



# American Opto Plus LED L-5C3NWC

5mm FLAT-TOP LED LAMP - WATER CLEAR

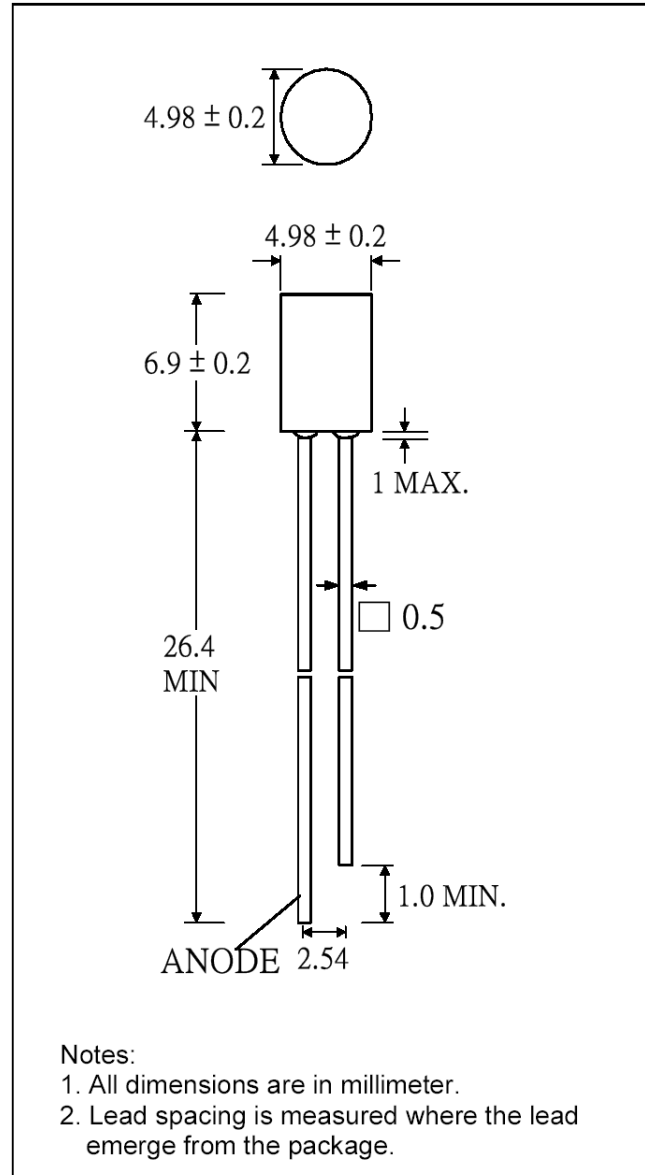
- ◆ 5.0mm FLAT-TOP LED LAMP
- ◆ WIDE VIEWING ANGLE
- ◆ LOW POWER CONSUMPTION
- ◆ HIGH LUMINOUS INTENSITY

## DESCRIPTION

- Super bright LED Lamp
- Cylindrical type
- T1-3/4 (5mm) diameter
- Lens color: Water clear
- Without flange
- Solder leads without stand-off

## FEATURES

- Emitted color: White
- High luminous intensity
- Technology: GaN
- Typical emission color  
x = 0.31, y = 0.32
- Viewing angle: 100°
- UV resistant epoxy



## SELECTION GUIDE

Chip Material	Chip Emitted	Lens Color	Viewing Angle
GaN	White	Water Clear	100°



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## ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

PARAMETER	SYMBOL	MAX. RATING	Unit
Power Dissipation	P <sub>D</sub>	120	mW
Peak Forward Current (1/10 Duty Cycle @1KHz )	I <sub>PF</sub>	100	mA
Continuous Forward Current	I <sub>AF</sub>	30	mA
Reverse Voltage	V <sub>R</sub>	5.0	V
Operating Temperature Range	T <sub>OPR</sub>	-20~+80	°C
Storage Temperature Range	T <sub>STG</sub>	-30~+100	°C

Solder temperature 1.6 mm from body for 3 seconds at 260°C

## OPTICAL-ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Luminous Intensity	I <sub>V</sub>	I <sub>F</sub> = 20mA	300	450		mcd
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 20mA		3.5	4.0	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> = 5V			10	uA
Viewing Angle	2θ <sub>1/2</sub>	I <sub>F</sub> = 20mA		100		deg.

