EVERLIGHT AMERICAS

DATASHEET

EAPL3527BA6

Features

- P-LCC-3 package.
- High flux output.
- High current capability.
- White package.
- Optical indicator.
- Colorless clear window.
- Ideal for backlight and light pipe application.
- Inter reflector.
- Wide viewing angle.
- Suitable for automatic placement equipment.
- Suitable for reflow and wave solder processes.
- Available on tape and reel (8mm Tape).
- Pb-free.
- The product itself will remain within RoHS compliant version.

Descriptions

- The EAPL3527 series is available in soft orange, red and yellow. 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.

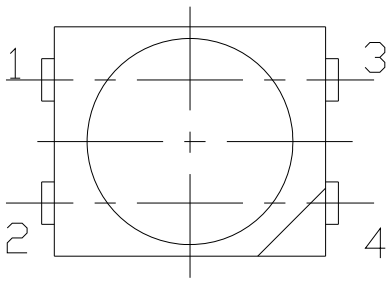
Applications

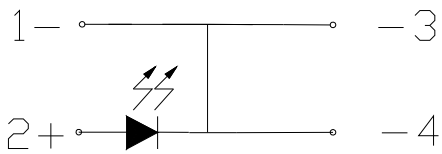
- Indicator and backlight for audio and video equipment.
- Indicator and backlight in office and family equipment.
- Flat backlight for LCD's, switches and symbols.
- Light pipe application.
- General use.

Device Selection Guide

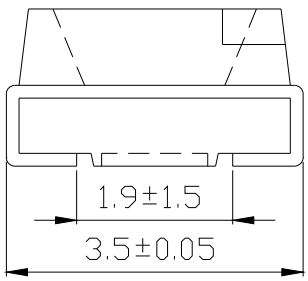
Chip Material	Emitted Color	Resin Color
InGaN	Blue	Water Clear

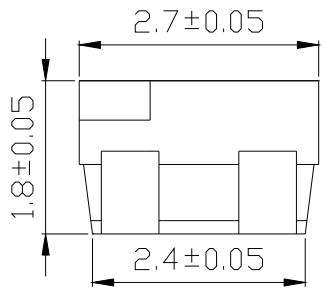
Package Dimensions

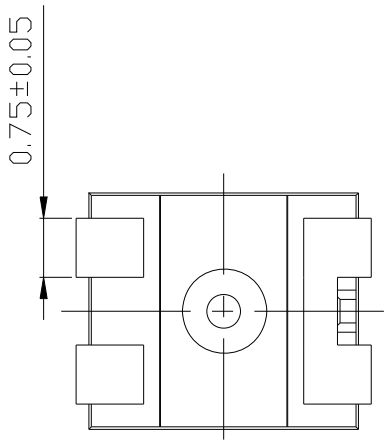




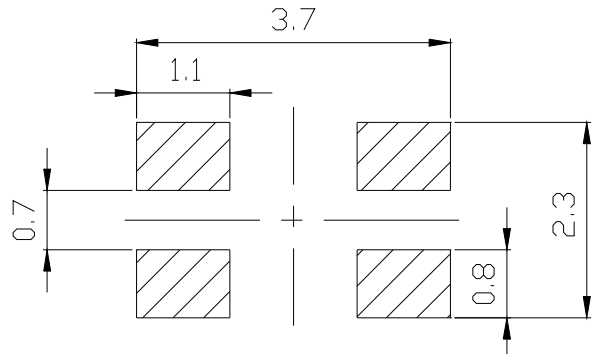
Polarity







Recommended solding pad design



Note: The tolerances unless mentioned is ±0.1mm ;Unit = mm

Absolute Maximum Ratings (T_A=25℃)

Parameter	Symbol	Rating	Unit
Reverse Voltage	V_R	5	V
Forward Current	I_F	30	mA
Peak Forward Current (Duty 1/10 @1KHz)	I_{FP}	100	mA
Power Dissipation	Pd	110	mW
Electrostatic Discharge(HBM)	ESD	150	V
Operating Temperature	T_{opr}	-40 ~ +85	℃
Storage Temperature	T_{stg}	-40 ~ +90	℃
Soldering Temperature	Tsol	Reflow Soldering : 260 ℃ for 10 sec. Hand Soldering : 350 ℃ for 3 sec.	

