

# 0805 SMD Chip LED - Orange multicomp<sup>PRO</sup>

**RoHS  
Compliant**



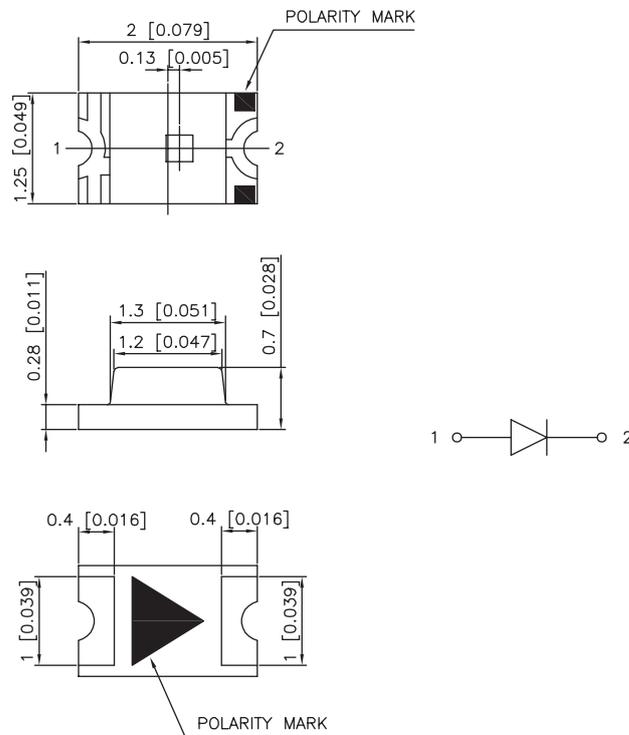
## Features

- 2mm × 1.25mm SMT LED, 0.7mm Thickness.
- Wide Viewing Angle.
- Ideal for Backlight and Indicator.
- Various Colours and Lens Types Available

## Applications

- Automotive: Backlighting in dashboard and switch.
- Telecommunication: Indicator and Backlighting in telephone and fax.
- Flat Backlight for LCD switch and symbol.

## Package Dimensions



Dimensions : Millimetres

## Notes

1. All dimensions are in millimeters.
2. Tolerance is  $\pm 0.25$  unless otherwise noted.
3. Specifications are subject to change without notice.

## Device Selection Guide

Part No.	Chip		Lens Colour
	Material	Emitted Colour	
MP007090	(InGaAlP)	Orange	Water Clear

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## Absolute Maximum Ratings at TA=25°C

Parameter	Symbol	Value	Unit
Power Dissipation	P <sub>D</sub>	62	mW
Forward Current	I <sub>F</sub>	25	mA
Peak Forward Current*1	I <sub>FP</sub>	100	mA
Reverse Voltage	V <sub>R</sub>	5	V
Operating Temperature	T <sub>opr</sub>	-40°C To +85°C	
Storage Temperature	T <sub>stg</sub>	-40°C To +85°C	

Notes:

\*1: Pulse width≤0.1ms, Duty cycle≤1/10

## Electrical / Optical Characteristics at TA=25°C

Parameter	Symbol	Min.	Typ.	Max	Unit	Test Conditions
Forward Voltage	V <sub>F</sub>	1.8	—	2.6	V	I <sub>F</sub> =20mA
Reverse Current	I <sub>R</sub>	—	—	10	μA	V <sub>R</sub> =5V
Dominate Wavelength	λ <sub>D</sub>	601	—	613	nm	I <sub>F</sub> =20mA
Luminous Intensity	I <sub>v</sub>	225	—	500	mcd	I <sub>F</sub> =20mA
Viewing Angle	2θ <sub>1/2</sub>	—	120	—	Deg.	I <sub>F</sub> =20mA

