

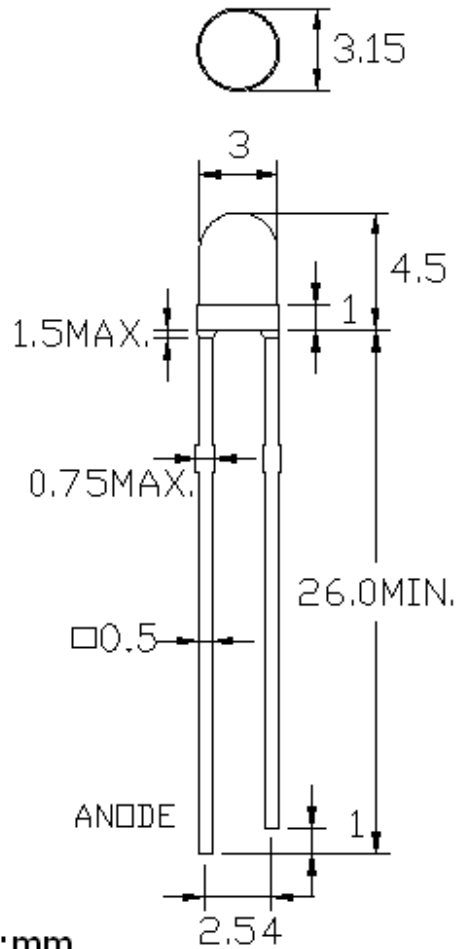


American Opto Plus LED Corp.

L354SRD

3mm RED LED Lamp

PACKAGE DIMENSION



Note: All dimensions are in millimeters and tolerance is ± 0.01 inch/0.25mm unless otherwise noted.

ITEM	MATERIALS
Lens Color	Red Diffused
Dice	GaAlAs
Emitted Color	Red



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ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

Parameter	Symbol	Ratings	Unit
Recommended Operating Current	I _F (Rec)	20	mA
Peak Forward Current (Duty 1/10 @1KHZ)	I _{FP}	100	mA
Power Dissipation	P _D	85	mW
Reverse Voltage	V _r	5	V
Operating temperature	T _{OPR}	-40 ~ +85	°C
Storage temperature	T _{STG}	-40 ~ +100	°C
Lead Soldering Temperature Range [1.6mm (1/16inch) from body]	260°C For 5 seconds		

OPTICAL-ELECTRICAL CHARACTERISTICS

(Ta=25°C)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Peak Wavelength	λ _P	I _F =20mA	--	660	--	nm
Dominant Wavelength	λ _D	I _F =20mA	--	643	--	nm
Spectral Halfwidth	Δλ	I _F =20mA	--	20	--	nm
Forward Voltage	V _F	I _F =20mA	1.7	1.85	2.5	V
Luminous Intensity	I _V	I _F =20mA	35	50	70	mcd
Viewing Angle	2θ _{1/2}	I _F =20mA	--	70	--	deg
Reverse Current	I _r	V _r =5V	--	--	10	μA

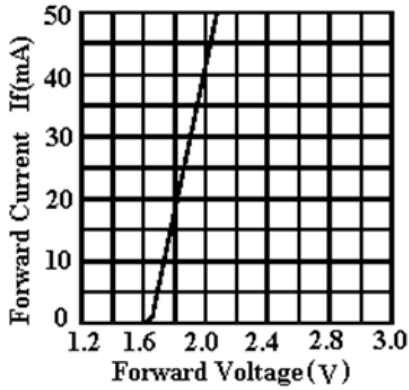


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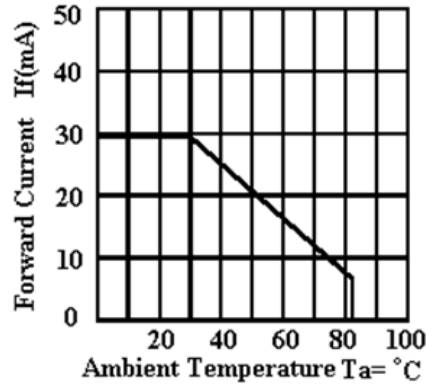
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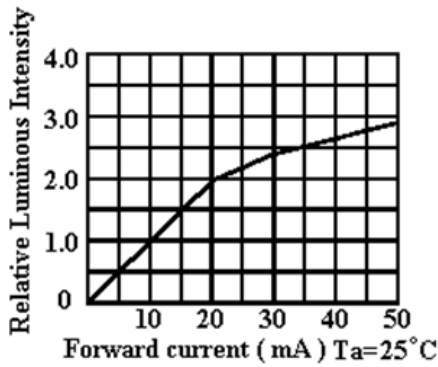
TYPICAL ELECTRO-OPTICAL CHARACTERISTICS CURVE