Electronic Optical Characteristics :

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I_V	285	-----	715	mcd	I_F=30mA
Viewing Angle	$2\theta_{1/2}$	-----	120	-----	deg	I_F=30mA
Peak Wavelength	λ_P	-----	468	-----	nm	I_F=30mA
Dominant Wavelength	λ_d	465	-----	475	nm	I_F=30mA
Spectrum Radiation Bandwidth	$\triangle\lambda$	-----	35	-----	nm	I_F=30mA
Forward Voltage	V_F	2.75	-----	3.95	V	I_F=30mA
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 Forward Voltage ±0.1V

Bin Range of Luminous Intensity

Bin	Min	Max	Unit	Condition
T1	285	360	mcd	I_F=30mA
T2	360	450		
U1	450	565		
U2	565	715		

Bin Range of Dominant Wavelengths

Group	Bin Code	Min.	Max.	Unit	Condition
Y	X	465	470	nm	I_F=30mA
	Y	470	475		

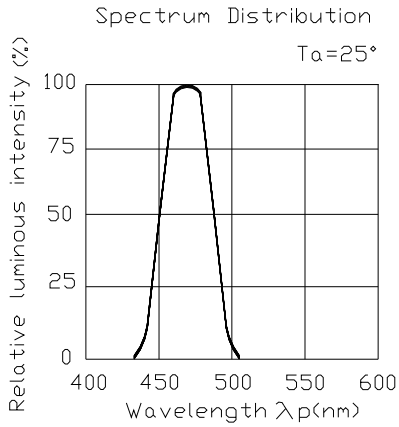
Bin Range of Forward Voltage

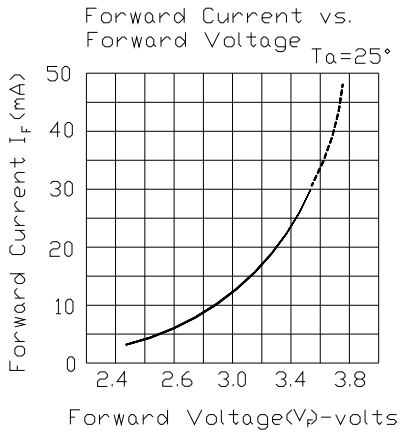
Group	Bin	Min	Max	Unit	Condition
M	5	2.75	3.05	V	I_F=30mA
	6	3.05	3.35		
	7	3.35	3.65		
	8	3.65	3.95		

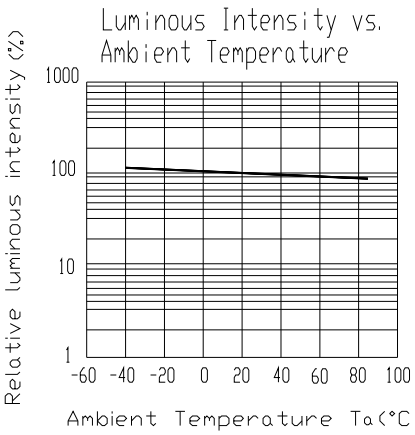
Notes:

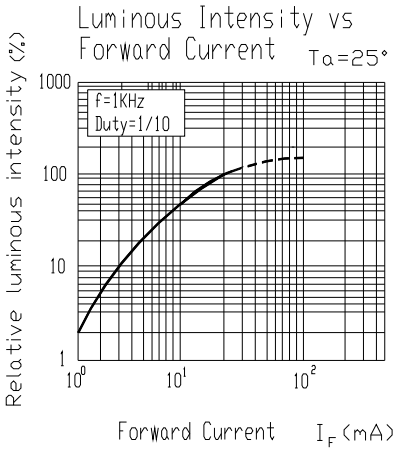
1.Tolerance of Luminous Intensity ±11%
2.Tolerance of Dominant Wavelength ±1nm
3.Tolerance of Forward Voltage ±0.1V

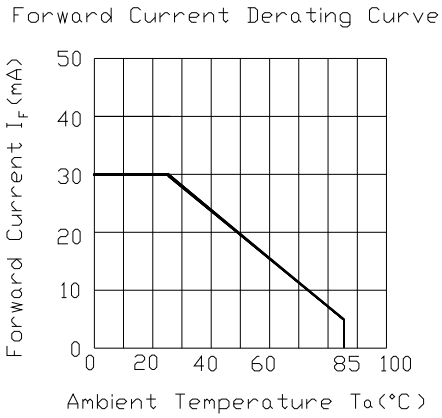
Typical Electro-Optical Characteristic Curves

