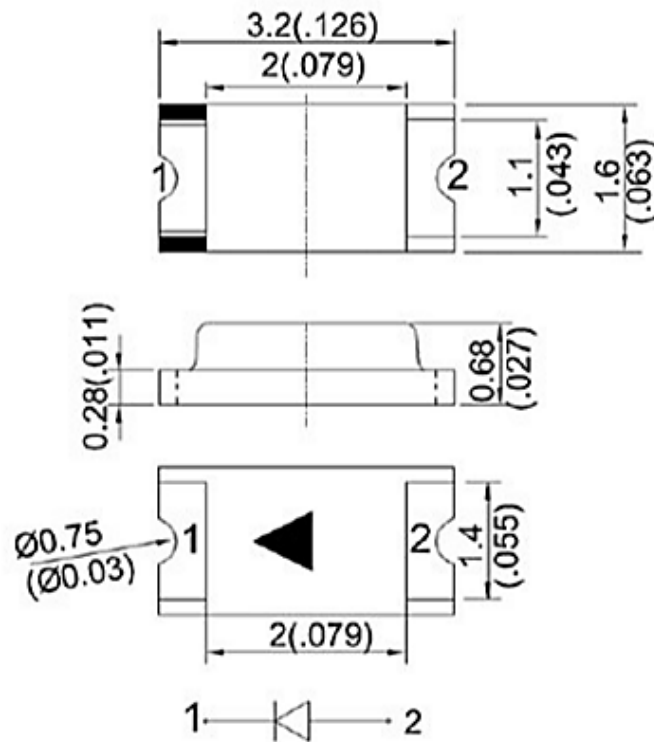


# Surface Mount LED 1206 Ultra Red

## Features

- 3.2mm x 1.6mm SMT LED, 0.68mm thickness.
- Low power consumption.
- Wide viewing angle.
- Ideal for backlight and indicator.
- Dice materials: GaP.
- Emitted color: Ultra Bright Red
- Lens color: Water Clear.



## NOTES:

1. All dimensions are in millimeter(inch);
2. Tolerance is  $\pm 0.2\text{mm}$ ( $0.008''$ ) especially other specified;
3. Specifications are subject to change without notice.

## ELECTRICAL PARAMETERS

### ❖ Absolute Maximum Ratings( $T_a=25C^\circ$ )

Item	Symbol	Maximum	Unit
Power Dissipation	$P_D$	65	mW
Continuous Forward Current	$I_{Fmax}$	30	mA
Peak Forward Current (1/10 Duty Cycle 0.1ms Pulse Width)	$I_{FP}$	160	mA
Reverse Voltage	$V_R$	5	V
Operating Temperature Range	$T_{opr}$	-40 to +85	$^\circ C$
Storage Temperature Range	$T_{stg}$	-40 to +85	$^\circ C$

