DATASHEET

Full Color Side View LEDs
C3005EDWN3A3-S817-2G(TS)

Features

- Inner reflector and white package.
- Built in 3 LED chips.
- Colorless clear resin
- Wide viewing angle 120 º
- Ideal for backlight and light pipe application.
- White SMT package.
- Soldering methods: IR reflow soldering.
- Precondition: Bases on JEDEC J-STD 020D Level 3
- Pb-free.
- The product itself will remain within RoHS compliant version.
- Compliance with EU REACH
- Compliance Halogen Free .(Br<900ppm,Cl<900ppm,Br+Cl<1500ppm)

Descriptions

- The C3005 series is available in soft red, green and blue. Due to the package design, the LED has wide viewing angle and optimized light coupling by inter reflector. This feature makes the ideal for light pipe application. The low current requirement makes this device ideal for portable equipment or any other application where power is at a premium.

Applications

- Telecommunication: indicator and backlighting in telephone and fax.
- Flat backlight for LCD's, switches and symbols.
- Light pipe application.
- General use.

Device Selection Guide

Chip Materials	Emitted Color	Resin Color
AlGaInP	Brilliant Red	Diffused
InGaN	Brilliant Green	Diffused
InGaN	Brilliant Blue	Diffused

Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol		Rating	Unit
Forward Current	I_F	R	20	mA
		G	30	
		B	30	
Peak Forward Current (Duty 1/10 @1KHz)	I_{FP}	R	40	mA
		G	60	
		B	60	
Power Dissipation	Pd	R	54	mW
		G	105	
		B	105	
Junction Temperature	T_j		105	℃
Operating Temperature	T_{opr}		-40 ~ +85	℃
Storage Temperature	Tstg		-40 ~ +90	℃
ESD	ESD_{HBM}	R	2000	V
		G	1000	
		B	1000	
Soldering Temperature	T_{sol}		Reflow Soldering : 260 ℃ for 10 sec.	

Electro-Optical Characteristics (Ta=25℃)

Parameter	Symbol		Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	Iv	R	560	-----	1120	mcd	R:I_F=20mA G:I_F=20mA B:I_F=20mA
		G	1120	-----	2240		
		B	250	-----	450		
Viewing Angle	$2\theta_{1/2}$		-----	120	-----	deg	R:I_F=20mA G:I_F=20mA B:I_F=20mA
Peak Wavelength	λp	R	-----	630	-----	nm	R:I_F=20mA G:I_F=20mA B:I_F=20mA
		G	-----	520	-----		
		B	-----	465	-----		
Dominant Wavelength	λd	R	617	-----	629	nm	R:I_F=20mA G:I_F=20mA B:I_F=20mA
		G	517	-----	530		
		B	465	-----	475		
Spectrum Radiation Bandwidth	Δλ	R	-----	18	-----	nm	R:I_F=20mA G:I_F=20mA B:I_F=20mA
		G	-----	29	-----		
		B	-----	20	-----		
Forward Voltage	V_F	R	1.80	-----	2.70	V	R:I_F=20mA G:I_F=20mA B:I_F=20mA
		G	2.60	-----	3.50		
		B	2.60	-----	3.50		
Reverse Current	I_R		-----	-----	10	μA	V_R=5V

Notes:
1. Tolerance of Luminous Intensity: ±11%
2. Tolerance of Dominant Wavelength: ±1nm
3. Tolerance of Chromaticity Coordinates: ±0.01
4. Tolerance of Forward Voltage: ±0.1V
5. All reliability item are tested under good thermal management. Dynamic reliability are tested at 20mA.
6. LED components are not supposed to be reverse operated.

