



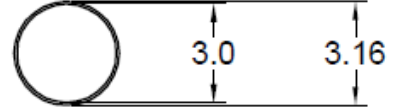
American Opto Plus LED Corp.

L354NWC-40D

3mm White LED Lamp

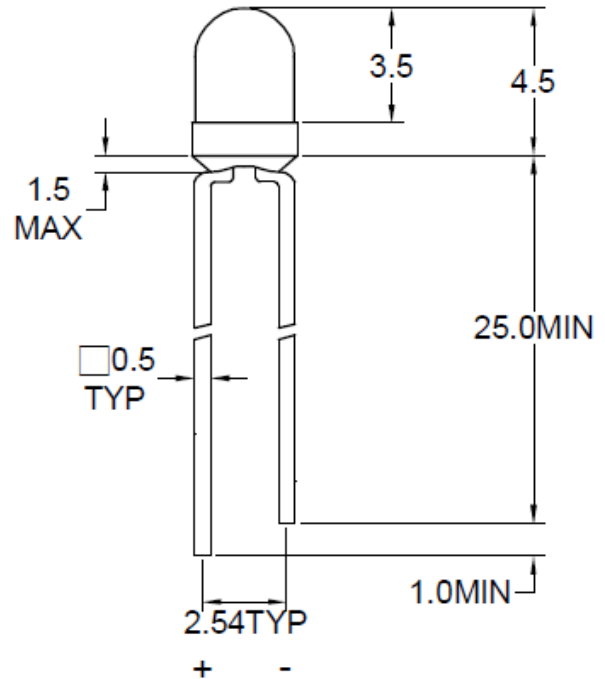
DESCRIPTION

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



FEATURES

- Emitted Color: White
- High Luminous Intensity
- Technology: InGaN/GaN
- Viewing Angle: 40°



Note:

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

Part No.	Chip Material	Lens Color	
		Emitted	Lens
L354NWC-40D	InGaN/GaN	White	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}	100	mA
Reverse Voltage	V _R	5.0	V
Power Dissipation	P _d	120	mW
Electrostatic Discharge	ESD	500	V
Operating temperature range	T _{opr}	-20~+85	°C
Storage temperature range	T _{stg}	-30~+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	--	--	50	μA
Forward Voltage	V _F	I _F =20mA	--	3.5	4.0	V
Luminous Intensity	I _v		1800	2700	--	mcd
Chromaticity Coordinates	X		0.26	--	0.31	
	Y		0.23	--	0.34	
Viewing Angle	2θ _{1/2}		--	40	--	Deg.

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



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COLOR BINS

BIN	X	Y
B1	0.26	0.265
	0.26	0.225
	0.27	0.240
	0.27	0.280
B2	0.27	0.280
	0.27	0.240
	0.28	0.255
	0.28	0.295
B3	0.28	0.295
	0.28	0.255
	0.29	0.270
	0.29	0.310
B4	0.29	0.310
	0.29	0.270
	0.30	0.285
	0.30	0.325
B5	0.30	0.325
	0.30	0.285
	0.31	0.300
	0.31	0.340

