0805 SMD Chip LED - Orange

Features

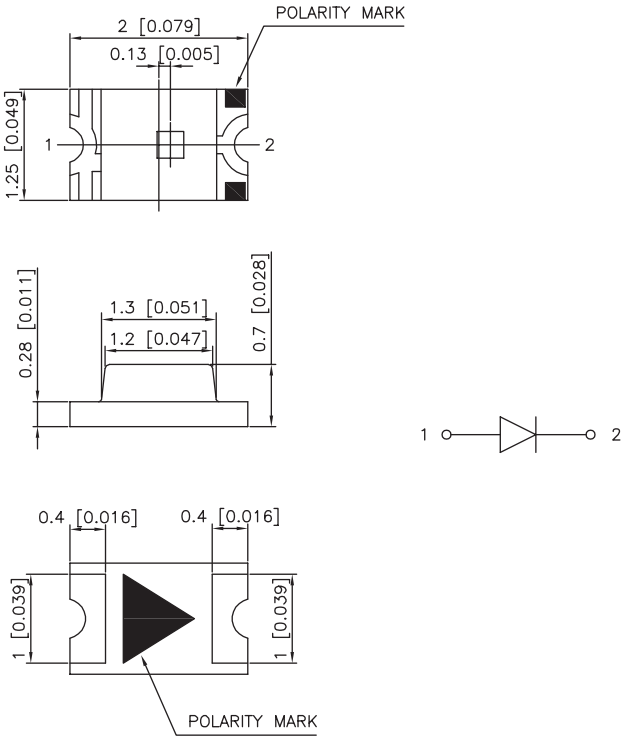
- 2mm × 1.25mm SMT LED, 0.7mm Thickness.
- Wide Viewing Angle.
- Ideal for Backlight and Indicator.
- Various Colours and Lens Types Available

RoHS Compliant

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 ±0.25 unless otherwise noted.
3. Specifications are subject to change without notice.

Device Selection Guide

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

Absolute Maximum Ratings at T_A=25°C

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	62	mW
Forward Current	I_F	25	mA
Peak Forward Current*1	I_{FP}	100	mA
Reverse Voltage	V_R	5	V
Operating Temperature	T_{opr}	-40°C To +85°C	
Storage Temperature	T_{stg}	-40°C To +85°C	

Notes:

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

Electrical / Optical Characteristics at T_A=25°C

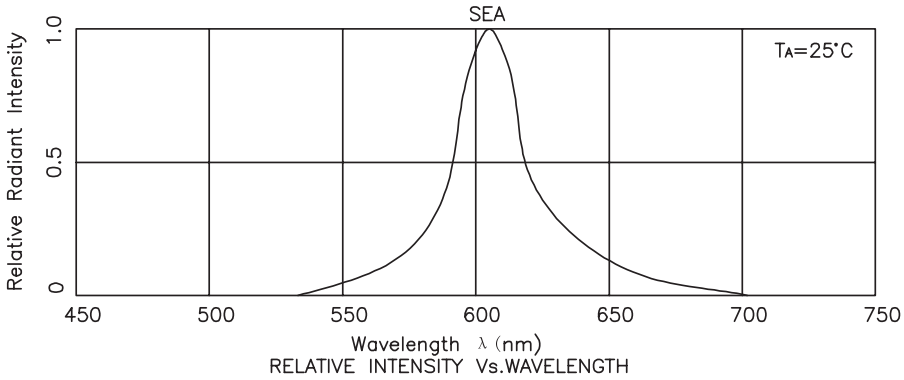
Parameter	Symbol	Min.	Typ.	Max	Unit	Test Conditions
Forward Voltage	V_F	1.8	—	2.6	V	IF=20mA
Reverse Current	I_R	—	—	10	μA	VR=5V
Dominate Wavelength	λ_D	601	—	613	nm	IF=20mA
Luminous Intensity	I_V	225	—	500	mcd	IF=20mA
Viewing Angle	2θ1/2	—	120	—	Deg.	IF=20mA

Remarks:

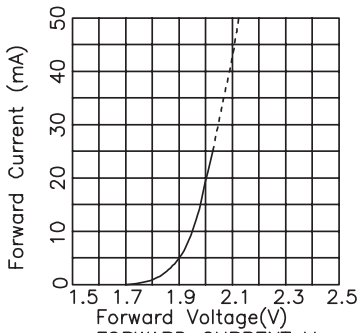
If special sorting is required (e.g. binning based on forward voltage, luminous intensity, or chromaticity), the typical accuracy of the sorting process is as follows:

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

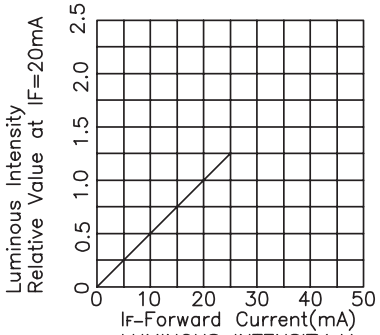
Typical Electrical/Optical Characteristics Curves



RELATIVE INTENSITY Vs.WAVELENGTH

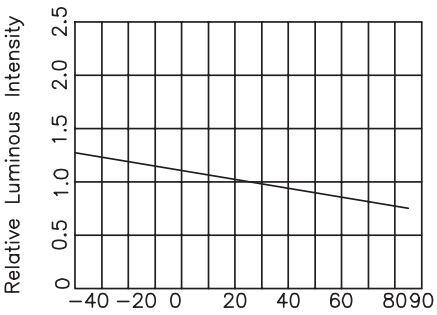


FORWARD CURRENT Vs.
FORWARD VOLTAGE

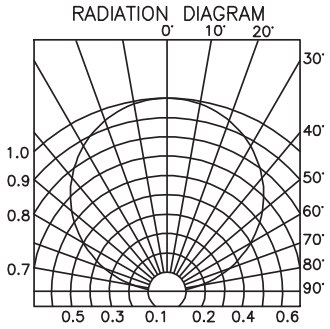


LUMINOUS INTENSITY Vs.
FORWARD CURRENT

FORWARD CURRENT Vs.
DERATING CURVE

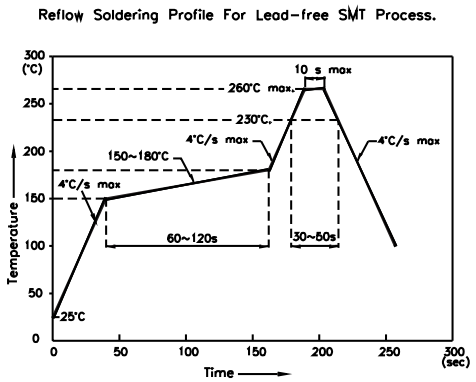


LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE



Dimensions : Millimetres

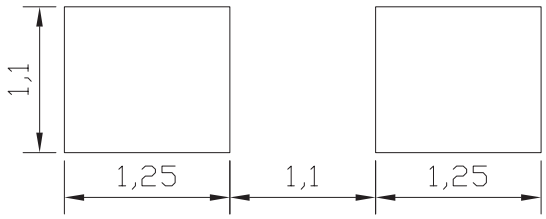
Soldering Profile



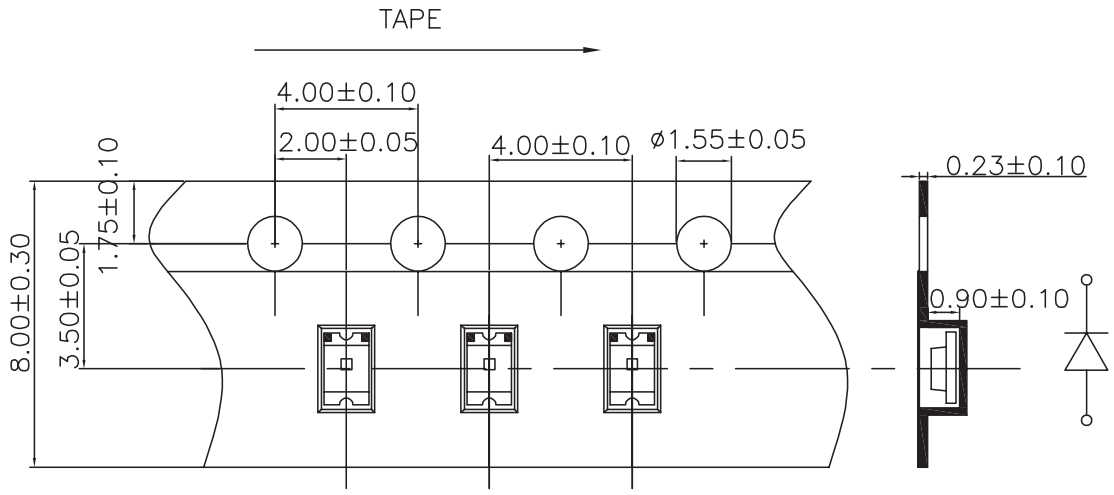
Notes

1. We recommend the reflow temperature 245°C. (±5°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

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 storge 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