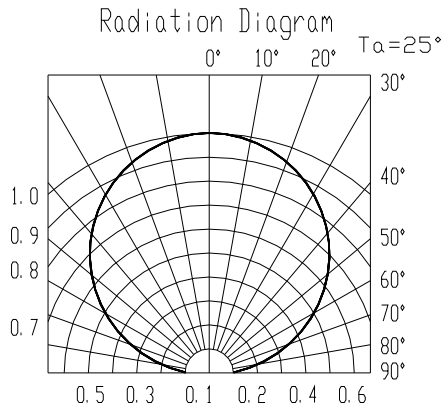










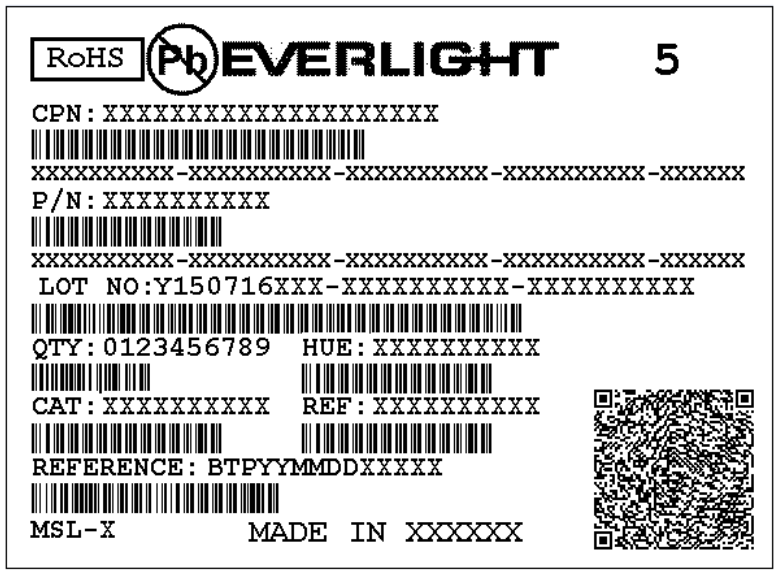


Label Explanation

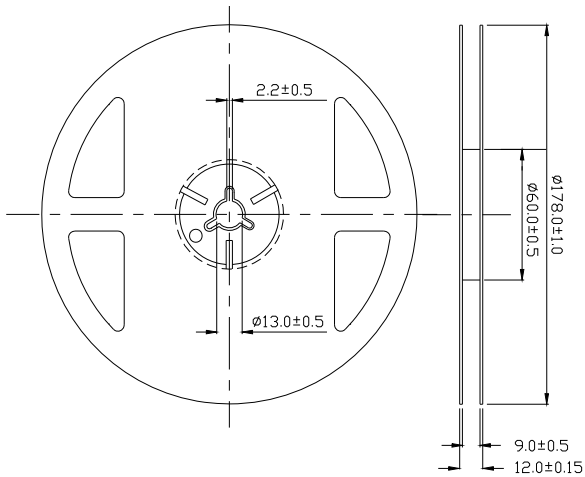
CAT: Luminous Intensity Rank

HUE: Dom. Wavelength Rank

REF: Forward Voltage Rank

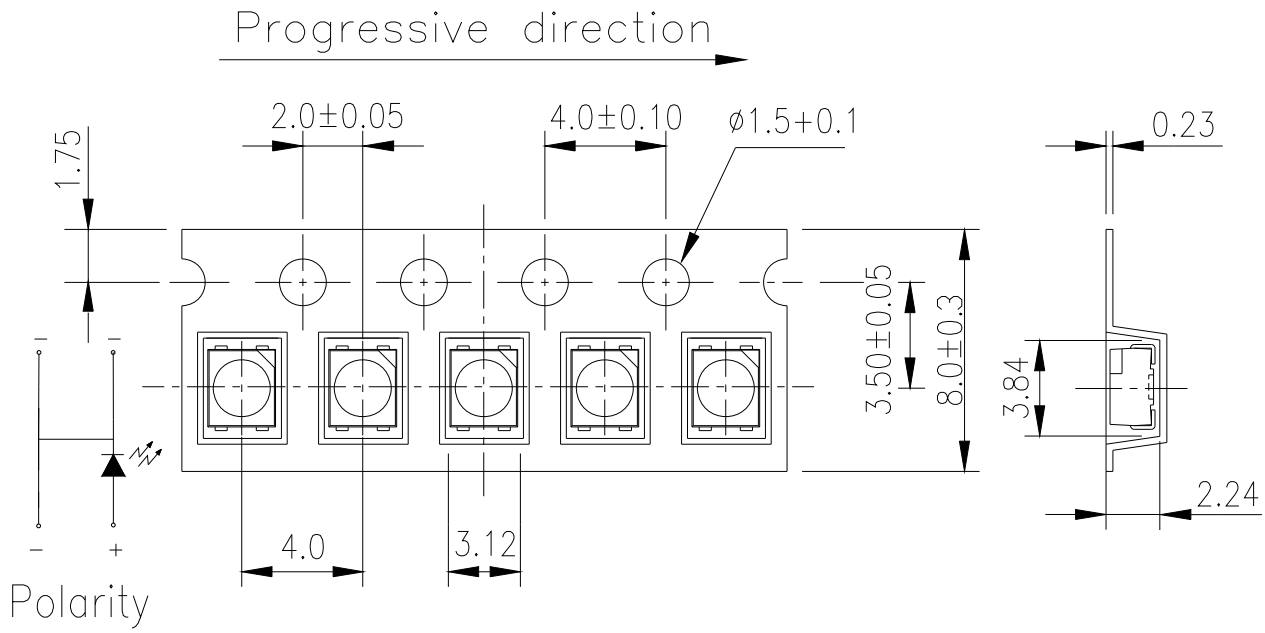


Reel Dimensions



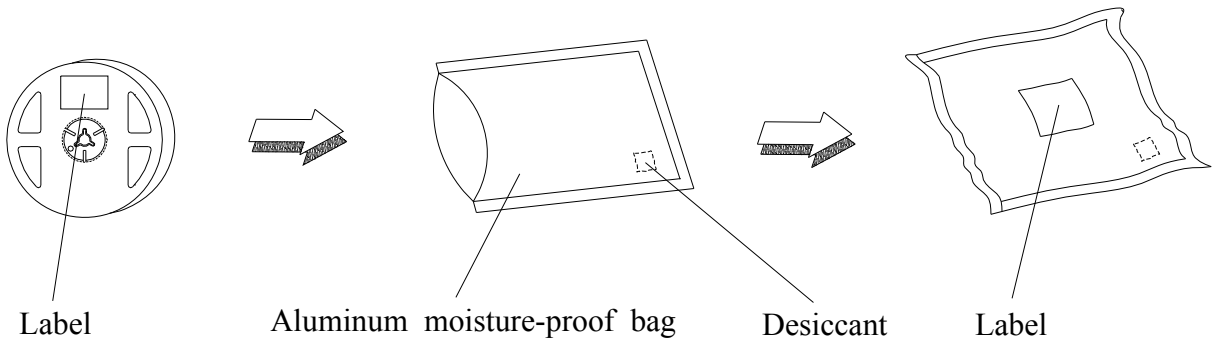