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



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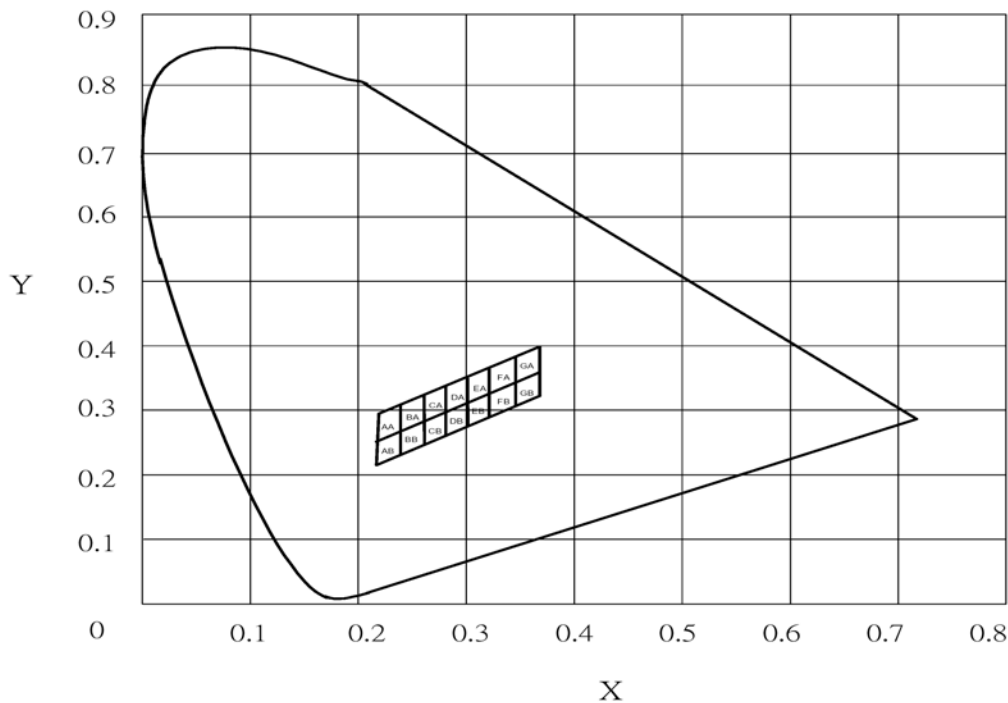
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### CHROMATICITY COORDINATES FOR BIN GRADING

Rank	Chromaticity Coordinates					Rank	Chromaticity Coordinates				
AA	x	0.222	0.224	0.243	0.242	DB	x	0.281	0.283	0.302	0.300
	y	0.251	0.294	0.311	0.262		y	0.260	0.298	0.313	0.275
AB	x	0.221	0.222	0.242	0.241	EA	x	0.302	0.303	0.325	0.323
	y	0.212	0.251	0.262	0.228		y	0.313	0.352	0.364	0.325
BA	x	0.242	0.243	0.264	0.262	EB	x	0.300	0.302	0.323	0.321
	y	0.262	0.311	0.329	0.280		y	0.275	0.313	0.325	0.292
BB	x	0.241	0.242	0.262	0.260	FA	x	0.323	0.325	0.349	0.347
	y	0.228	0.262	0.280	0.241		y	0.325	0.364	0.383	0.344
CA	x	0.262	0.264	0.284	0.283	FB	x	0.321	0.323	0.347	0.345
	y	0.280	0.329	0.340	0.298		y	0.292	0.325	0.344	0.306
CB	x	0.260	0.262	0.283	0.281	GA	x	0.347	0.349	0.372	0.370
	y	0.241	0.280	0.298	0.260		y	0.344	0.383	0.400	0.360
DA	x	0.283	0.284	0.303	0.302	GB	x	0.345	0.347	0.370	0.368
	y	0.298	0.340	0.352	0.313		y	0.306	0.344	0.360	0.320
Tolerance	$x \pm 0.02$					$y \pm 0.02$					

