

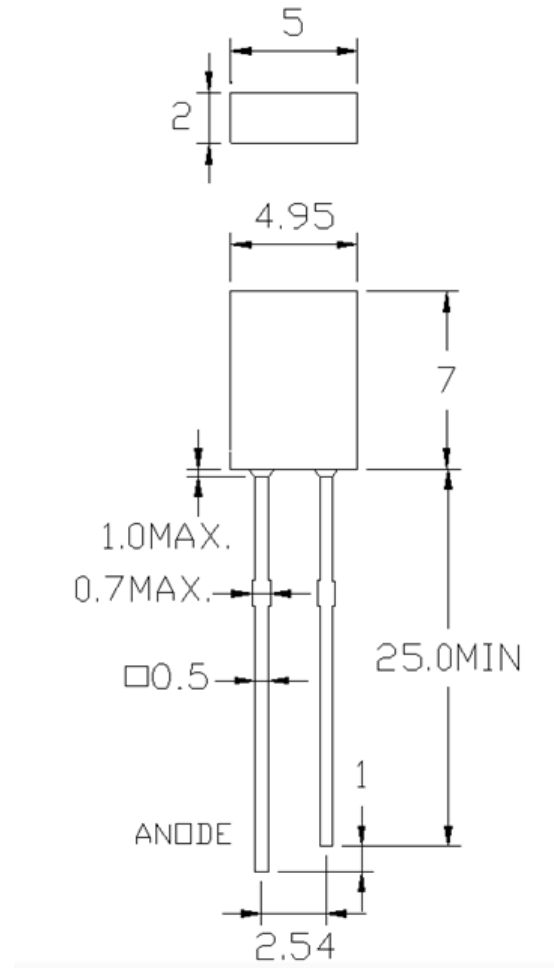


American Opto Plus LED Corp.

L403YD

2 x 5 x 7mm Yellow LED Lamp

PACKAGE DIMENSION



Item	Materials
Dice Material	GaAsP on GaP
Lens Color	Yellow Diffused
Emitted Color	Yellow
View Angle	120 Degrees

Note: Unit: mm; Tolerance $\pm 0.01/0.25$ mm unless otherwise noted



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ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

Parameter	Symbol	Absolute Maximum Rating	Unit
Power Dissipation	Pd	85	W
Peak Forward Current (Duty 1/10 @ 1KHZ)	IF (Peak)	100	mA
Reverse Voltage	Vr	5	V
Operating temperature	T _{opr}	-40~+85	°C
Storage temperature	T _{stg}	-40~+100	°C
Lead Solder Temperature	T _{sld}	260°C for 5 sec (1.6mm (1/16 inch) from body)	--
Recommended Operating Current	IF (Rec)	30	mA

OPTICAL-ELECTRICAL CHARACTERISTICS

(Ta=25°C)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Luminous Intensity	IV	12	18	25	mcd	If=20mA
Peak Emission Wavelength	λ_p	--	587	--	nm	If=20mA
Dominant Wavelength	λ_d	585	590	595	nm	If=20mA
Forward Voltage	VF	1.7	2.0	2.6	V	If=20mA
Spectral Line Half-Width	$\Delta\lambda$	--	35	--	nm	If=20mA
Viewing Angle	2 θ 1/2	--	120	--	deg	If=20mA
Reverse Current	Ir	--	--	10	uA	Vr=5V