Bin Range of Luminous Intensity

Chip	Bin Code	Min.	Max.	Unit	Condition
R	U	560	710	mcd	R:I_F=20mA G:I_F=20mA B:I_F=20mA
	V	710	1120		
G	A	1120	1400		
	B	1400	1800		
	C	1800	2240		
B	T1	250	355		
	T2	355	450		

Note:
Tolerance of Luminous Intensity: ±11%

Bin Range of Dominant Wavelength

Chip	Bin Code	Min.	Max.	Unit	Condition
R	E4	617	621	nm	R:I_F=20mA G:I_F=20mA B:I_F=20mA
	E5	621	625		
	E6	625	629		
G	K1	517	522		
	K2	522	530		
B	X	465	470		
	Y	470	475		

Note:
Tolerance of Dominant Wavelength: ±1nm

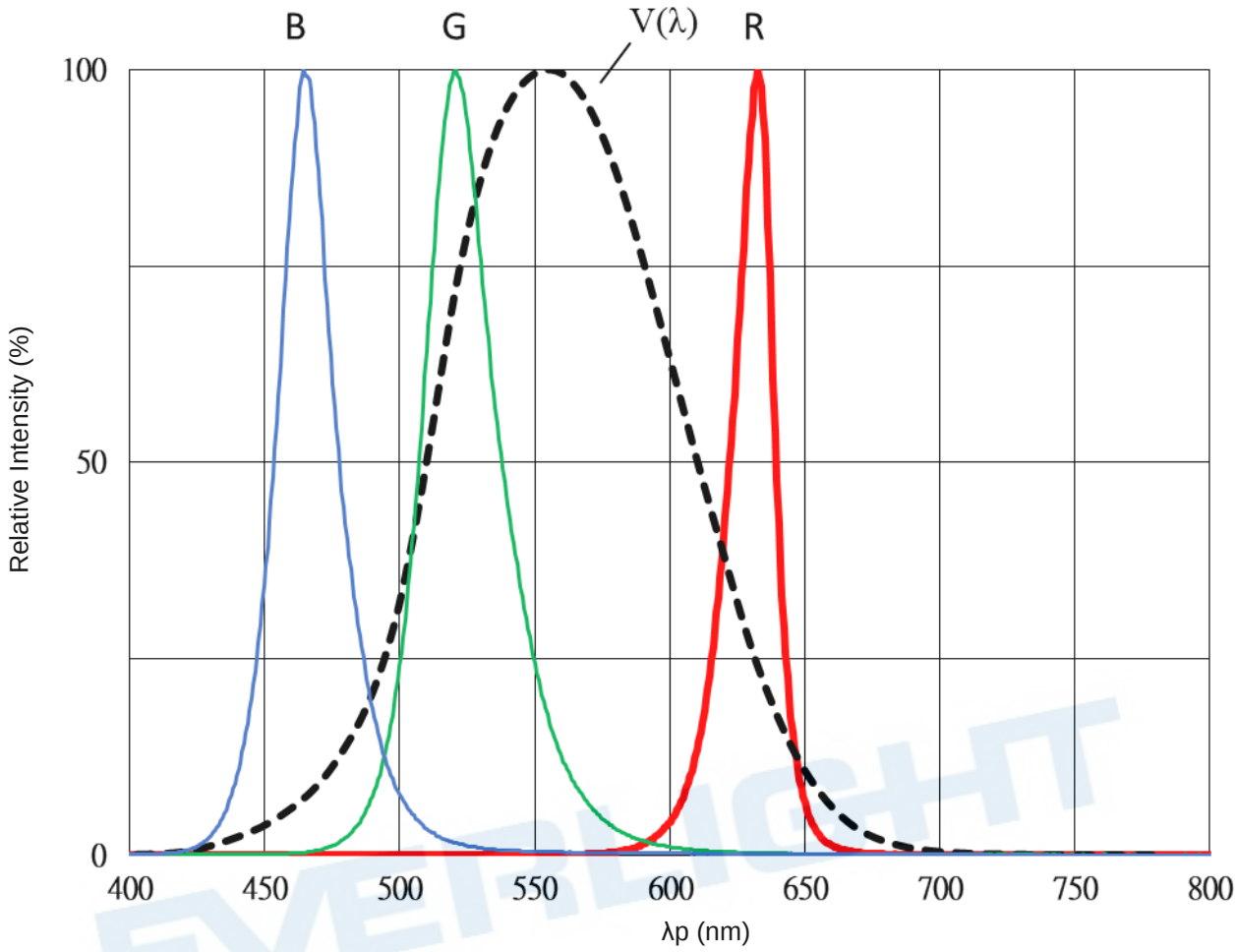
Bin Range of Forward Voltage

Chip	Bin Code	Min.	Max.	Unit	Condition
R	0	1.8	2.1	V	R:I_F=20mA G:I_F=20mA B:I_F=20mA
	1	2.1	2.4		
	2	2.4	2.7		
G	10	2.6	2.9		
	11	2.9	3.2		
	12	3.2	3.5		
B	7	2.6	2.9		
	8	2.9	3.2		
	9	3.2	3.5		

