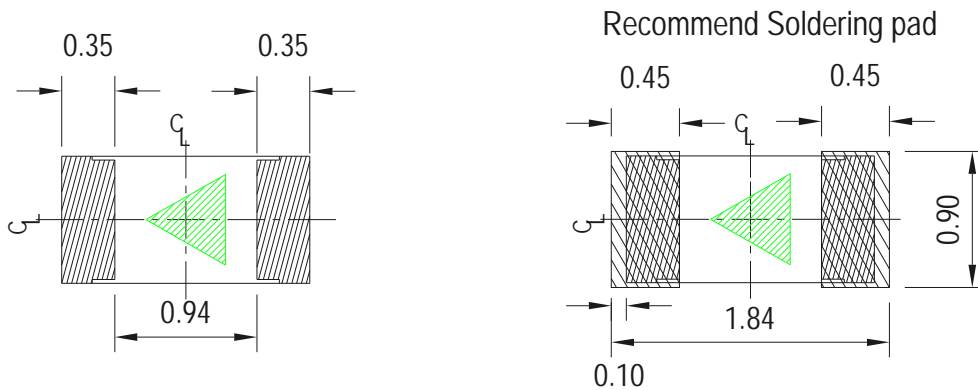
Precautions for Use

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

a. IR reflow



(B) Recommend soldering pad



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.

Revision History:

Rev.	Modified date	File modified contents
1	2017/12/26	New Spec
2	2018/01/12	Fix the Iv & Wd range spec
3.	2008/03/16	Modify product name