

Светодиод

ARL-0805UOC



FEATURES

- Package (L/W/H) : 2.0 × 1.2 × 1.0 mm
- Color : Amber
- Lens: Water Clear Flat Mold
- EIA STD Package
- Meet ROHS, Green Product
- Compatible With SMT Automatic Equipment
- Compatible With Infrared Reflow Solder And Wave Solder Process

DESCRIPTIONS

- The 0805 SMD LED is much smaller than lead frame type components thus enable smaller board size, higher packing density, reduced storage space and finally smaller equipment to be obtained.
- Besides, lightweight makes them ideal for miniature applications.etc.

USAGE NOTES

- Surge will damage the LED
- When using LED, it must use a protective resistor in series with DC current about 20mA

APPLICATIONS

- Automotive: Backlighting in dashboard and switch
- Telecommunication: Indicator and backlighting in telephone and fax
- Flat backlight for LCD, switch and symbol
- General use

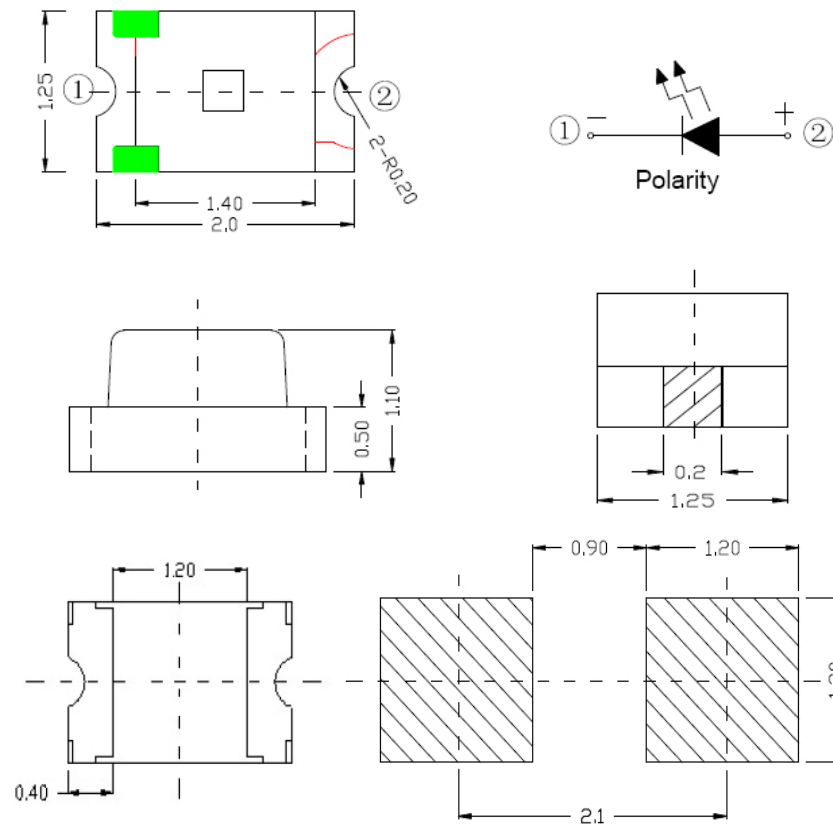
Absolute maximum rating ($T_A=25^{\circ}c$)

Parameter	Symbol	Absolute Maximum Rating	Unit
Power Dissipation	Pd	70	mW
Peak Forward Current	IFM	25	mA
(1/10 Duty Cycle, 0.1ms Pulse Width)	IFP	70	mA
DC Forward Current	IF	30	mA
Reverse Voltage	VR	5	V
Operating Temperature Range	Topr	-30°C ~ + 85°C	
Storage Temperature Range	Tstg	-40°C ~ + 90°C	
Soldering Condition	Tsol	Reflow soldering : 260°C For 5 Seonds	
		Hand soldering: 300°C For 3 Sec-onds	

DEVICE SELECTION GUIDE

LED Part No.	Chip		Lens Color
	Material	Emitted Color	
0805A1C-KHA-A	AlGaInP	Amber	Water clear

PACKAGE DIMENSIONS & SOLDERING PAD SUGGESTED



Notes:

1. Other dimensions are in millimeters, tolerance is 0.25mm except being specified.
2. Protruded resin under flange is 1.5mm Max LED.
3. Bare copper alloy is exposed at tie-bar portion after cutting.