### ❖ Electrical / Optical Characteristics( $T_a=25C^\circ$ )

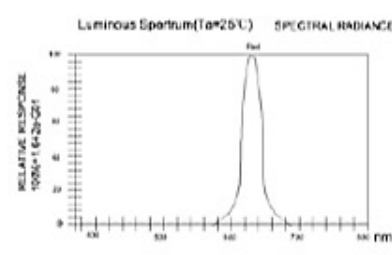
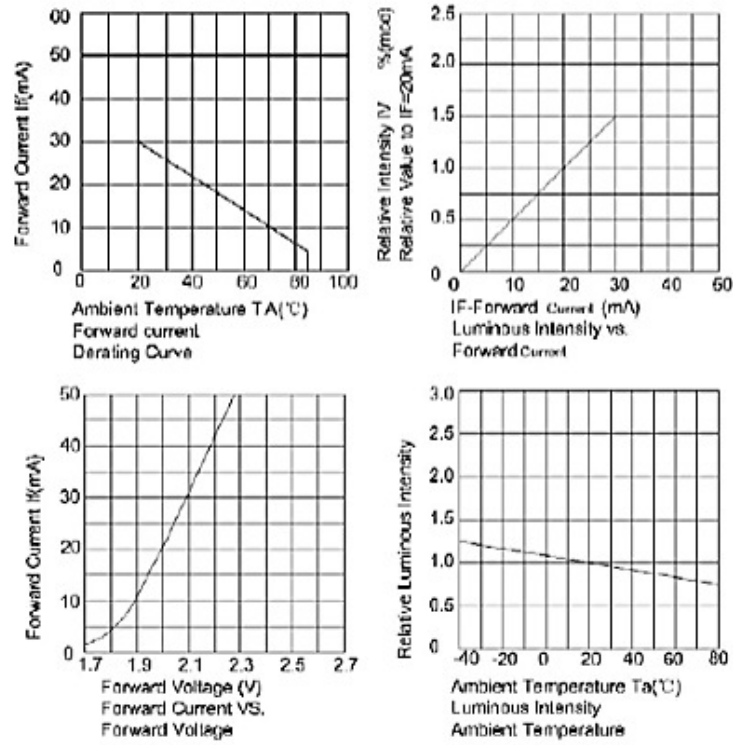
Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	$V_F$	$I_F=20mA$	1.60	1.90	2.10	V
Luminous Intensity	$I_v$	$I_F=20mA$	30	50	--	mcd
Peak Emission Wavelength	$\lambda_P$	$I_F=20mA$	--	630	--	nm
Dominant Wavelength	$\lambda_D$	$I_F=20mA$	623	625	--	nm
Viewing Angle	$2\theta_{1/2}$	$I_F=20mA$	--	120	--	deg
Capacitance	$C$	$V_R=0V; f=1MHz$	--	15	--	pF
Reverse Current	$I_R$	$V_R=5V$	--	5	10	$\mu A$

Note:

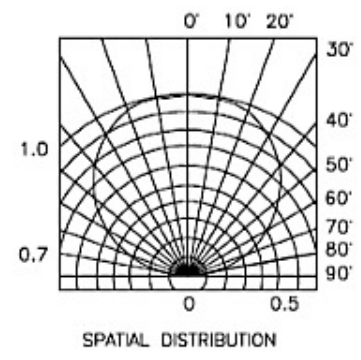
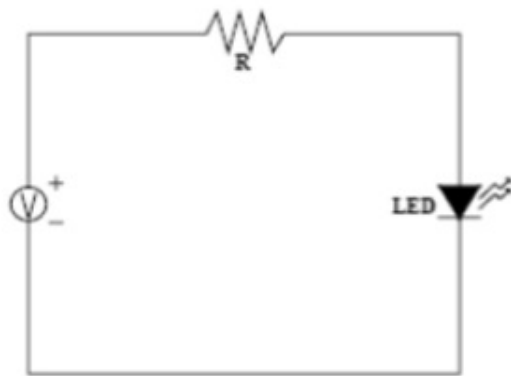
- $\theta_{1/2}$  is the angle from optical centerline where the luminous intensity is  $1/2$  the optical centerline value.
- The above luminous intensity measurement allowance tolerance  $\pm 10\%$ .

# Electro-Optical Characteristics Curves & Test Circuit

## ✧ Typical Electro-Optical Characteristics Curves



## ✧ Test Circuit

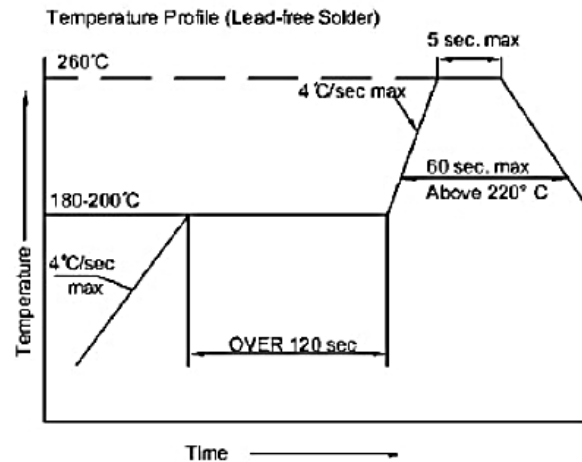
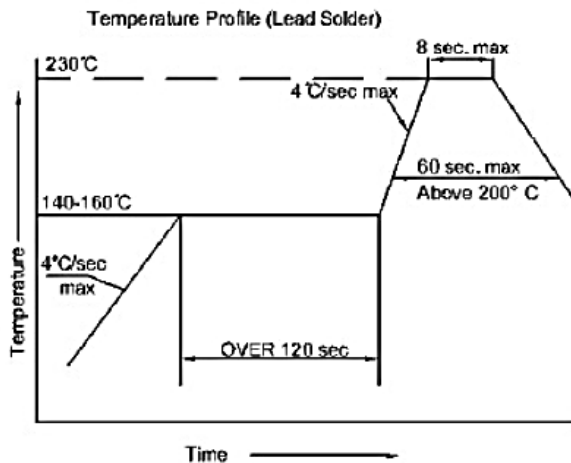


