

Mini Top View LEDs EAPL3527GA5

PRELIMINARY



Features

- P-LCC-2 package.
- White package.
- Optical indicator.
- Colorless clear window.
- Wide viewing angle.
- Suitable for vapor-phase reflow.
- Computable with automatic placement equipment.
- Available on tape and reel (8mm Tape).
- Pb-free.
- ESD protection.

Applications

- Telecommunication: indicator and backlighting in telephone and fax.
- Flat backlight for LCD, switch and symbol.
- Light pipe application.
- General use.

Device Selection Guide

Chip Materials	Emitted Color	Resin Color
InGaN	Brilliant Green	Water Clear

Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Rating	Unit
Reverse Voltage	VR	5	V
Forward Current	IF	25	mA
Peak Forward Current (Duty 1/10 @1KHz)	IFP	100	mA
Power Dissipation	Pd	95	mW
Electrostatic Discharge(HBM)	ESD	2000	V
Operating Temperature	Topr	-40 ~ +85	℃
Storage Temperature	Tstg	-40 ~ +90	℃
Soldering Temperature	Tsol	Reflow Soldering : 260 ℃ for 10 sec. Hand Soldering : 350 ℃ for 3 sec.	

Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous intensity	I_v	360	-----	900	mcd	IF=20mA
Viewing Angle	2 θ 1/2	-----	120	-----	deg	IF=20mA
Peak Wavelength	λ_p	-----	518	-----	nm	IF=20mA
Dominant Wavelength	λ_d	517.5	-----	535.5	nm	IF=20mA
Spectrum Radiation Bandwidth	$\Delta \lambda$	-----	35	-----	nm	IF=20mA

Note:

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

Bin Range of Luminous Intensity

Bin	Min	Max	Unit	Condition
T2	360	450	mcd	$I_F=20\text{mA}$
U1	450	565		
U2	565	715		
V1	715	900		

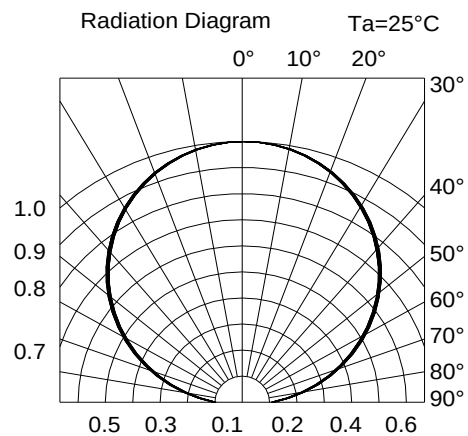
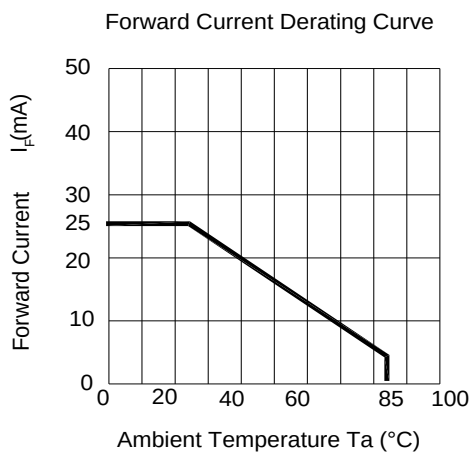
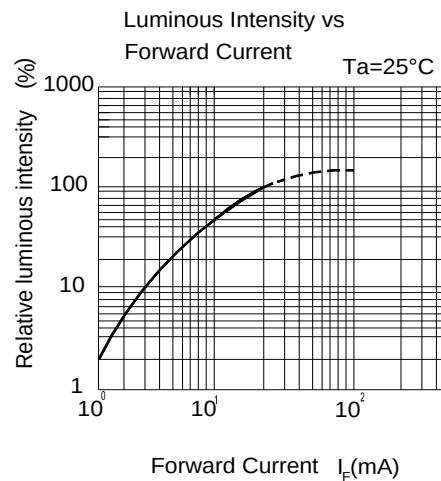
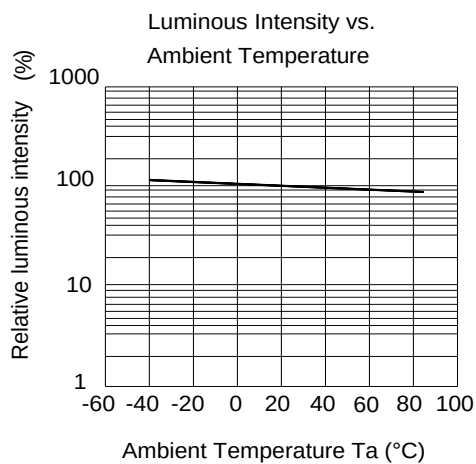
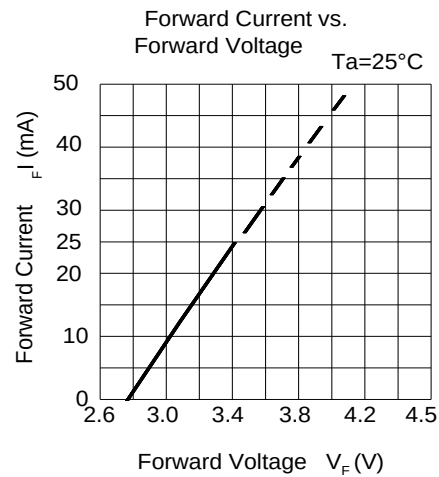
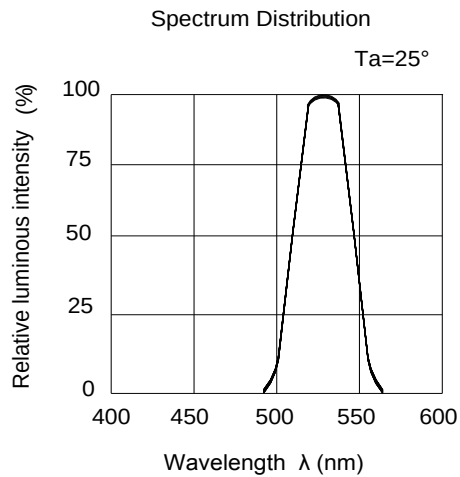
Note: Tolerance of Luminous Intensity: $\pm 11\%$