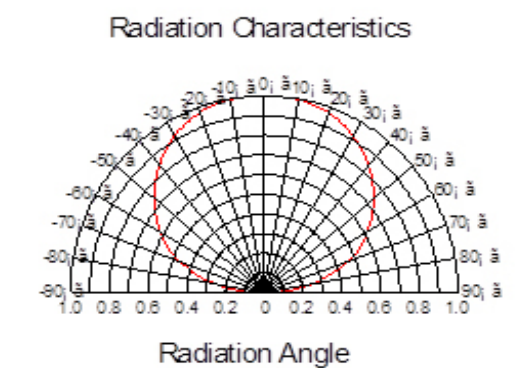
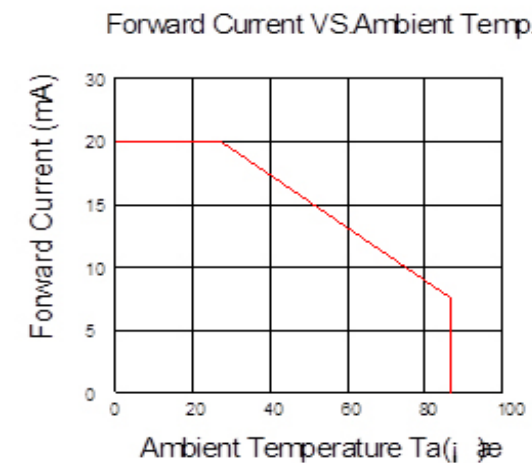
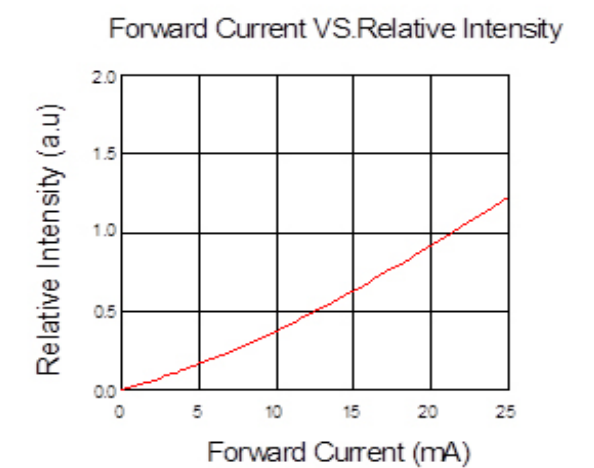
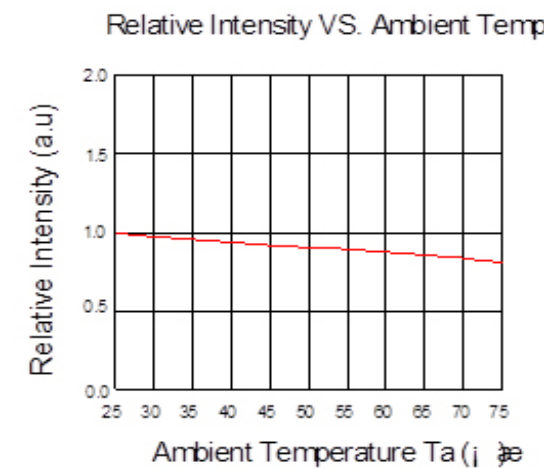
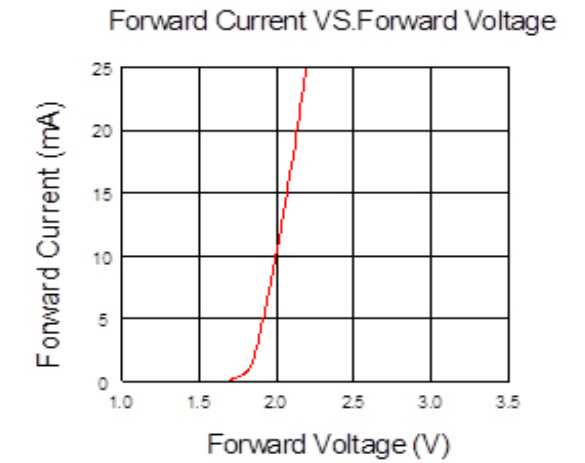
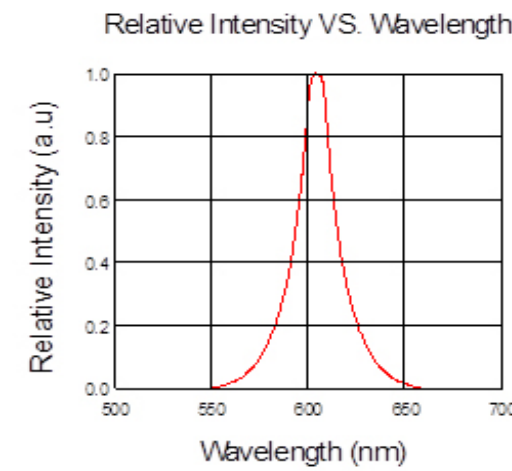
Electro-optical characteristics (T_A = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	IV	100	---	150	mcd	IF = 20mA
Viewing Angle	2θ1/2	---	120	---	deg	IF = 20mA
Dominant Wavelength	λ _d	---	600	---	nm	IF=20mA
Peak Wavelength	λ _p	---	610	---	nm	IF=20mA
Spectral Line Half-Width	Δλ	---	15	---	nm	IF=20mA
Forward Voltage	VF	1.9	---	2.4	V	IF=20mA
Reverse Current	IR	---	---	10	uA	VR=5V

