

5mm FLAT-TOP LED LAMP - WATER CLEAR

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

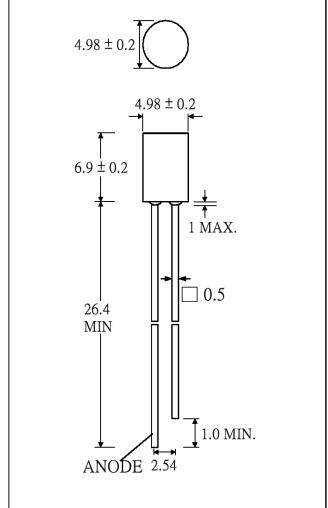
### **DESCRIPTION**

- 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





#### Notes:

- 1. All dimensions are in millimeter.
- 2. Lead spacing is measured where the lead emerge from the package.

### **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>	$I_F = 20 \text{mA}$	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	201/2	I <sub>F</sub> = 20mA		100		deg.

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



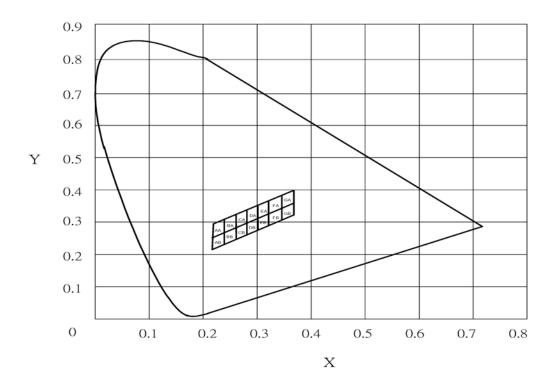
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#### **CHROMATICITY COORDINATES FOR BIN GRADING**

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

#### **CIE CHROMATICITY DIAGRAM:**

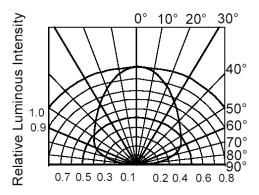


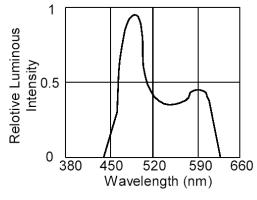


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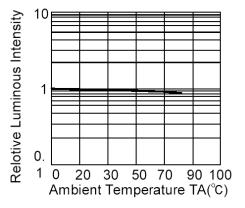
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### TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES

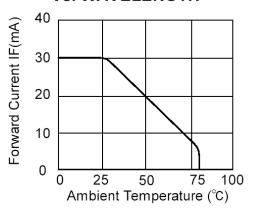




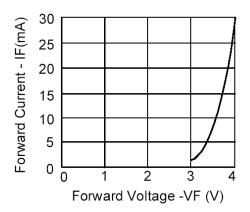
#### **RADIATION DIAGRAM**



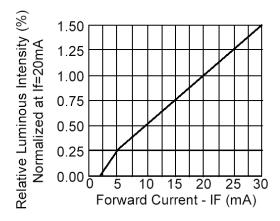
## RELATIVE LUMINOUS INTENSITY Vs. WAVELENGTH



## LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE



FORWARD CURRENT Vs. AMBIENT TEMPERATURE



FORWARD CURRENT Vs. FORWARD VOLTAGE

LUMINOUS INTENSITY Vs. FORWARD CURRENT