Note:
Tolerance of Forward Voltage: ±0.1V

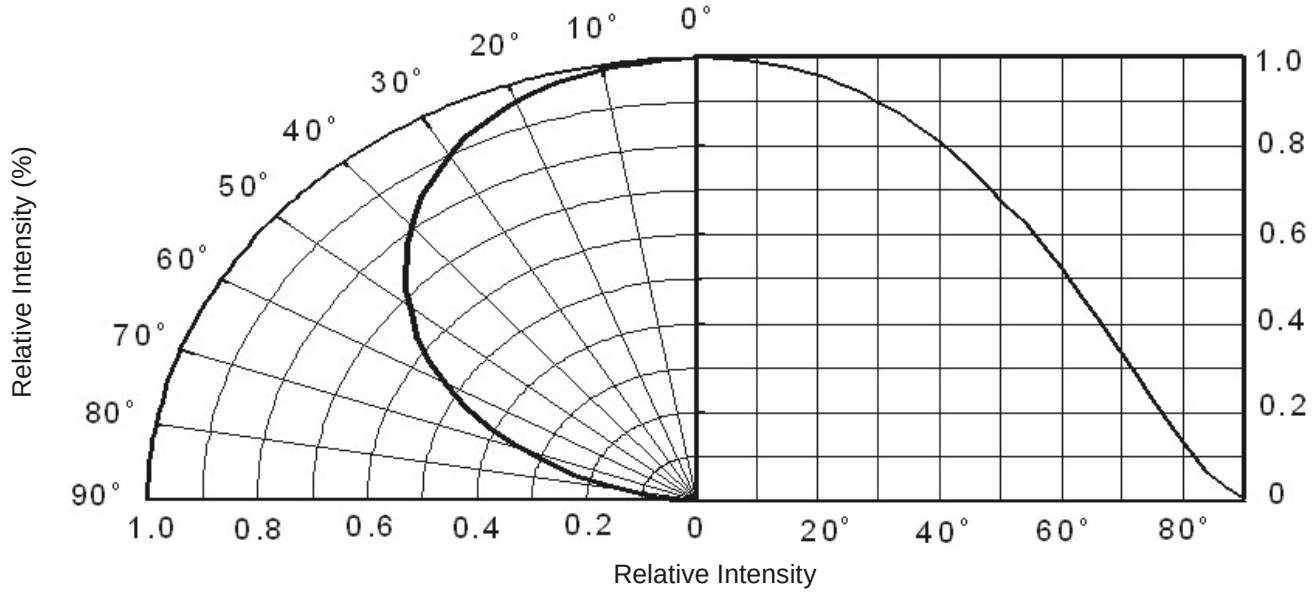
Typical Electro-Optical Characteristics Curves

Typical Curve of Spectral Distribution



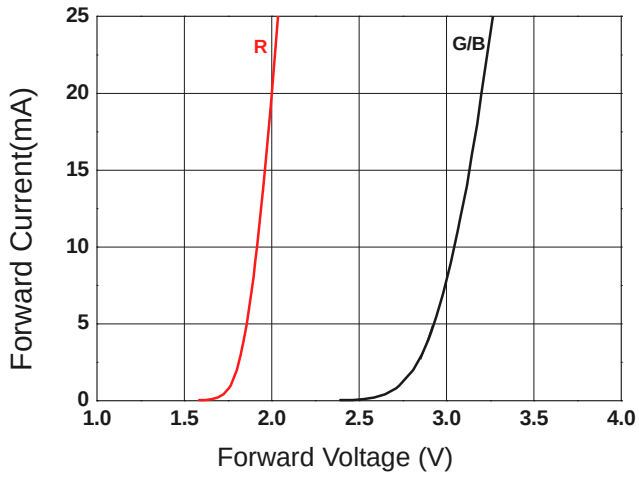
Note: V(λ)=Standard eye response curve; I_F =20mA

