

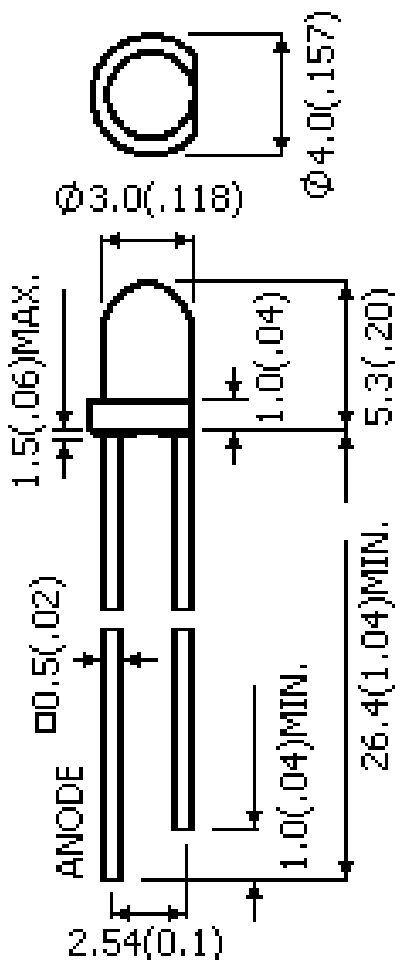


American Opto Plus LED Corp.

L314SRC-36D

3mm Super Red LED Lamp

PACKAGE OUTLINES



Notes:

1. All dimensions are in millimeters
2. Tolerances are $\pm 0.25\text{mm}$ unless otherwise noted

Part Number	Material	Color	
		Emitted	Lens
L314SRC-36D	AlInGaP	Super Red	Water Clear



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ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

Parameter	Symbol	Value	Unit
Forward Current	I_F	20	mA
Peak Forward Current (Duty 1/10@1KHz)	I_{FP}	100	mA
Power Dissipation	P_D	85	mW
Reverse Current ($V_R=5V$)	I_R	10	μA
Operating Temperature	T_{OPR}	-40~+85	°C
Storage Temperature	T_{STG}	-40~+100	°C
Soldering Temperature	T_{SOL}	260°C for 5 seconds	

OPTICAL-ELECTRICAL CHARACTERISTICS

(Ta=25°C)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Luminous Intensity	I_V	$I_F = 20mA$	250	400	650	mcd
Peak Wavelength	λ_P		--	653	--	nm
Dominant Wavelength	λ_D		--	640	--	nm
Spectral Half-Width	$\Delta\lambda$		--	19	--	nm
Viewing Angle	$2\theta \frac{1}{2}$		--	36	--	deg
Forward Voltage	V_F		1.7	1.9	2.6	V

Notes:

1. Forward voltage data did not include $\pm 0.1V$ testing tolerance.
2. Luminous intensity data did not include $\pm 15\%$ testing tolerance.

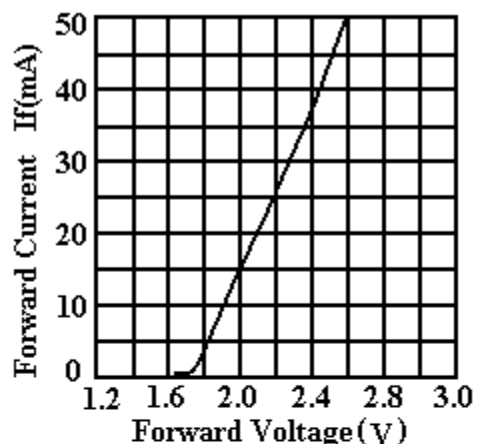


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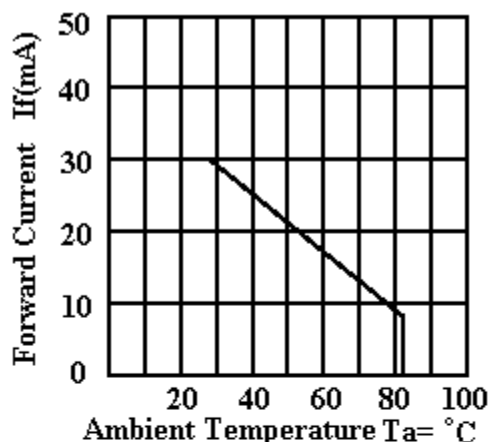
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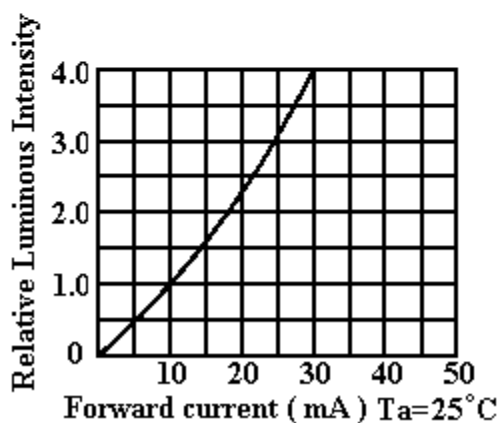
OPTICAL CHARACTERISTIC CURVES