Notes:

1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2. θ_{1/2} is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
3. The dominant wavelength, λ_d is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.

Typical Electro-Optical Characteristics Curves

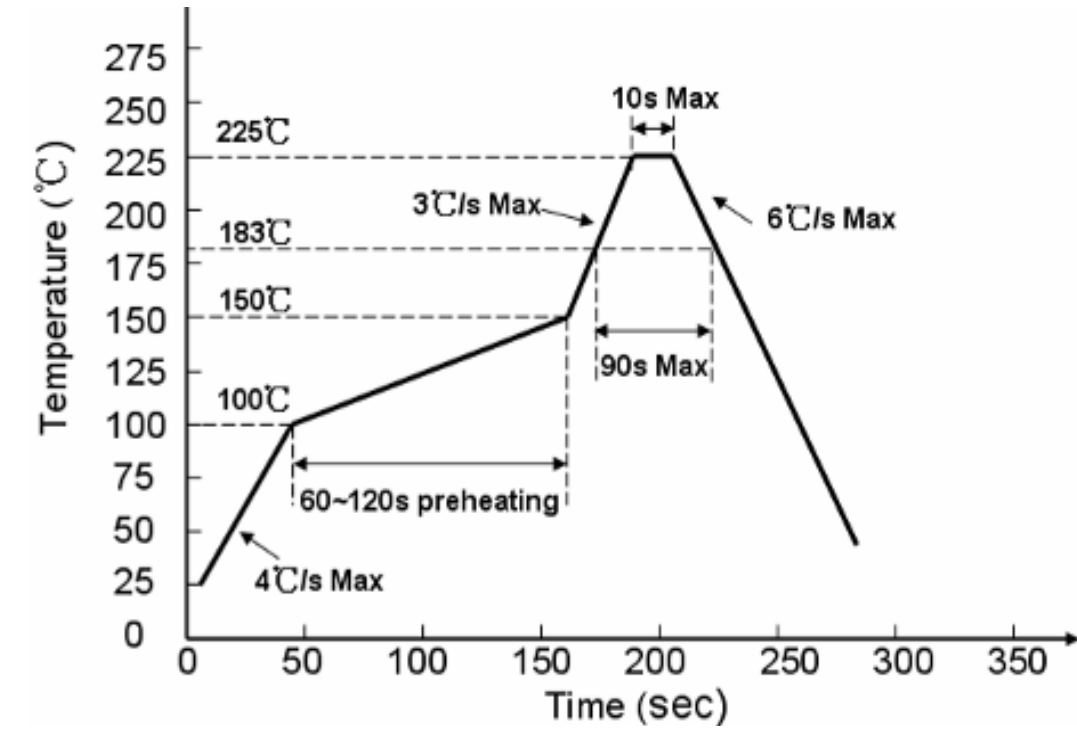


Reliability Test

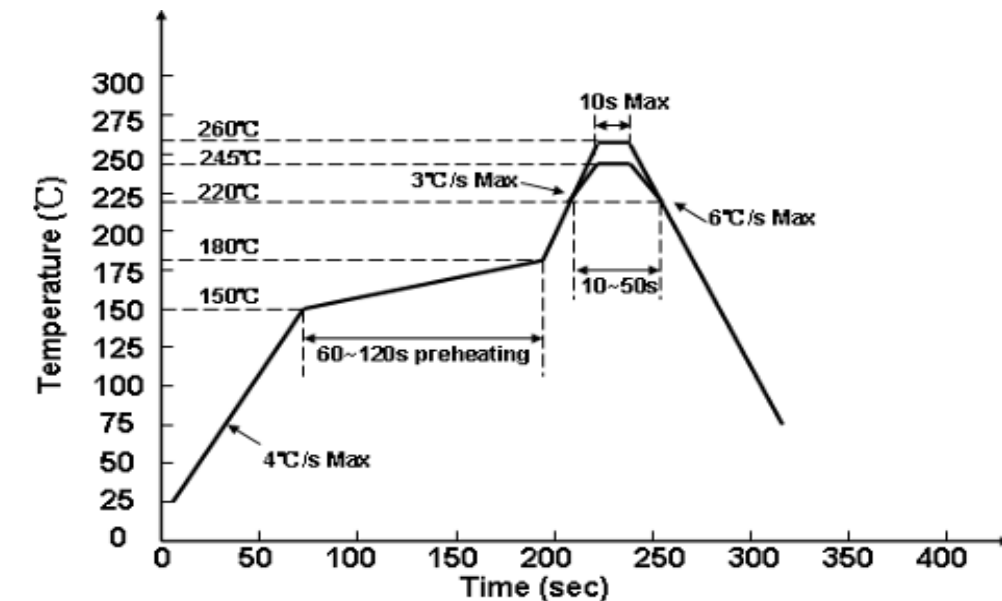
Classification	Test Item	Test Condition	Reference Standard	Reference Standard	
Endurance Test	Operation Life	Ta= Under Room Temperature As Per Data Sheet Maximum Rating	1000HRS (-24HRS,+72HRS)*@20mA	MIL-STD-750D:1026 MIL-STD-883D:1005 JIS C 7021:B-1	
	High Temperature, High Humidity Storage	IR-Reflow In-Board, 2 Times Ta= 65±5°C,RH= 90~95%	240HRS±2HRS	MIL-STD-202F:103B JIS C 7021:B-11	
	High Temperature Storage	Ta= 105±5°C	1000HRS (-24HRS,+72HRS)	MIL-STD-883D:1008 JIS C 7021:B-10	
	Low Temperature Storage	Ta= 105±5°C	1000HRS (-24HRS,+72HRS)	JIS C 7021:B-12	
Environmental Test	Temperature Cycling	105°C ~ 25°C ~ -55°C ~ 25°C 30mins 5mins 30mins 5mins	10 Cycles	MIL-STD-202F:107D MIL-STD-750D:1051 MIL-STD-883D:1010 JIS C 7021:A-4	
	Thermal Shock	IR-Reflow In-Board, 2 Times 85 ± 5°C ~ -40°C ± 5°C 10mins 10mins	10 Cycles	MIL-STD-202F:107D MIL-STD-750D:1051 MIL-STD-883D:1011	