Bin Range of Dominant Wavelength

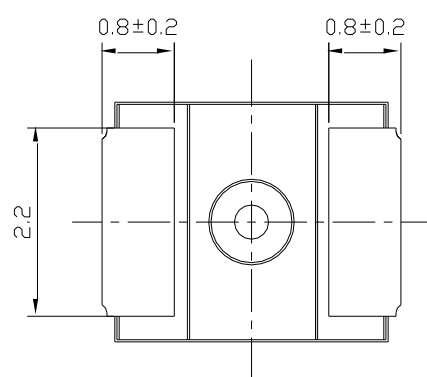
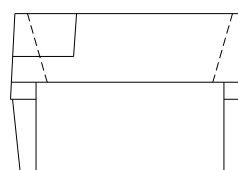
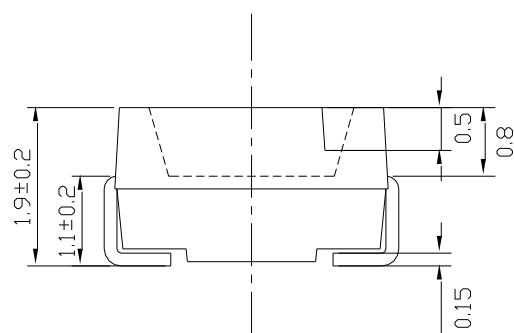
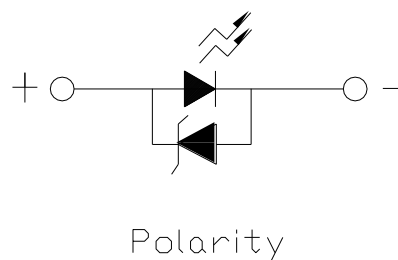
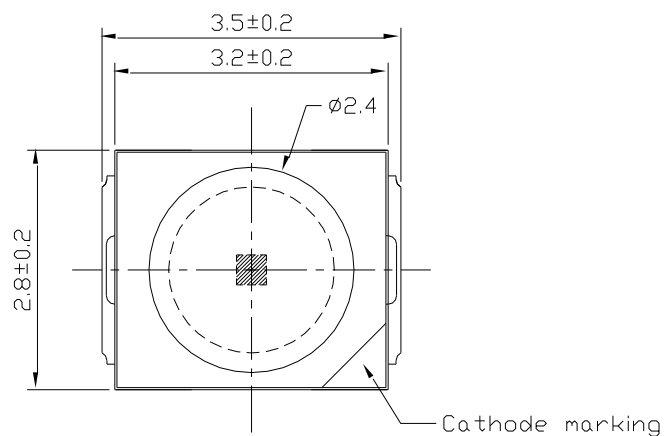
Group	Bin Code	Min.	Max.	Unit	Condition
A	B10	517.5	519.5	nm	I _F =20mA
	B11	519.5	521.5		
	B12	521.5	523.5		
	B13	523.5	525.5		
	B14	525.5	527.5		
	B15	527.5	529.5		
	B16	529.5	531.5		
	B17	531.5	533.5		
	B18	533.5	535.5		