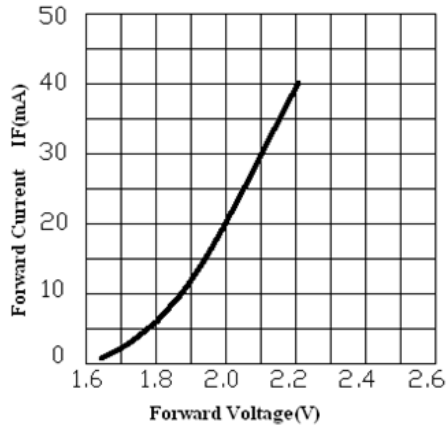


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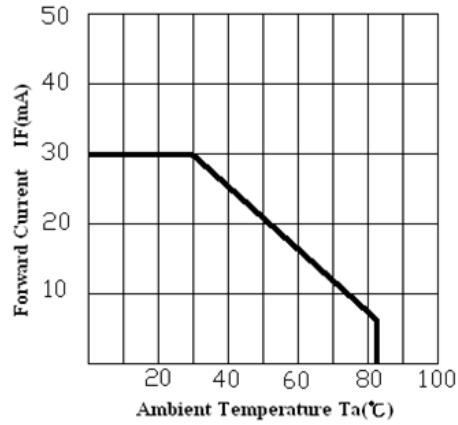
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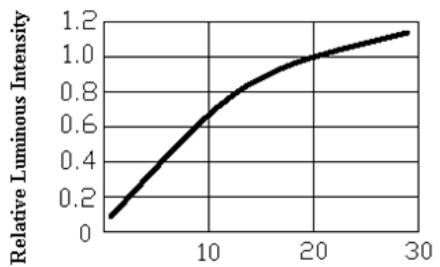
ELECTRO-OPTICAL CHARACTERISTICS CURVE



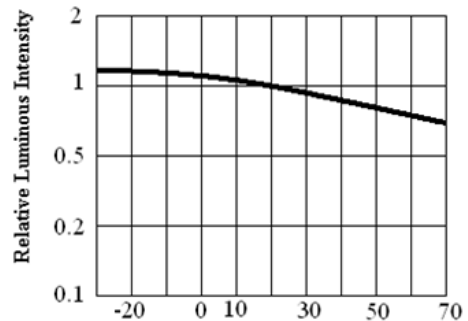
Forward Current vs. Forward Voltage



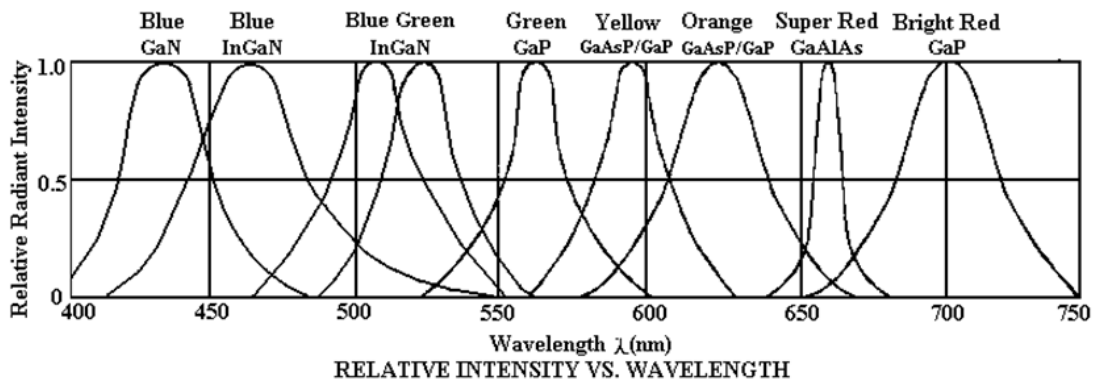
Forward Current Derating Curve



Forward current (mA) Ta=25°C
Luminous Intensity vs. Forward current



Ambient Temperature Ta= °C
Luminous Intensity vs. Ambient Temperature





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RELIABILITY TEST FOR LED LAMPS

Item	Test Conditions	Test Time/ Cycle	Sample Size	Ac/Re
DC Operating Life	Temperature:25°C IF:20mA	1000HRS	20PCS	0/1
High Temperature High Humidity	Temperature:85°C 85%RH	1000HRS	20PCS	0/1
High Temperature Storage	Temperature:100°C	1000HRS	20PCS	0/1
Low Temperature Storage	Temperature: - 40°C	1000HRS	20PCS	0/1
Temperature Cycling	85°C~ 25°C~ - 35°C 15min~ 5min~ 15min	15Cycles	20PCS	0/1
Thermal Shock	85°C~ 25°C~ - 10°C 5min~ 10sec ~ 5min	15Cycles	20PCS	0/1
Solder Heat	Temperature:260°C±5°C	10SEC.	20PCS	0/1