Diagram Characteristics of Radiation

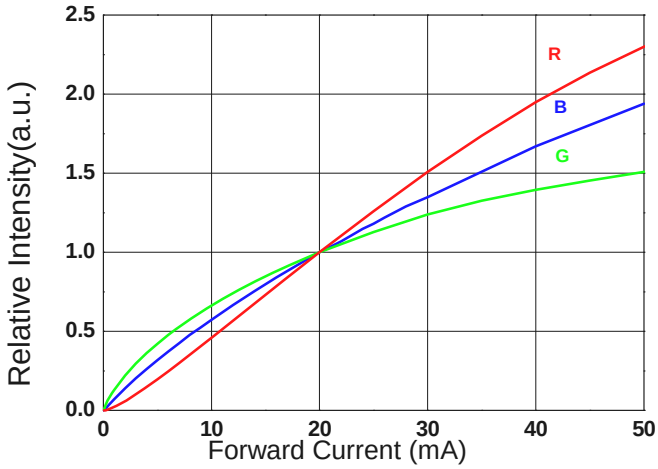


Typical Electro-Optical Characteristics Curves

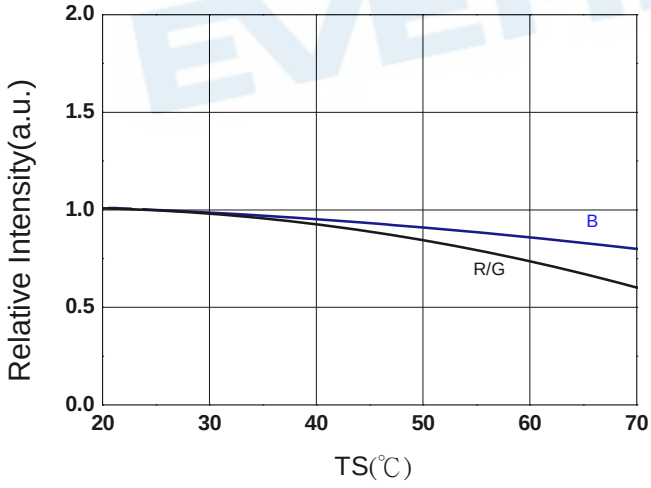
Forward Current vs. Forward Voltage (Ta=25℃)



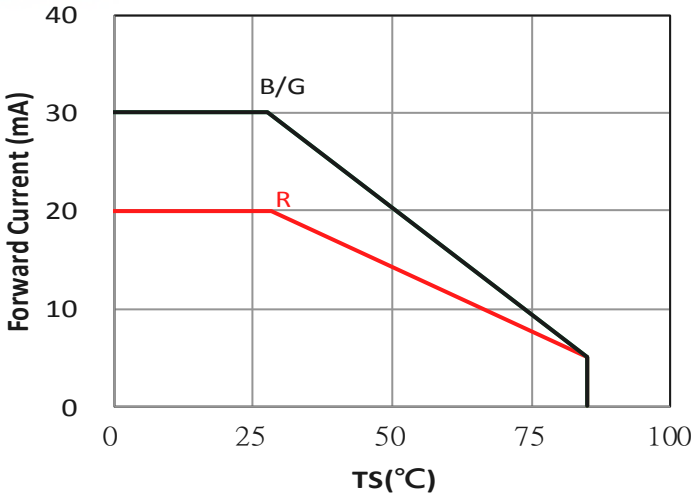
Relative Intensity vs. Forward Current (Ta=25℃)



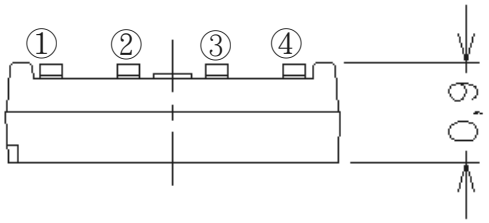
Relative Intensity vs. Ambient Temp.