	Solder Resistance	T.sol= 260 ± 5°C	10 ± 1secs	MIL-STD-202F:210A MIL-STD-750D:2031 JIS C 7021:A-1	
	IR-Reflow Normal Process	Ramp-up rate(183°C to Peak) +3°C/ second max Temp. maintain at 125(±25)°C 120 seconds max Temp. maintain above 183°C 60-150 seconds Peak temperature range 235°C+5/-0°C Time within 5°C of actual Peak Temperature (tp) 10-30 seconds Ramp-down rate +6°C/second max	-----	MIL-STD-50D:2031.2 J-STD-020C	
	IR-Reflow Pb Free Process	Ramp-up rate(217°C to Peak) +3°C/ second max Temp. maintain at 175(±25)°C 180 seconds max Temp. maintain above 217°C 60-150 seconds Peak temperature range 260°C+0/-5°C Time within 5°C of actual Peak Temperature (tp) 20-40 seconds Ramp-down rate +6°C/second max	-----	MIL-STD-50D:2031.2 J-STD-020C	
	Solderability		T.sol= 235 ± 5°C Immersion rate 25±2.5 mm/sec Coverage □95% of the dipped surface	Immersion time 2±0.5 sec	MIL-STD-202F:208D
					MIL-STD-750D:2026
MIL-STD-883D:2003					
IEC 68 Part 2-20					
JIS C 7021:A-2					

Soldering Profile Suggested

For Lead Solder



For Lead Free Solder



Notes:

We recommend the soldering temperature 245± 5°C ;
The maximum temperature should be limited to 260 °C.