### CIE CHROMATICITY DIAGRAM:



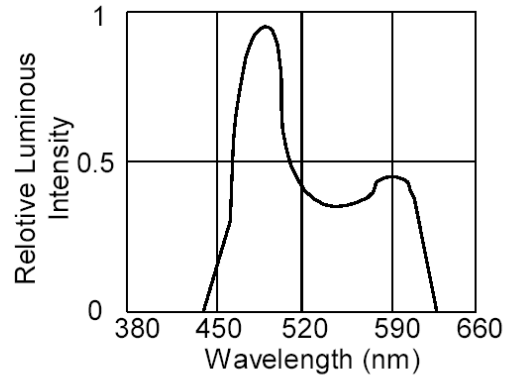
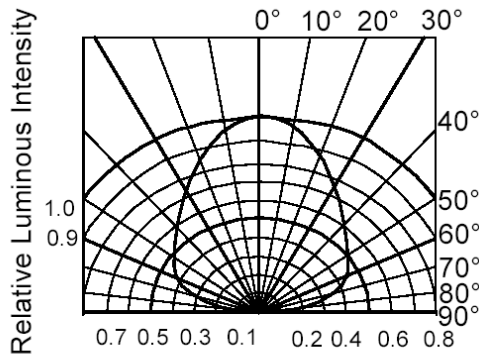


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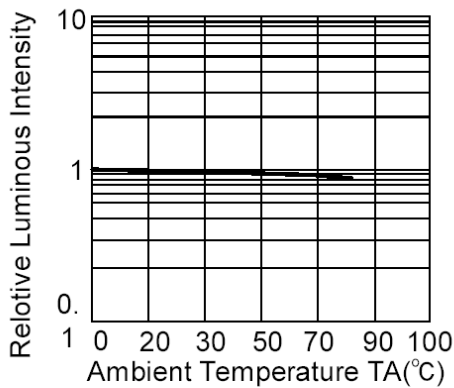
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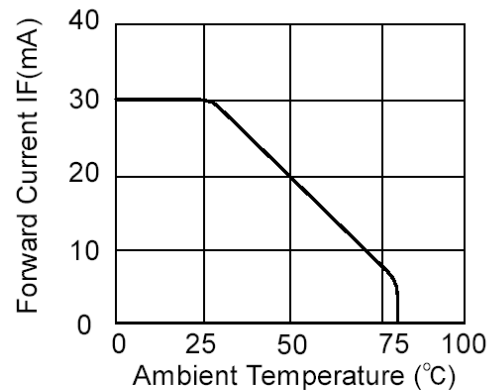
## TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES



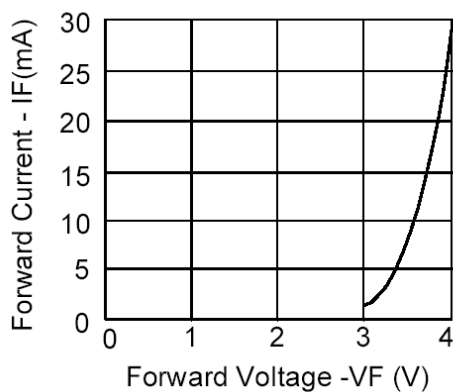
### RADIATION DIAGRAM



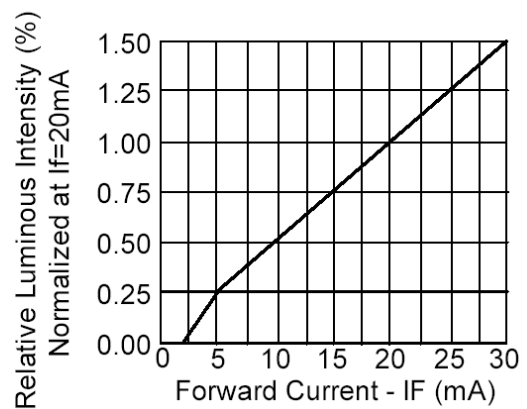
### RELATIVE LUMINOUS INTENSITY Vs. WAVELENGTH



### LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE



### FORWARD CURRENT Vs. AMBIENT TEMPERATURE



### FORWARD CURRENT Vs. FORWARD VOLTAGE

### LUMINOUS INTENSITY Vs. FORWARD CURRENT