Note: Tolerance of Dominant Wavelength $\pm 1\text{nm}$

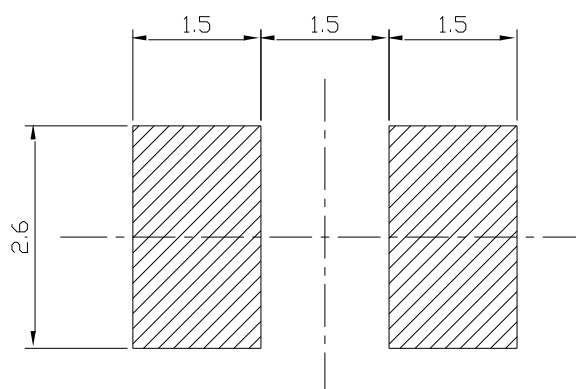
Typical Electro-Optical Characteristics Curves



Package Dimension



Recommended Solder Pad



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

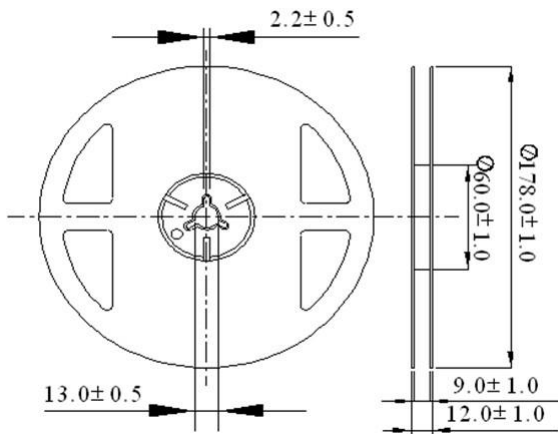
Moisture Resistant Packing Materials

Label Explanation

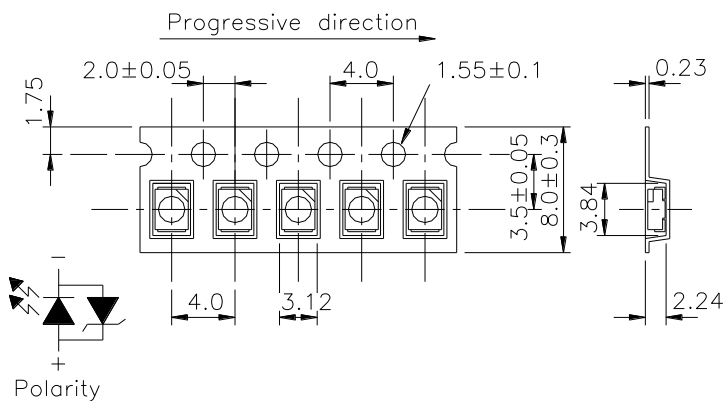


- CPN: Customer's Product Number
- P/N: Product Number
- QTY: Packing Quantity
- CAT: Luminous Intensity Rank
- HUE: Dom. Wavelength Rank
- REF: Forward Voltage Rank
- LOT No: Lot Number