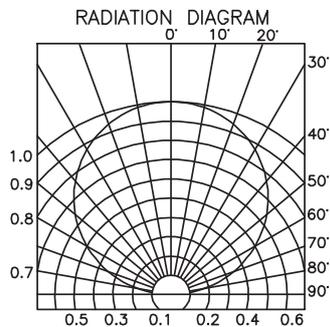
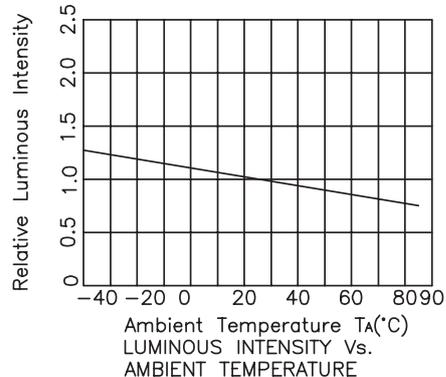
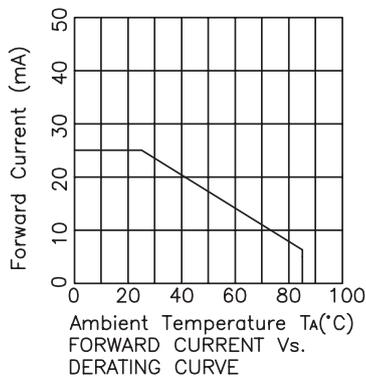
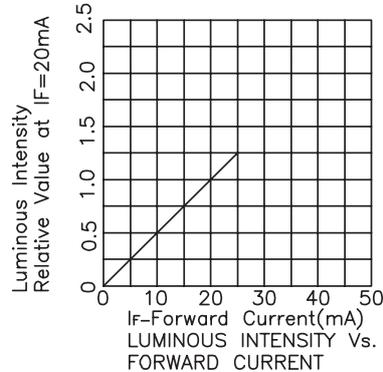
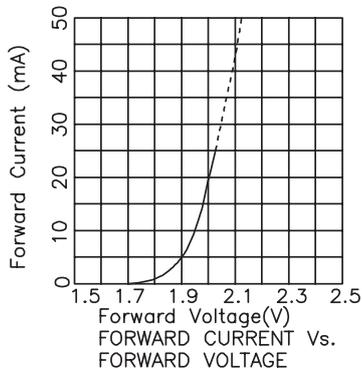
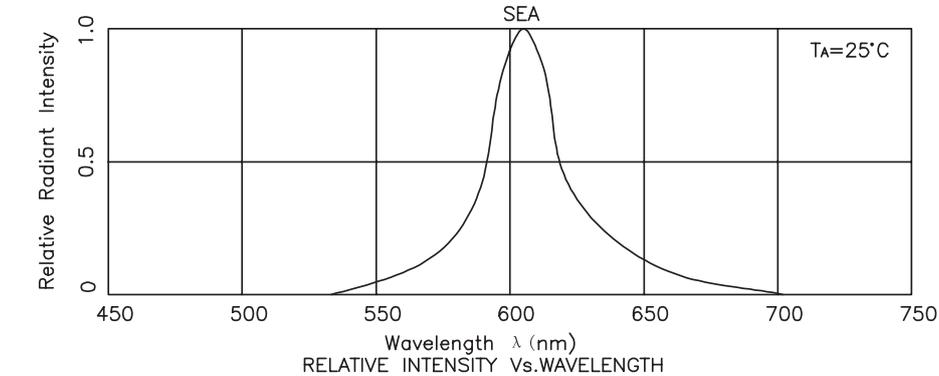
Remarks:

If special sorting is required (e.g. binning based on forward voltage, luminous intensity, or chromaticity), the typical accuracy of the sorting process is as follows:

1. wavelength: ±1nm
2. Luminous Intensity: ±15%
3. Forward Voltage: ±0.1V

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## Typical Electrical/Optical Characteristics Curves

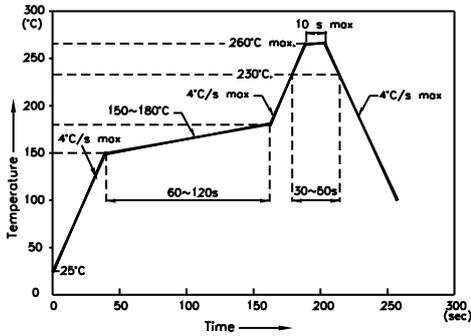


Dimensions : Millimetres

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## Soldering Profile

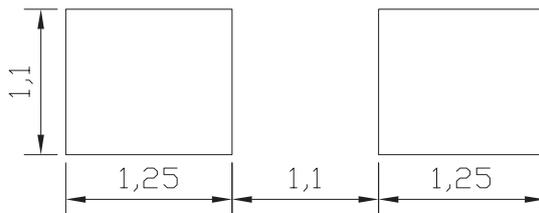
Reflow Soldering Profile For Lead-free SMT Process.



