



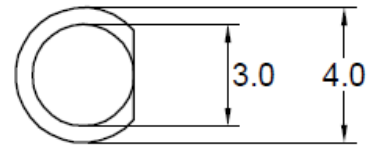
# American Opto Plus LED Corp.

## L314LPGD-34D

### 3mm Pure Green LED Lamp

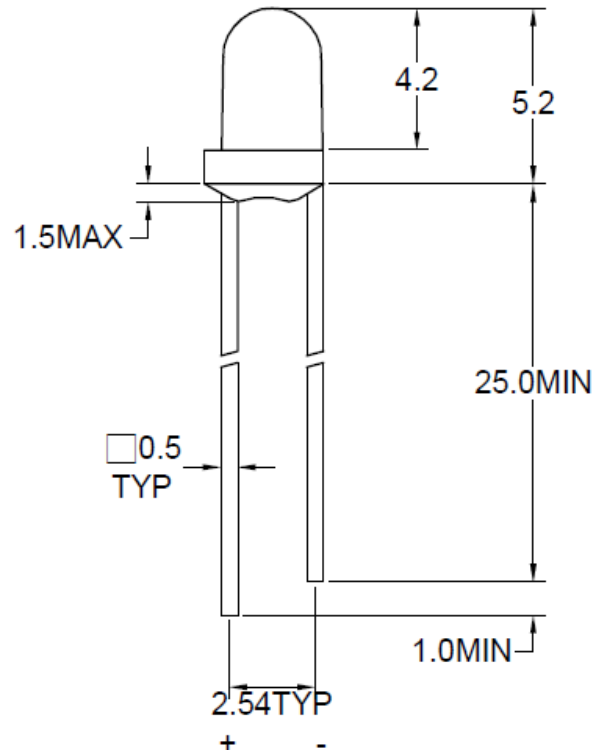
#### DESCRIPTION

- Round Type
- 3mm Diameter
- Lens Color: Pure Green Diffused
- With Flange
- Solder leads without standoffs



#### FEATURES

- Emitted Color: Pure Green
- Technology: InGaN/GaN
- High Luminous Intensity
- Dominant Wavelength  $\lambda_D = 525\text{nm}$
- Viewing Angle:  $34^\circ$



Note: all dimensions are in millimeters; tolerance is  $\pm 0.25\text{mm}$  unless otherwise noted.

Part Number	Material	Color		Viewing Angle
		Emitted	Lens	
L314LPGD-34D	InGaN/GaN	Pure Green	Pure Green Diffused	$34^\circ$



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#### ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

Parameter	Symbol	Value	Unit
DC Forward Current	I <sub>F</sub>	30	mA
Peak Forward Current (Duty 1/10@10KHz)	I <sub>FP</sub>	100	mA
Power Dissipation	P <sub>D</sub>	120	mW
Reverse Current @ 5V	I <sub>R</sub>	50	μA
Electrostatic Discharge	ESD	150	V
Operating Temperature	T <sub>OPR</sub>	-20~+80	°C
Storage Temperature	T <sub>STG</sub>	-30~+100	°C

#### OPTICAL-ELECTRICAL CHARACTERISTICS

(Ta=25°C)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Luminous Intensity	I <sub>v</sub>	I <sub>F</sub> =20mA	900	1500	--	mcd
Peak Wavelength	λ <sub>P</sub>	I <sub>F</sub> =20mA	--	518	--	nm
Dominant Wavelength	λ <sub>D</sub>	I <sub>F</sub> =20mA	--	525	--	nm
Spectral Line Half-Width	Δλ	I <sub>F</sub> =20mA	--	36	--	nm
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =20mA	--	3.5	4.0	V
Viewing Angle	2θ <sub>1/2</sub>	I <sub>F</sub> =20mA	--	--	34	deg

#### Notes:

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



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#### TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVE

Fig.1 Forward current vs. Forward Voltage

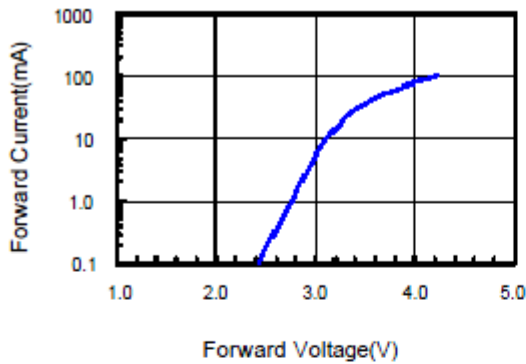


Fig.2 Relative Intensity vs. Forward Current

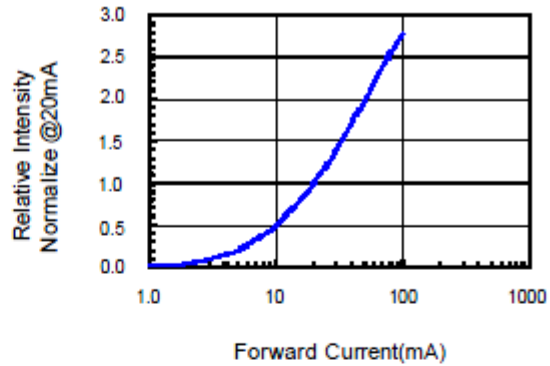


Fig.3 Forward Voltage vs. Temperature

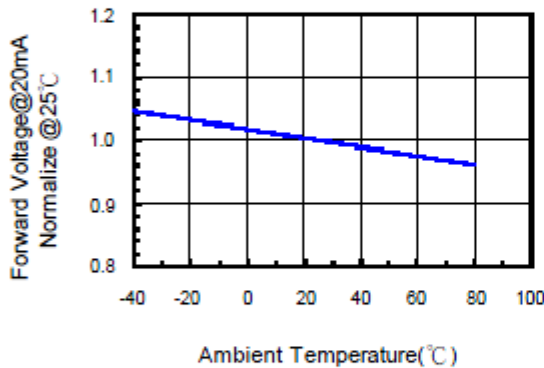


Fig.4 Relative Intensity vs. Temperature

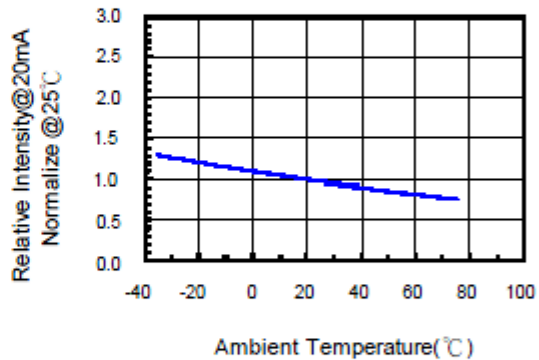
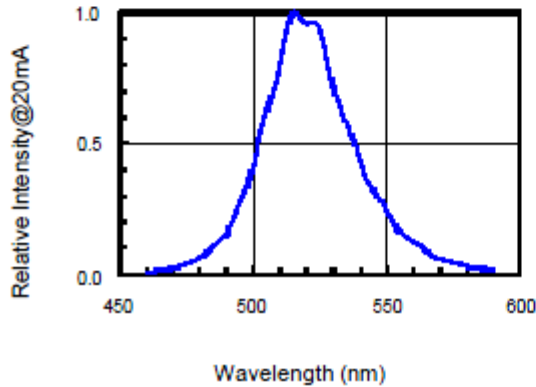
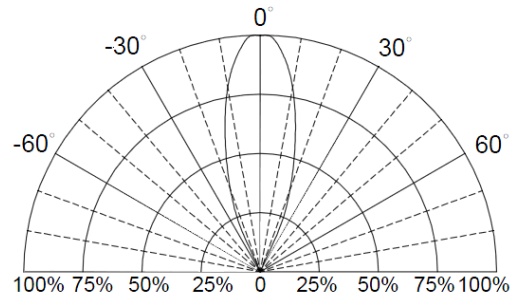