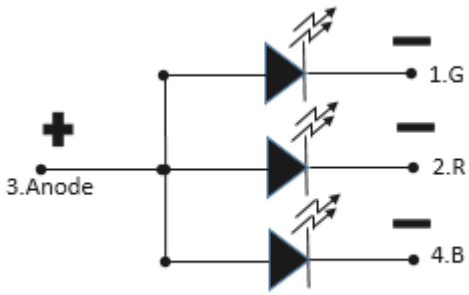


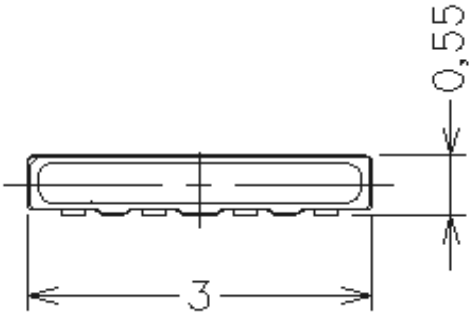
Forward Current vs. Ambient Temp.

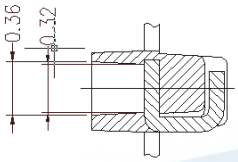


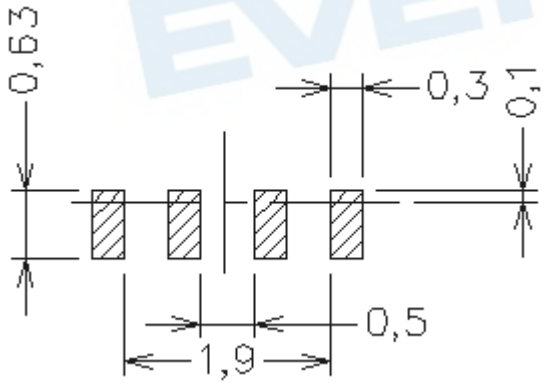
Package Dimension

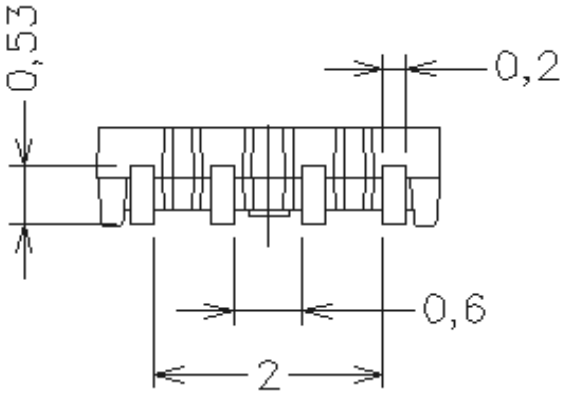








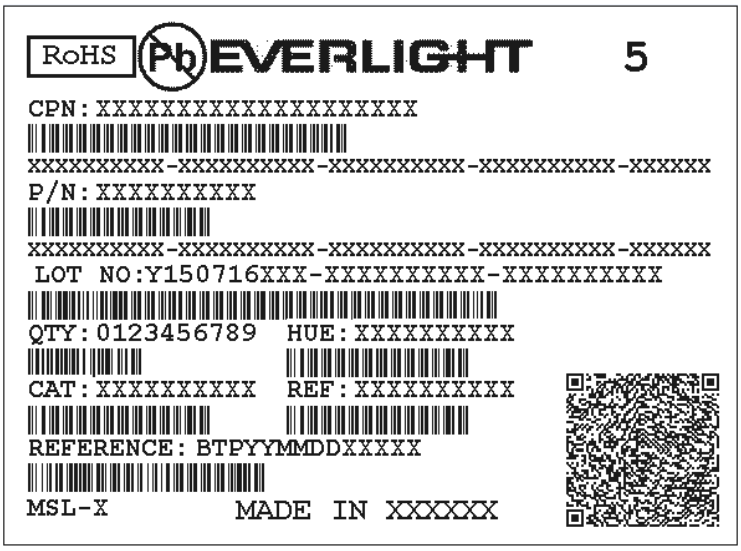




Note:
1. Tolerances unless mentioned ±0.1mm. Unit = mm
2. Suggested pad dimension is just reference only. Please modify the pad dimension based on individual need.

