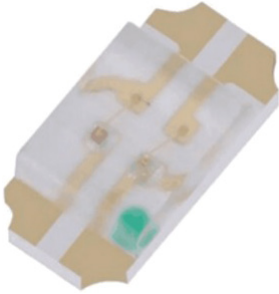


# 1206 SMD Chip LED

## Red and Green

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**RoHS  
Compliant**



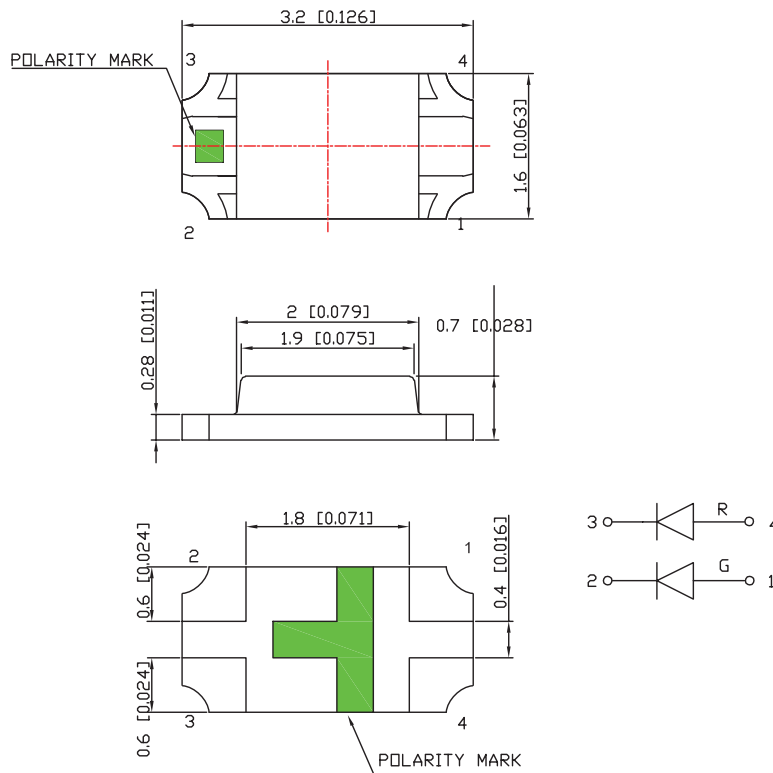
### Features

- 3.2mm × 1.6mm 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  $\pm 0.15$  unless otherwise noted.
3. Specifications are subject to change without notice.

### Device Selection Guide

Part No.	Chip		Lens Colour
MP007097	Material	Emitted Colour	Water Clear
	(InGaAlP)	Red	
		Green	

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# 1206 SMD Chip LED

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### Absolute Maximum Ratings at TA=25°C

Parameter	Symbol	Red	Green	Unit
Power Dissipation	P <sub>D</sub>	62	100	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	Device	Min.	Typ.	Max	Unit	Test Conditions
Forward Voltage	V <sub>F</sub>	Red Green	—	2.2 3.3	2.5 3.6	V	I <sub>F</sub> =20mA
Reverse Current	I <sub>R</sub>		—	—	10	μA	V <sub>R</sub> =5V
Dominant Wavelength	λ <sub>D</sub>		617 518	—	629 530	nm	I <sub>F</sub> =20mA
Luminous Intensity	I <sub>v</sub>		170 1100	—	385 1800	mcd	I <sub>F</sub> =20mA
Viewing Angle	2θ1/2		—	120 120	—	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:

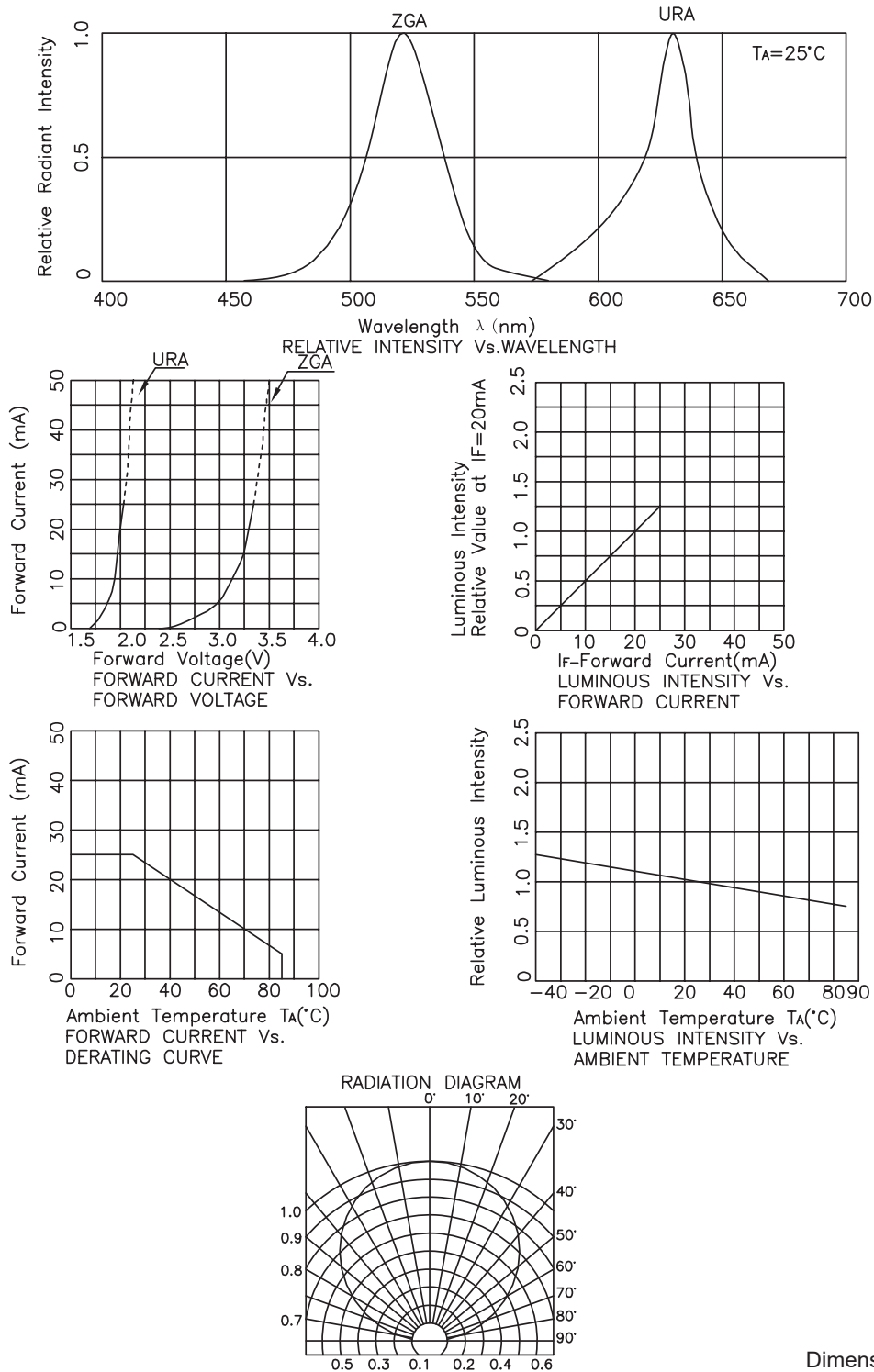
1. wavelength: ±1nm
2. Luminous Intensity: ±15%
3. Forward Voltage: ±0.1V

# 1206 SMD Chip LED

## Red and Green

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### Typical Electrical/Optical Characteristics Curves



Dimensions : Millimetres

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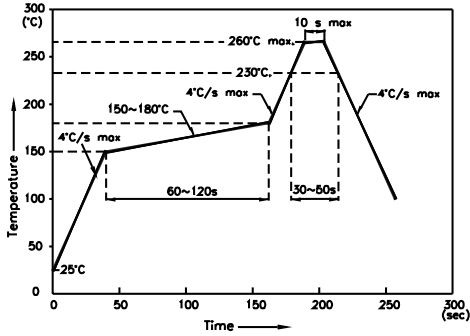
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# 1206 SMD Chip LED

## Red and Green

### Soldering Profile

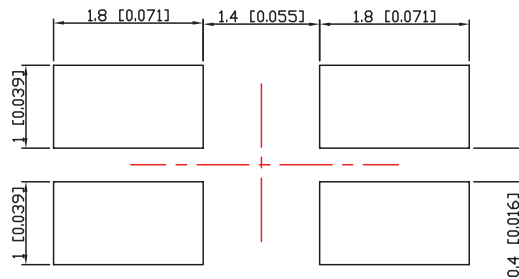
Reflow Soldering Profile For Lead-free SMT Process.



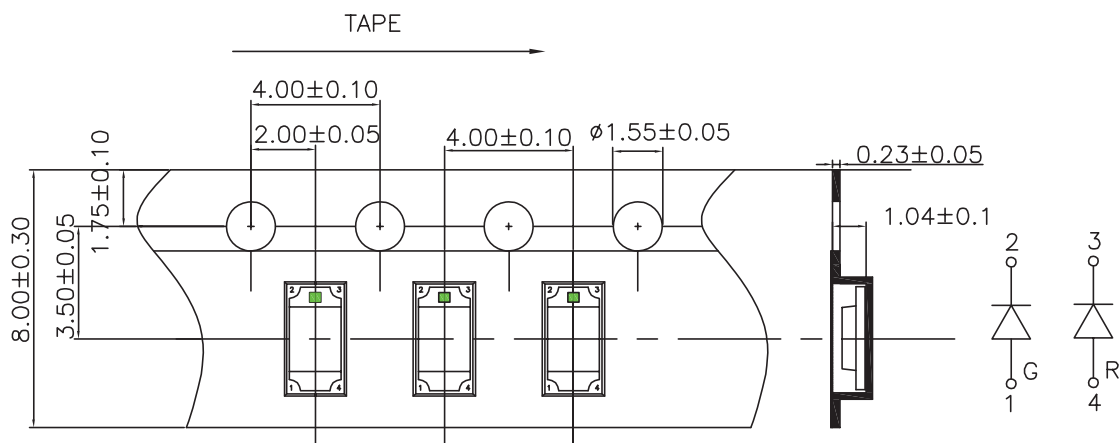
#### Notes

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

# 1206 SMD Chip LED

## Red and Green



### 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, Red / Green , 120°, 135mcd / 1800mcd, 1206	MP007097

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