Fig.5 Relative Intensity vs. Wavelength



Directivity Radiation





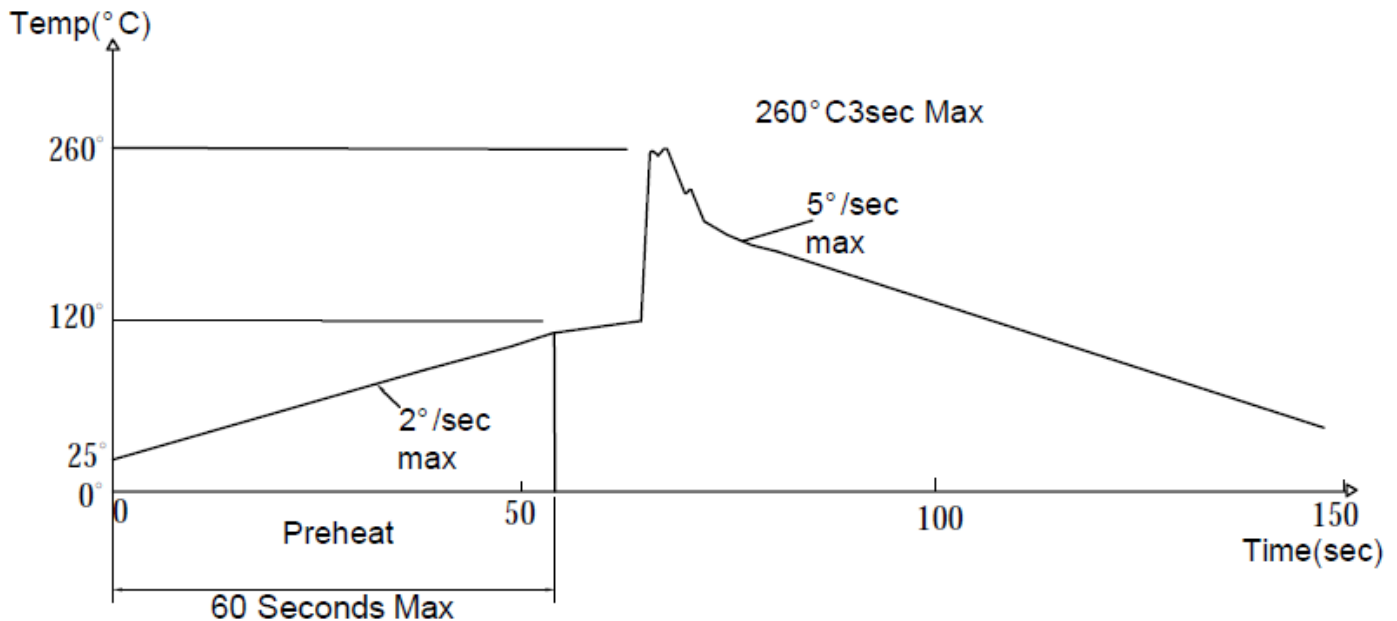
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### SOLDERING PROFILE

1. Iron:  
Soldering Iron: 30W max  
Temperature 350 °C max  
Soldering Time: 3 seconds max (one time)  
Distance: 2mm min (from solder joint to body)
2. Wave Soldering Profile:  
Dip soldering  
Preheat: 120 °C max  
Preheat time: 120 seconds max  
2 °C/sec (max)  
Ramp-down: -5 °C/sec (max)  
Solder bath: 260 °C max  
Dipping time: 3 seconds max  
Distance: 2mm min (from solder joint to body)



#### Notes:

1. Wave solder should not be made more than one time.
2. Only select one of the soldering conditions as above.



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#### RELIABILITY TEST

Test Item	Test Condition	Description	Reference Standard
Operating Life Test	1.Under Room Temperature 2.If=20mA 3.t=1000 hrs (-24hrs, +72hrs)	This test is conducted for the purpose of determining the resistance of a part in electrical and thermal stressed.	MIL-STD-750: 1026 MIL-STD-883: 1005 JIS C 7021: B-1
High Temperature Storage Test	1.Ta=105 °C±5°C 2.t=1000 hrs (-24hrs, +72hrs)	The purpose of this is the resistance of the device which is laid under condition of high temperature for hours.	MIL-STD-883:1008 JIS C 7021: B-10
Low Temperature Storage Test	1.Ta=-40 °C±5°C 2.t=1000 hrs (-24hrs, +72hrs)	The purpose of this is the resistance of the device which is laid under condition of low temperature for hours.	JIS C 7021: B-12
High Temperature High Humidity Test	1.Ta=65 °C±5°C 2.RH=90 %~95% 3.t=240hrs ±2hrs	The purpose of this test is the resistance of the device under tropical for hours.	MIL-STD-202:103B JIS C 7021: B-11
Thermal Shock Test	1.Ta=105 °C±5°C & -40 °C±5°C (10min) (10min) 2.total 10 cycles	The purpose of this is the resistance of the device to sudden extreme changes in high and low temperature.	MIL-STD-202: 107D MIL-STD-750: 1051 MIL-STD-883: 1011
Solder Resistance Test	1.T.Sol=260 °C±5°C 2.Dwell time= 10 ±1sec.	This test intended to determine the thermal characteristic resistance of the device to sudden exposures at extreme changes in temperature when soldering the lead wire.	MIL-STD-202: 210A MIL-STD-750: 2031 JIS C 7021: A-1
Solderability Test	1.T.Sol=230 °C±5°C 2.Dwell time=5 ±1sec	This test intended to see soldering well performed or not.	MIL-STD-202: 208D MIL-STD-750: 2026 MIL-STD-883: 2003 JIS C 7021: A-2