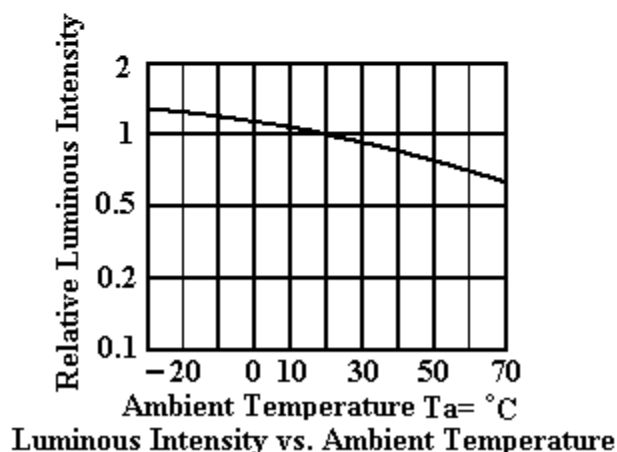
Forward current vs. Forward Voltage



Forward current Derating curve



Luminous Intensity vs. Forward current



Luminous Intensity vs. Ambient Temperature



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RELIABILITY TEST

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



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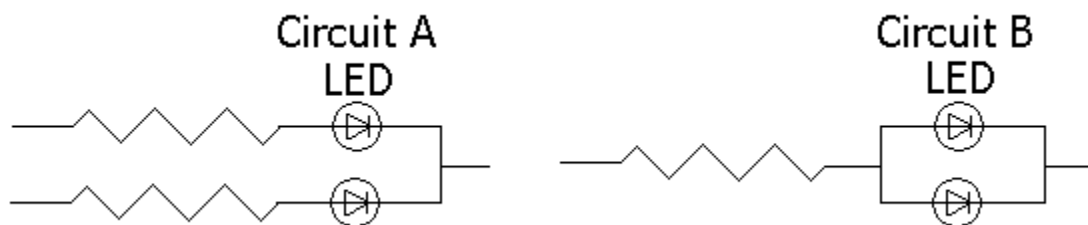
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PRECAUTION FOR USE

1. Drive Method

LED is 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 the recommended circuit.

(b) Circuit B the brightness of each LED might appear different due to the differences 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 moisture proof package with moisture absorbent material (silica gel). We suggest using the product within a year.

If the moisture absorbent material (silica gel) has faded away or LEDs exceeded the storage time, baking of more than 24 hours at 60°C±5°C should be performed.

4. Electrostatic Discharge (ESD)

Static electricity or surge voltage will damage the LEDs.

Use of conductive wrist band or anti-electrostatic glove when handling these LEDs is recommended. All devices, equipment, work table, storage rack and machinery must be properly grounded.

In the events of manual working in process, make sure devices are well protected from ESD at all times.



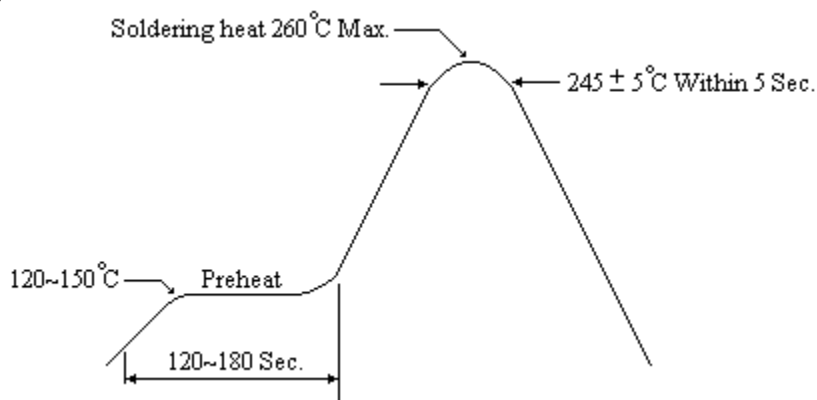
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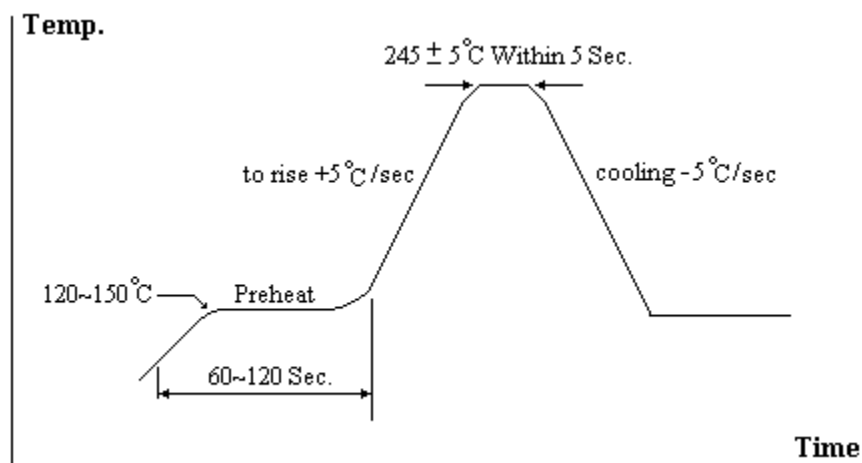
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SOLDERING CONDITION

Soldering Heat (DIP)



Reflow Temp./Time



Soldering Iron:

Temperature at tip of iron: 300°C max (25W max)

Soldering time: 3 sec. ± 1 sec. (one time only)

If temperature is higher, time should be shorter.