



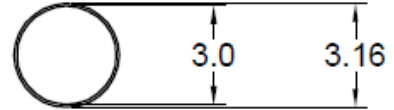
American Opto Plus LED Corp.

L354LGC-45D

3mm Green LED Lamp

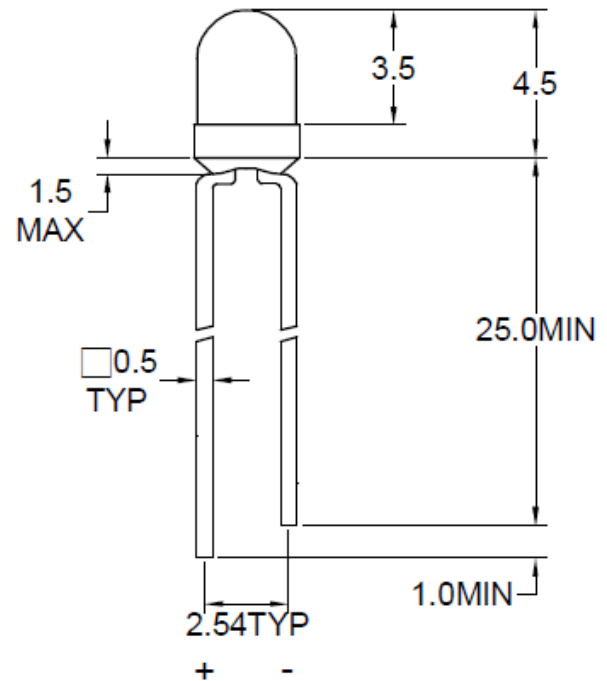
DESCRIPTION

- Round Type
- 3mm Diameter
- Lens Color: Water Clear
- With Flange
- Solder leads without stand-off
- Compliant with RoHS



FEATURES

- Emitted Color: Green
- High Luminous Intensity
- Technology: GaP
- Viewing Angle: 45°
- Peak Wavelength $\lambda_p = 565\text{nm}$



Note:

1. The forward voltage data did not include $\pm 0.1\text{V}$ testing tolerance.
2. The luminous intensity data did not include $\pm 15\%$ testing tolerance.

Part No.	Chip Material	Lens Color	
		Emitted	Lens
L354LGC-45D	GaP	Green	Water Clear



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ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

Parameter	Symbol	Ratings	Unit
Continuous Forward Current	I _F	30	mA
Peak Forward Current (1/10 Duty Cycle @1KHz)	I _{FP}	120	mA
Reverse Voltage	V _R	5.0	V
Power Dissipation	P _d	100	mW
Operating temperature range	Topr	-40~+85	°C
Storage temperature range	Tstg	-40~+100	°C

Solder Temperature 1.6mm from body for 3 sec at 260°C

OPTICAL-ELECTRICAL CHARACTERISTICS

(Ta=25°C)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Current	I _R	V _R =5V	--	--	10	μA
Forward Voltage	V _F	I _F =20mA	1.7	--	2.6	V
Luminous Intensity	I _V		120	220	--	mcd
Spectrum Radiation Bandwidth	Δλ		--	25	--	nm
Peak Wavelength	λ _p		--	565	--	nm
Viewing Angle	2θ1/2		--	45	--	Deg.

*Note: Tolerance of Viewing Angle: -10 / +5 deg.