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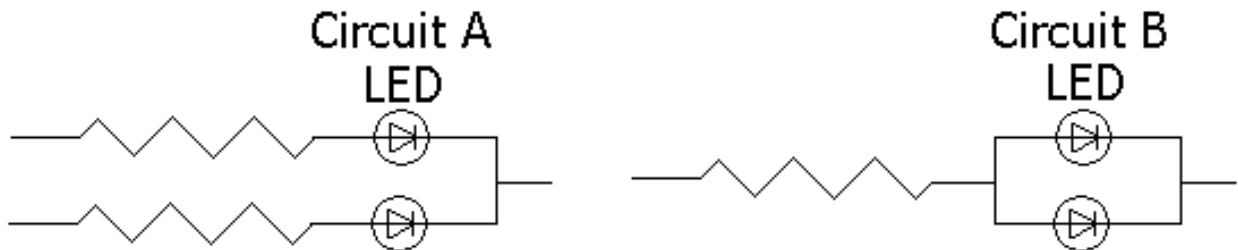
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PRECAUTION FOR USE LED

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 it is 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.

Over-current-proof

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

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 our customers to use our products within a year.

If the moisture absorbent material (silica gel) has faded away or the LEDs exceeded the storage time, baking treatment should be performed using the following conditions.

Baking treatment: more than 24 hours at 60°C ±5°C .



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Electrostatic Discharge (ESD)

Static electricity or surge voltage will damage the LEDs

Suggestions to prevent ESD damage:

Use of a conductive wrist band or ante-electrostatic glove when handing these LEDs

All devices, equipment, and machinery must be properly grounded.

Work tables 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.

Others

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



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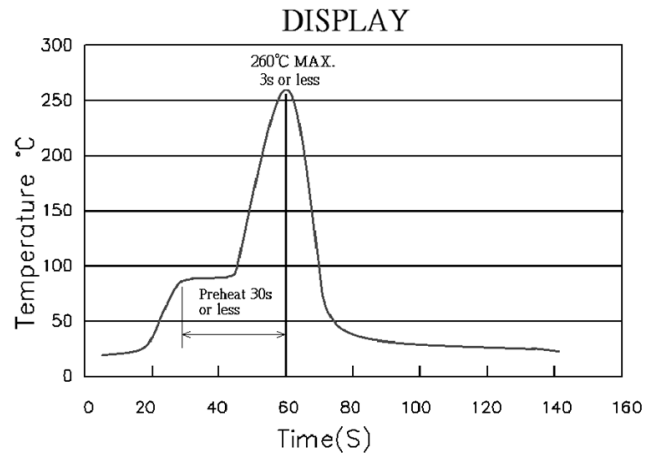
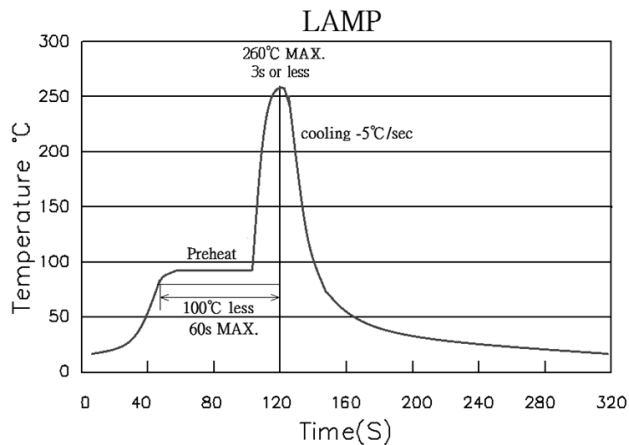
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Soldering

Recommended soldering condition as shown below:

- **Soldering heat (DIP)**



Soldering Iron

Temperature at tip of iron: 350°C Max.

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

If temperature is higher, time should be shorter

- **Reflow Temp./Time(SMD)**

