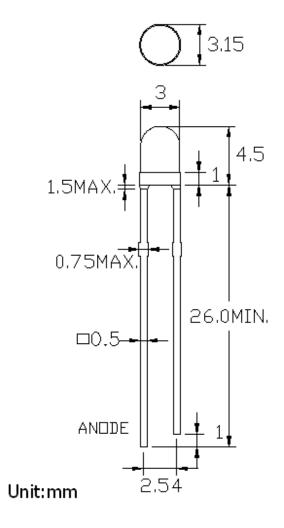


American Opto Plus LED Corp. L354SRD

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)	IFP	100	mA	
Power Dissipation	P _D	85	mW	
Reverse Voltage	Vr	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)

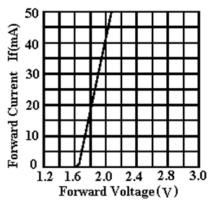
Parameter	Symbol	Test Condition	Min	Тур	Max	Unit
Peak Wavelength	λ_{P}	I _F =20mA	1	660		nm
Dominant Wavelength	ΛD	I _F =20mA		643		nm
Spectral Halfwidth	Δλ	I _F =20mA		20		nm
Forward Voltage	VF	I _F =20mA	1.7	1.85	2.5	V
Luminous Intensity	l _V	I _F =20mA	35	50	70	mcd
Viewing Angle	201/2	I⊧=20mA	1	70		deg
Reverse Current	lr	Vr=5V	1	1	10	μΑ



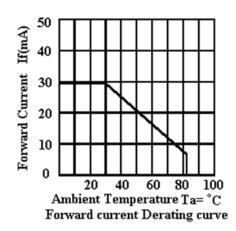
American Opto Plus LED Corp. L354SRD

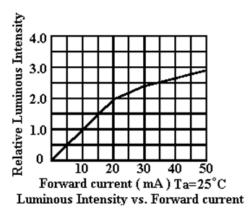
3mm RED LED Lamp

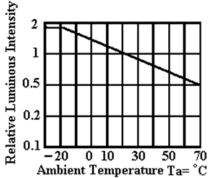
TYPICAL ELECTRO-OPTICAL CHARACTERISTICS CURVE



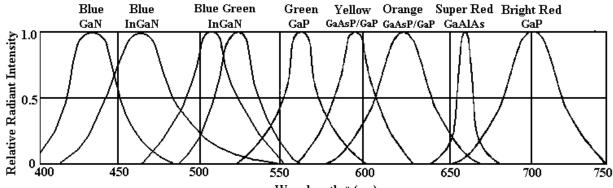
Forward current vs. Forward Voltage







Luminous Intensity vs. Ambient Temperature



Wavelength \(\mu(nm) \)
RELATIVE INTENSITY VS. WAVELENGTH



American Opto Plus LED Corp. L354SRD

3mm RED LED Lamp

RELIABILITY TEST FOR LED LAMPS

NO.	ltem	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



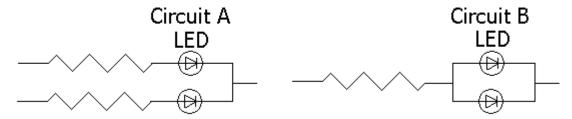
American Opto Plus LED Corp. L354SRD

3mm RED LED Lamp

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



- a. Circuit (A) is recommended
- b. 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 $5^{\circ}\text{C} \sim 30^{\circ}\text{C}$, RH 60% or less. Once the pacakge is opened, the products should be used within a week. Otherwise they shuld 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 $60^{\circ}\text{C} \pm 5^{\circ}\text{C}$

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

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



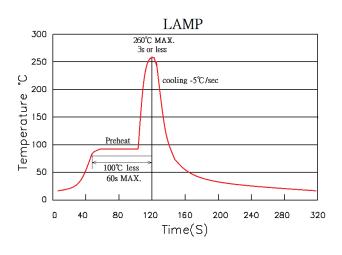
American Opto Plus LED Corp. L354SRD

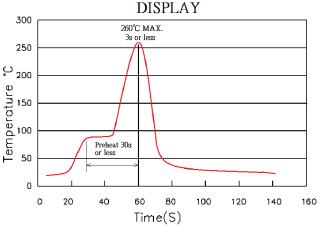
3mm RED LED Lamp

6. Soldering

Recommended soldering conidtion shown below:

Soldering heat (DIP)





Soldering Iron

Temperature at tip of iron: 350°C Max

Soldering Time: 3 second ±1 second (1 time only) If temperature is higher, time should be shorter

Reflow Temperature/Time (SMD)