## Reliability Test And Conditions

NO.	Item	Test Condition	Test Hr/cycle/time	Sample Q'ty	Ac/Re
1	Reflow	TEMP:260°C±5°C; Min. 5sec	6 min	22pcs	0/1
2	Temperature Cycle	H: +100°C 15mins to (5mins) L: -40°C 15mins	300 cycles	22pcs	0/1
3	Thermal Shock	H: +100°C 15mins to (10sec) L: -10°C 15mins	300 cycles	22pcs	0/1
4	High Temperature Storage	TEMP: +100°C	1000 hrs	22pcs	0/1
5	Low Temperature Storage	TEMP: -40°C	1000 hrs	22pcs	0/1
6	DC Operating Life	IF=20mA	1000 hrs	22pcs	0/1
7	High Temperature	85°C	1000 hrs	22pcs	0/1
8	High Humidity	85%R.H.	1000 hrs	22pcs	0/1

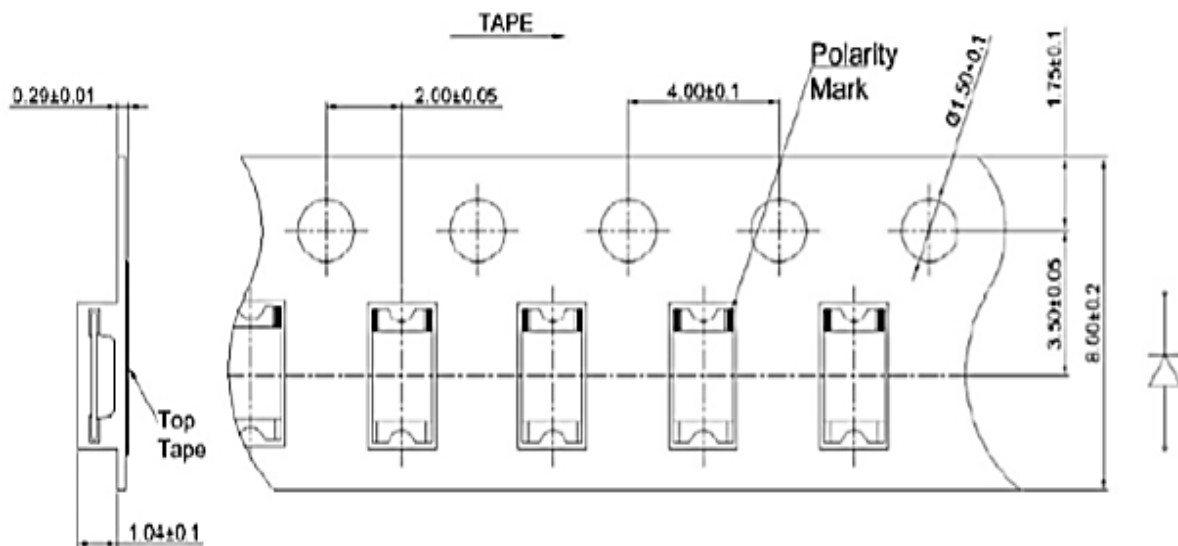
### SMT Reflow Soldering Instructions

Number of reflow process shall be less than 2 times and cooling process to normal temperature is required between first and second soldering process.



## Packing Diagram

❖ **Tape Specification: 3,000pcs per reel**



### NOTES:

1. All dimensions are in millimeter(inch);
2. Tolerance is  $\pm 0.2$ mm(0.008") especially other specified;
3. Specifications are subject to change without notice.