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TYPICAL ELECTRICAL-OPTICAL CHARACTERISTIC CURVES

Fig.1 Forward current vs. Forward Voltage

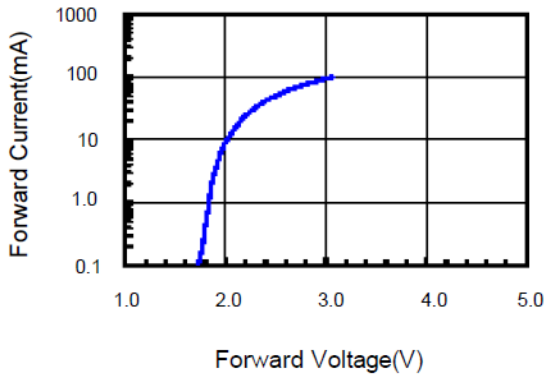


Fig.2 Relative Intensity vs. Forward Current

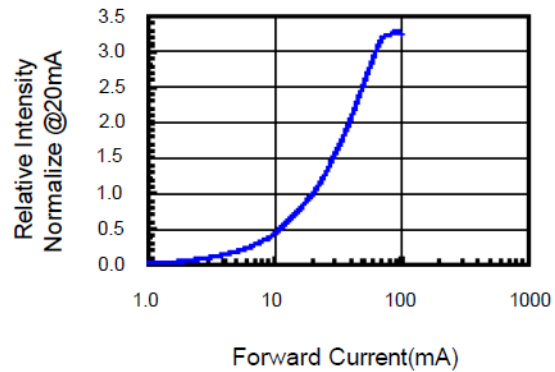


Fig.3 Forward Voltage vs. Temperature

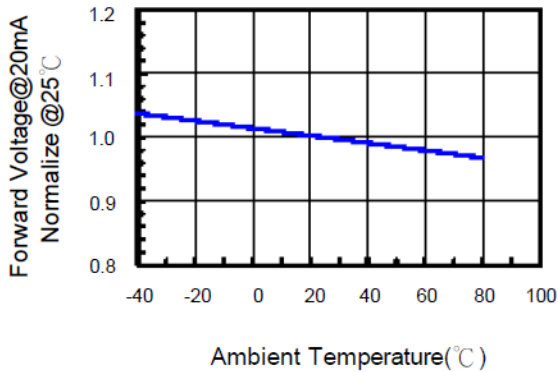


Fig.4 Relative Intensity vs. Temperature

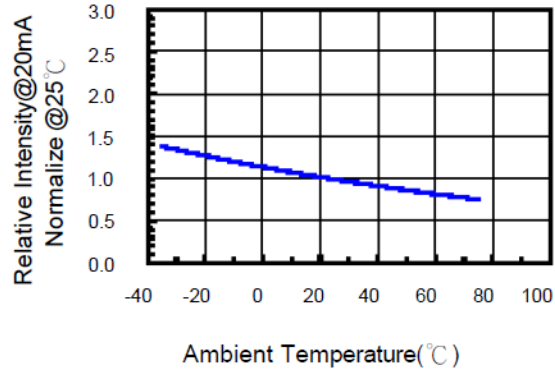
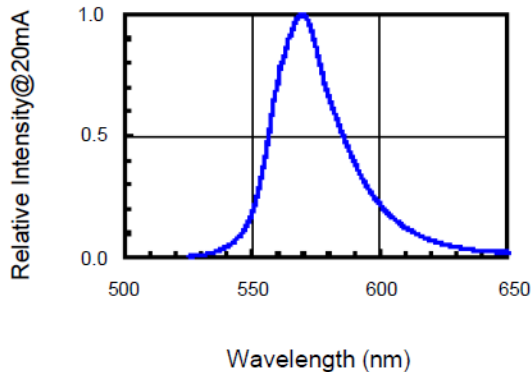


Fig.5 Relative Intensity vs. Wavelength





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SOLDERING CONDITION (Pb-Free)

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: 60 seconds Max

Ramp-up

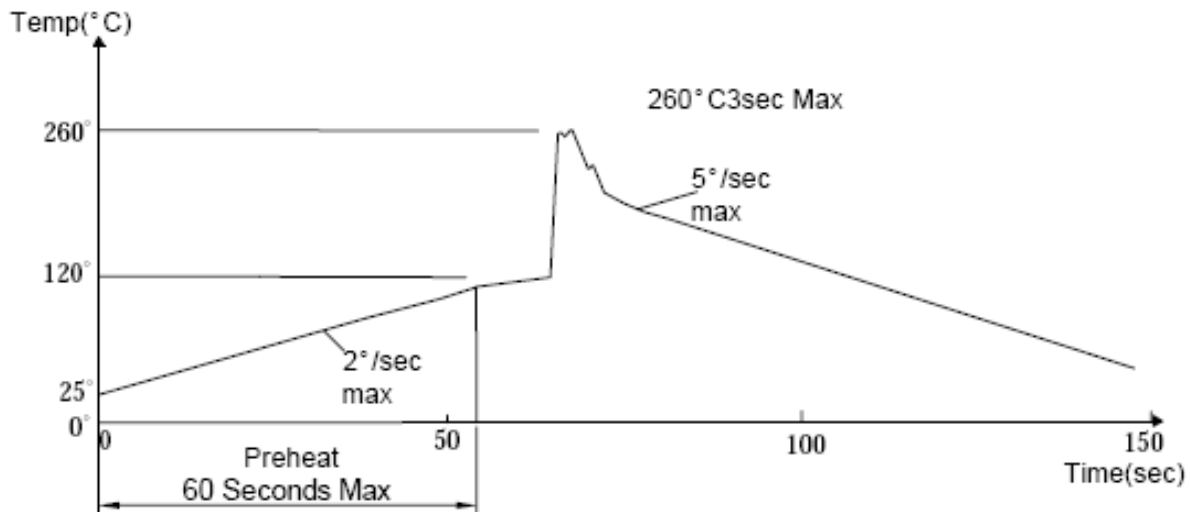
2°C/sec (Max)

Ramp-Down: -5°C/sec (Max)

Solder Bath: 260°C Max

Dipping Time: 3 seconds Max

Distance: 2mm Min (from solder joint to body)





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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