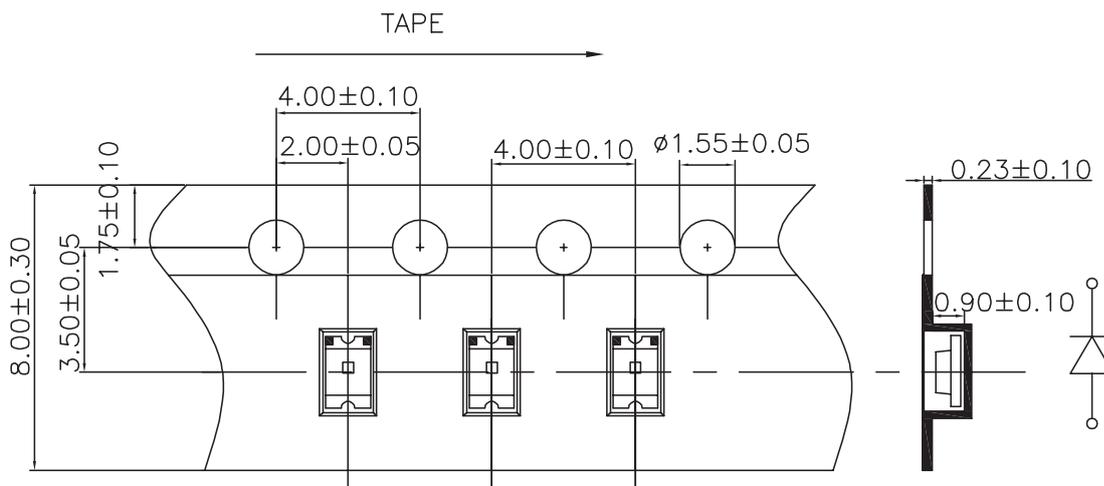
### Notes

1. We recommend the reflow temperature 245°C. ( $\pm 5^\circ\text{C}$ ) The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

## Recommended soldering pattern



## Tape specifications



Dimensions : Millimetres

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## Storage

- Storage condition before opening the package: 5°C to 30°C, the largest percentage relative humidity is 60% and the storage period is one month. The LEDs beyond the storage period just can be used after dealing as step 4.
- After opening the package, If the LEDs will be Infrared reflow soldering, Oxygen phase reflow soldering or any other welding.
  - a. must be welding within 24 hours.
  - b. the storage humidity must be below 30% .
- If the situation does not satisfy 2a or 2b, the LEDs must be roasted.
- If the LEDs need to be roasted, the roast temperature should be 60°C+/-3 and the roast timeshould be 48 hours.

## ESD ( Electrostatic Discharge)

Static Electricity or power surge will damage the LED.

The following procedures may decrease the possibility of ESD damage.

- All production machinery and test instruments must be electrically grounded.
- Use a conductive wrist band or anti-electrostatic glove when handling these LEDs.
- Maintain a humidity level of 50% or higher in production areas.
- Use anti-static packaging for transport and storage.

## Cleaning

- Led should be cleaned in a normal temperature and the time for cleaning should be less than 3 minutes; please use Alcohol as cleaner ,before you use other cleaning solvent ,please make sure that the cleaner will not make any damage to the LED performance or the appearance .
- Ultrasonic Cleaning is also commonly used for cleaning LED , please verify the Ultrasonic cleaning's Power and time to avoid any damage to the LED.

## Part Number Table

Description	Part Number
Chip LED, Orange, 120°, 500mcd, 0805	MP007090

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