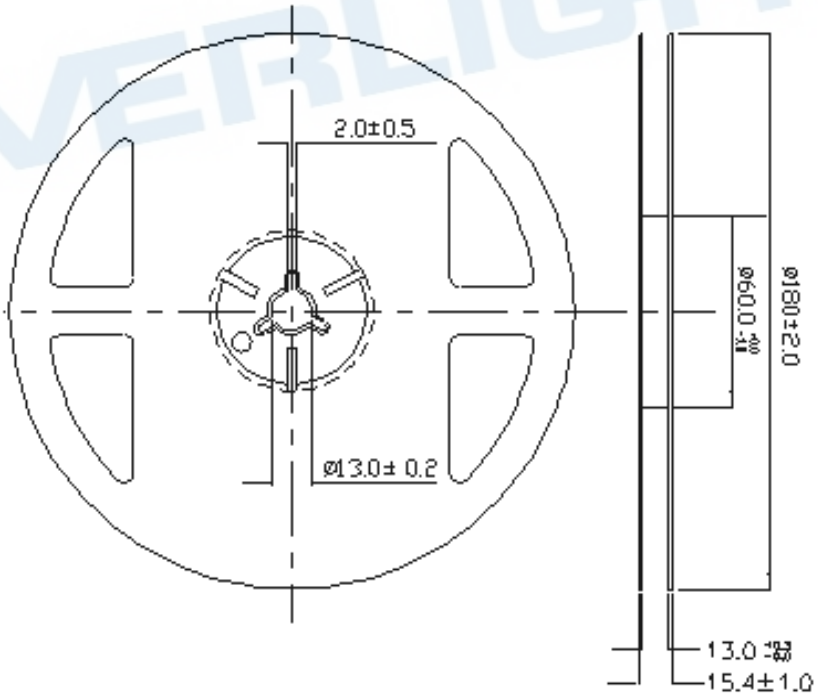
Moisture Resistant Packing Materials

Label Explanation

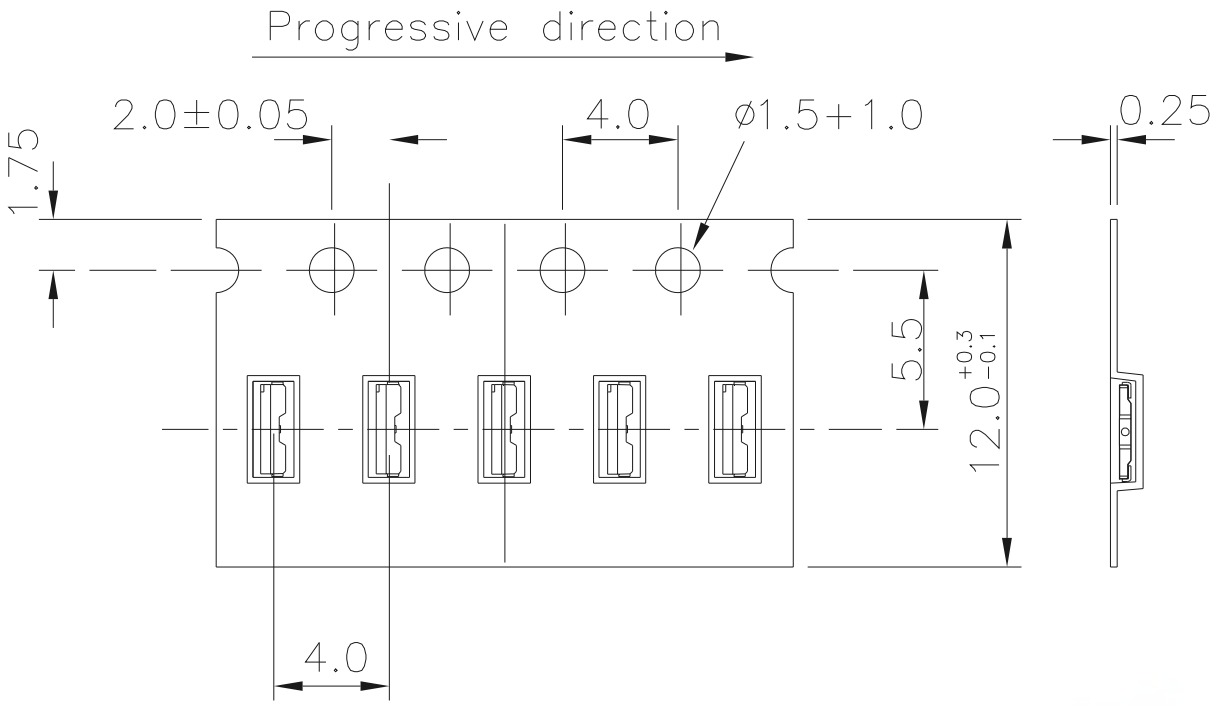


- CPN: Customer's Product Number
- P/N: Product Number
- QTY: Packing Quantity
- CAT: Luminous Intensity Rank
- HUE: Dom. Wavelength Rank
- REF: Forward Voltage Rank
- LOT No: Lot Number