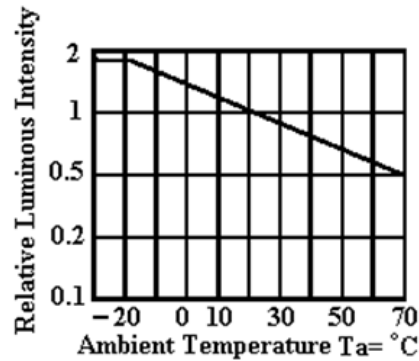
Forward current vs. Forward Voltage



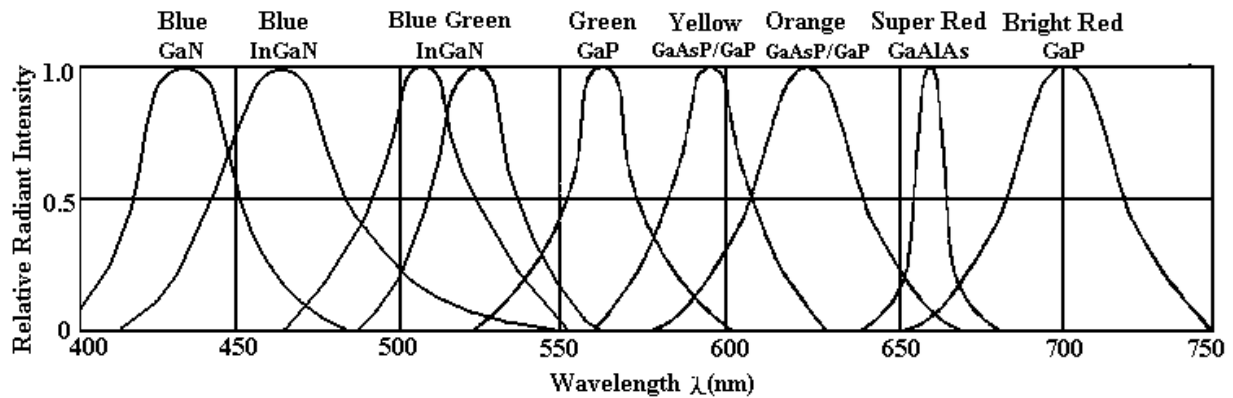
Forward current Derating curve



Luminous Intensity vs. Forward current



Luminous Intensity vs. Ambient Temperature



RELATIVE INTENSITY VS. WAVELENGTH



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RELIABILITY TEST FOR LED LAMPS

NO.	Item	Test Conditions	Test Time/ Cycle	Sample Size	Ac/Re
1	DC Operating Life	Temperature:25°C IF:20mA	1000HRS	20PCS	0/1
2	High Temperature High Humidity	Temperature:85°C 85%RH	1000HRS	20PCS	0/1
3	High Temperature Storage	Temperature:100°C	1000HRS	20PCS	0/1
4	Low Temperature Storage	Temperature: -40°C	1000HRS	20PCS	0/1
5	Temperature Cycling	85°C~ 25°C~-35°C 15min~ 5min~ 15min	15Cycles	20PCS	0/1
6	Thermal Shock	85°C~ 25°C~-10°C 5min~ 10sec ~ 5min	15Cycles	20PCS	0/1
7	Solder Heat	Temperature:260°C±5°C	10SEC.	20PCS	0/1