Reel Dimensions

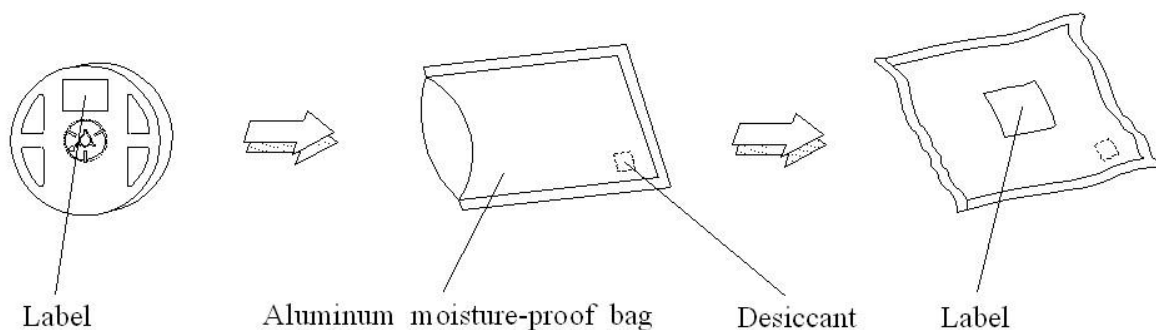


Carrier Tape Dimensions: Loaded Quantity 2000 pcs Per Reel



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

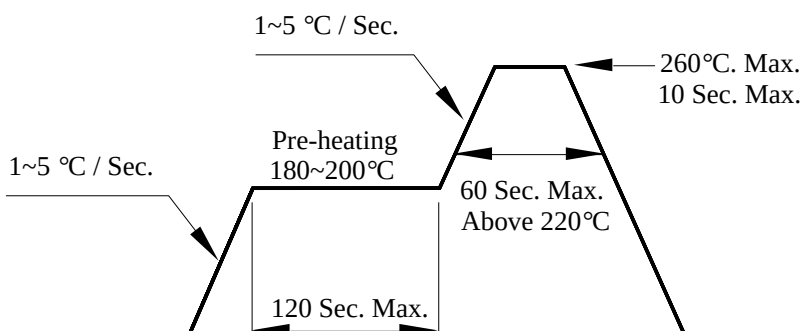
Moisture Resistant Packing Process



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

Precautions for Use

1. Over-current-proof
Customer must apply resistors for protection; otherwise slight voltage shift will cause big current change (Burn out will happen).
2. Storage
 - 2.1 Do not open moisture proof bag before the products are ready to use.
 - 2.2 Before opening the package, the LEDs should be kept at 30°C or less and 90%RH or less.
 - 2.3 After opening the package: The LED's floor life are 168 hours under 30°C or less and 60% RH or less.
If unused LEDs remain, it should be stored in moisture proof packages.
 - 2.4 If the moisture absorbent material (silica gel) has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions.
Baking treatment : $60\pm 5^{\circ}\text{C}$ 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.

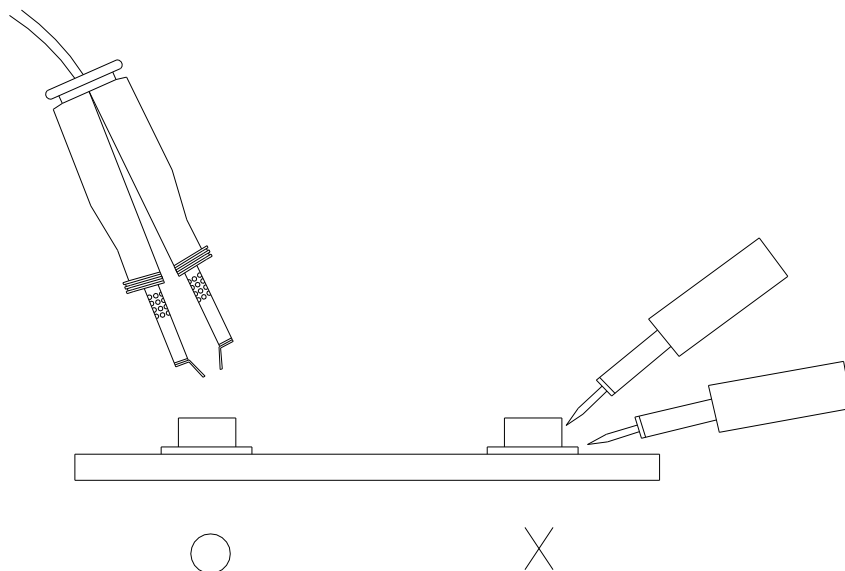


4. Soldering Iron

Each terminal is to go to the tip of soldering iron temperature less than 280°C 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.



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