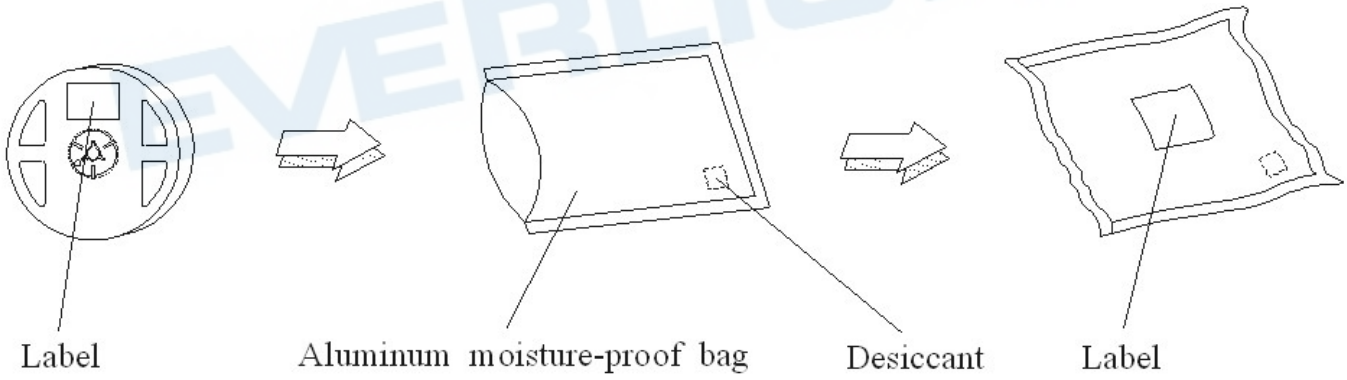
Reel Dimensions



Carrier Tape Dimensions: Loaded Quantity 2000 pcs Per Reel

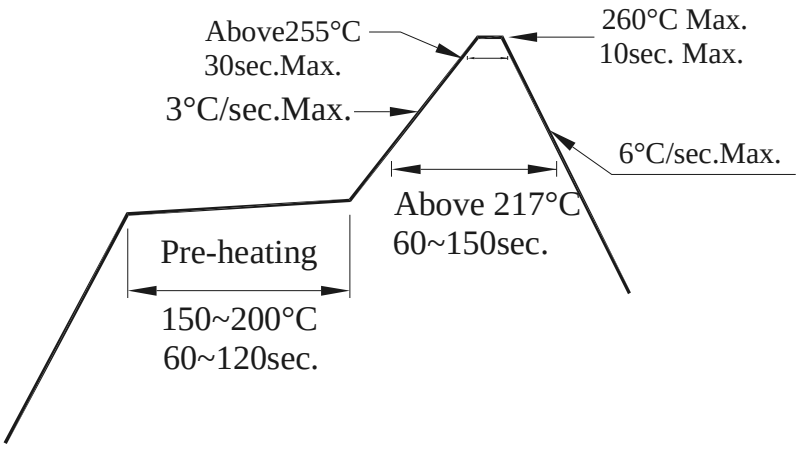


Moisture Resistant Packing Process

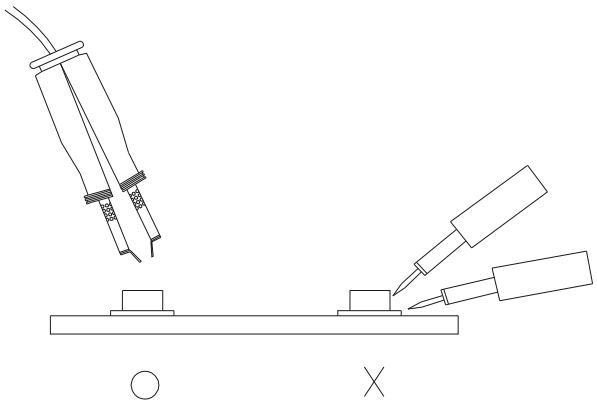


Precautions for Use

1. Over-current-proof
   1.1 Customer must apply resistors for protection, otherwise slight voltage shift will cause big current change (Burn out will happen).



2. Storage
   2.1 Moisture proof bag should only be opened immediately prior to usage.
   2.2 Environment should be less than 30℃ and 60% RH when moisture proof bag is opened.
   2.3 After opening the package MSL Conditions stated on page 1 of this spec should not be exceeded.
   2.4 If the moisture sensitivity card indicates higher than acceptable moisture, the component should be baked at min. 60deg +/-5deg for 24 hours.
3. Soldering Condition
   3.1 Pb-free solder temperature profile
   3.2 Reflow soldering should not be done more than two times.
   3.3 When soldering, do not put stress on the LEDs during heating.
   3.4 After soldering, do not warp the circuit board.
4. Soldering Iron
   Each terminal is to go to the tip of soldering iron temperature less than 350℃ for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of the hand solder.
5. 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 the LEDs will or will not be damaged by repairing.



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.

DISCLAIMER

1. EVERLIGHT reserves the right(s) on the adjustment of product material mix for the specification.
2. The product meets EVERLIGHT published specification for a period of twelve (12) months from date of shipment.