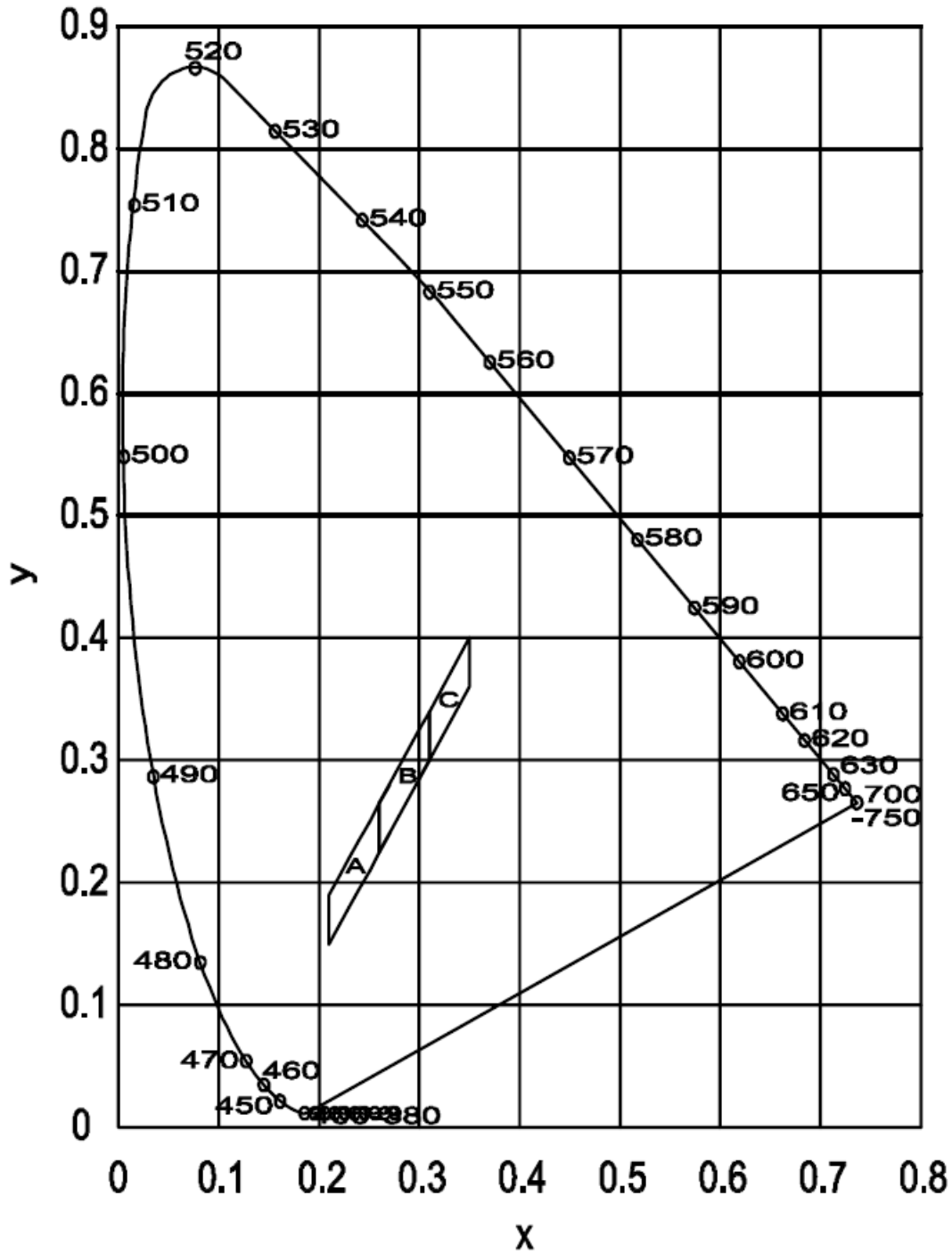


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CIE CHROMATICITY DIAGRAM





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TYPICAL ELECTRICAL-OPTICAL CHARACTERISTIC CURVES

Fig.1 Forward current vs. Forward Voltage

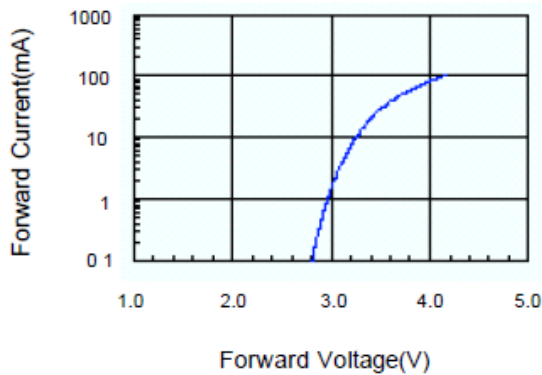


Fig.2 Relative Intensity vs. Forward Current

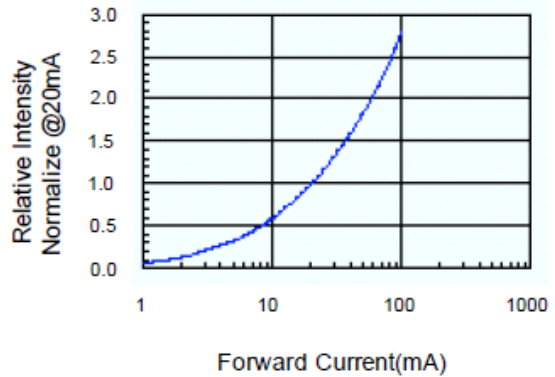


Fig.3 Forward Voltage vs. Temperature

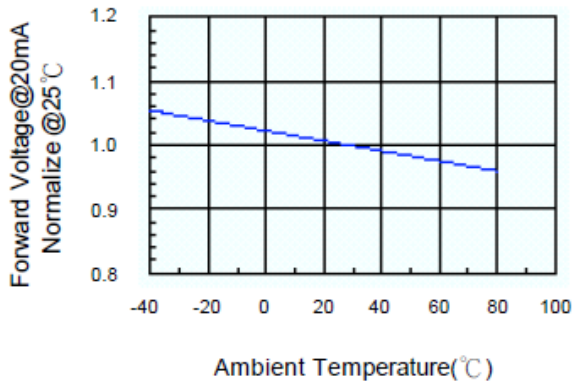


Fig.4 Relative Intensity vs. Temperature

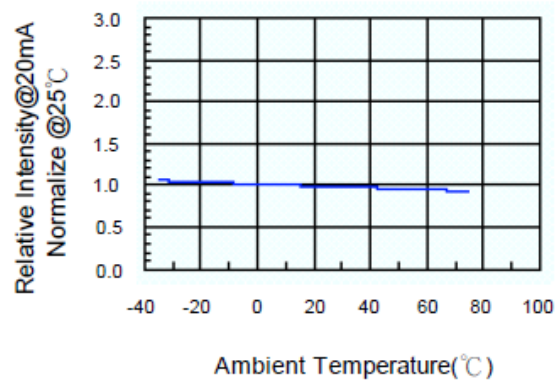
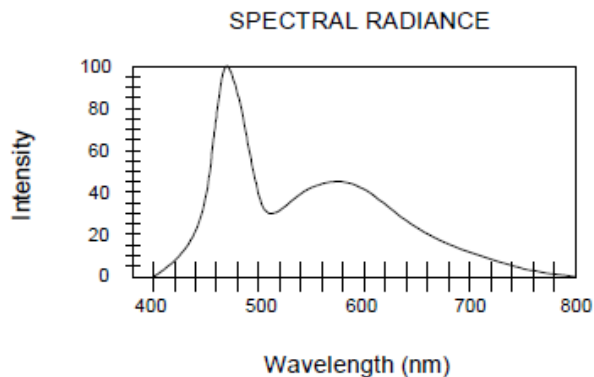


Fig.5 Luminous Spectrum (Ta=25°C)





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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