Note: The tolerances unless mentioned is ±0.1mm,Unit = mm

Carrier Tape Dimensions; Loaded Quantity 2000 pcs Per Reel



Note: Tolerances Unless Dimension ±0.1mm Unit = mm

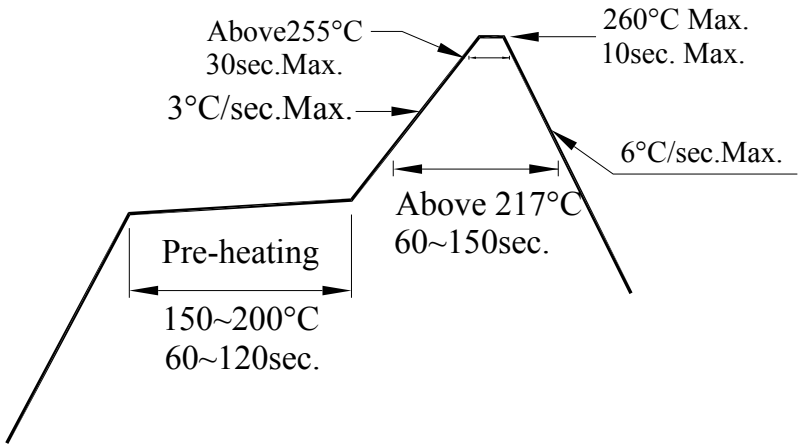
Moisture Resistant Packaging



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.
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