3. The graphs shown in this datasheet are representing typical data only and do not show guaranteed values.
4. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. EVERLIGHT assumes no responsibility for any damage resulting from the use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
5. These specification sheets include materials protected under copyright of EVERLIGHT. Reproduction in any form is prohibited without obtaining EVERLIGHT's prior consent.
6. This product is not intended to be used for military, aircraft, automotive, medical, life sustaining or life saving applications or any other application which can result in human injury or death. Please contact authorized Everlight sales agent for special application request.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Standard LEDs - SMD ***category:***

Click to view products by Everlight ***manufacturer:***

Other Similar products are found below :

LTST-C190KYKT LTST-C19GD2WT LTST-N683GBEW LTW-170ZDC LTW-M140SZS40 LTW-M140ZVS 598-8110-100F 91-21SUBCS400-A6TR7 AAAF5060QBFSEEZGS APT1608QGW 99-213/R6C-AR2T1B/2C SML-LX0606SISUGC/A SML-LXR851SIUPGUBC LT1ED53A AM27ZGC03 APFA3010SURKCGKQBDC APHK1608VGCA APT2012QGW LTST-008BGEW LTW-010DCG LTW-020ZDCG LTW-21TS5 LTW-220DS5 LO T67F-V1AB-24-1 598-8330-117F CMDA20AYAA7D1S 95-21SURCS530-A3TR10 HSMQ-C177 598-8040-100F 598-8070-100F 598-8140-100F 598-8610-200F SML-LXL1209SYC/ATR CMD91-21VRC/TR7 SML-512PWT86A SMF-2432GYC-TR EASV3015RGYA0 LTST-C190KFKT-5A LTST-C194TBKT-5A CLX6E-FKC-CH1M1D1BB7C3D3 SML-LXL0805USBC-TR SML-LX2835SYSUGCTR LTW-M670ZVS-M5 APA2106ZGC/G CLMXB-FKA-CbcfghjnpACBB79463 VFA1101W-5AY3B2-TR LCB P473-P2R2-3J7L-1-Z HSMR-C197 LW A67C-S2U1-FK0KM0 LW A673-P1S1-FK0PM0