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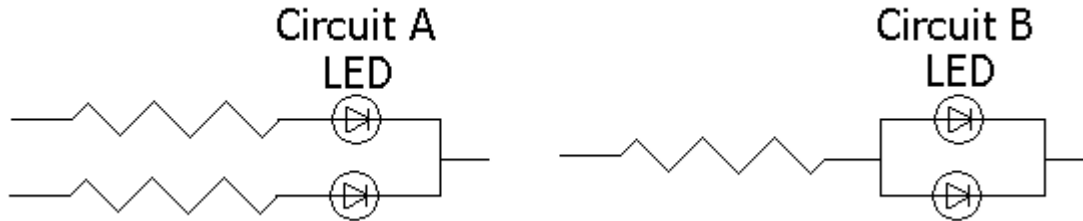
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PRECAUTIONS FOR USE LED

1. Drive Method

LED is a current operated device. In order to ensure intensity uniformity on multiple LEDs connected in parallel in an application, it is recommended that a current limiting resistor be incorporated in the drive circuit



- Circuit (A) is recommended
- Circuit (B) the brightness of each LED might appear different due to the difference in the I-V characteristics of those LEDs

2. Over-Current proof

Customer must apply resistors for protection, otherwise slight voltage shift will cause big current change (Burn out will happen)

3. Storage

The storage temperature and RH are 5°C~30°C, RH 60% or less. Once the package is opened, the products should be used within a week. Otherwise they should be kept in a moisture proof package with moisture absorbent material (silica gel). We suggest to use our products within a year. If the moisture absorbent material (silica gel) has faded away or LEDs exceed the storage time, baking treatment should be performed using the following conditions. Baking treatment: more than 24 hours at 60°C ±5°C

4. Electrostatic Discharge(ESD)

Static electricity or surge voltage will damage the LEDs. Suggestions to prevent ESD damage: Use of a conductive wrist band or anti-electrostatic glove when handling these LEDs. All devices, equipment and machinery must be properly grounded. Work table storage racks, etc. should be properly grounded. In the events of manual working in process, make sure the devices are well protected from ESD at any time

5. Other

- If you want to have the uniform luminance and color, please use the same binning number, and avoid using intermix to cause the difference of luminance and color
- The appearance and specifications of the product may be modified for improvement without prior notice



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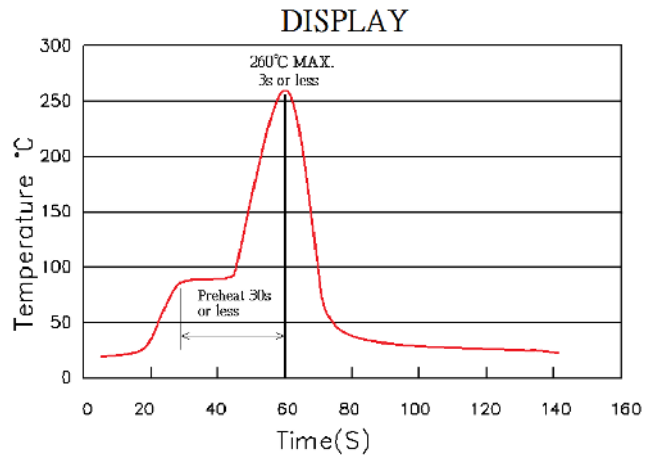
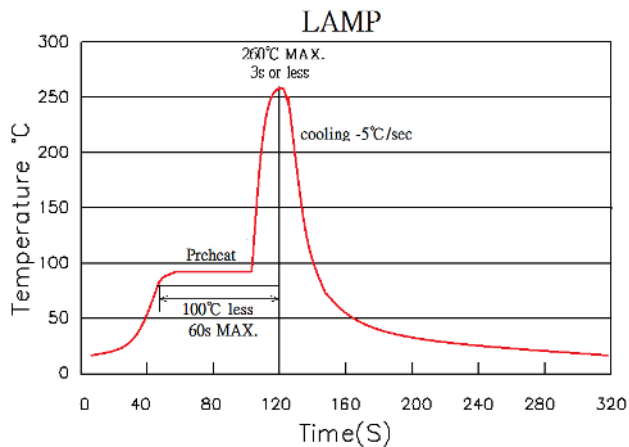
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6. Soldering

Recommended soldering condition shown below:

- Soldering heat (DIP)



Soldering Iron

Temperature at tip of iron: 350°C Max

Soldering Time: 3 second \pm 1 second (1 time only)

If temperature is higher, time should be shorter

- Reflow Temperature/Time (SMD)

