



American Opto Plus LED

L-513LEC-15D

5mm Dia LED LAMP - WATER CLEAR

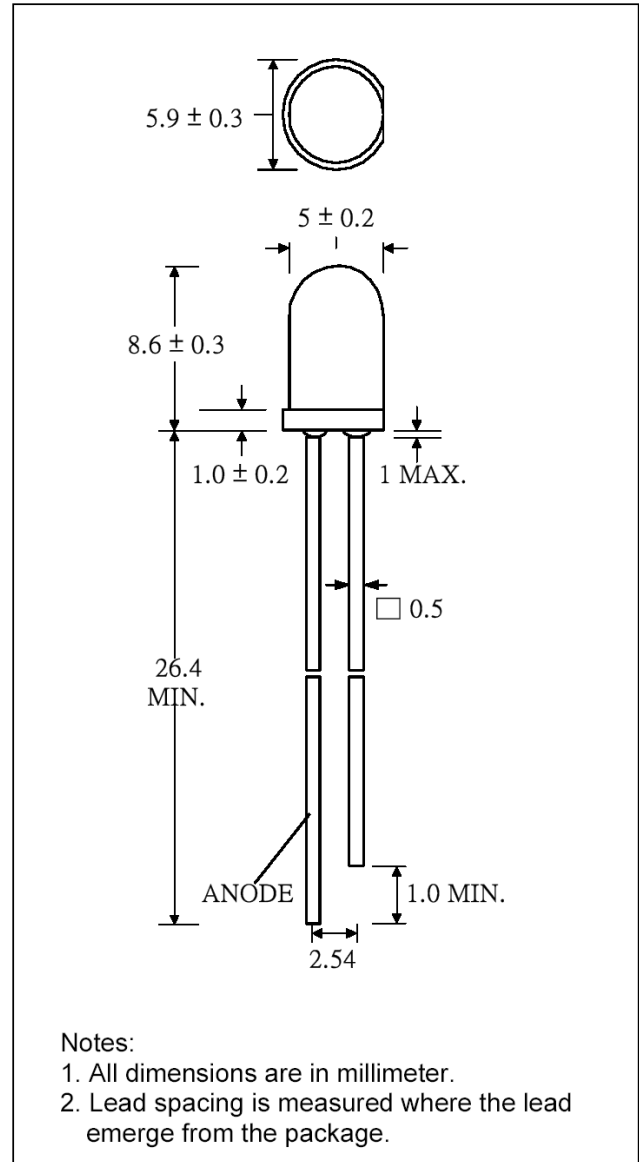
- ◆ 5.0mm DIA LED LAMP
- ◆ I.C. COMPATIBLE
- ◆ LOW POWER CONSUMPTION
- ◆ HIGH LUMINOUS INTENSITY

DESCRIPTION

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

FEATURES

- Emitted color: Super Red
- High luminous intensity
- Technology: AlGaInP
- Peak wavelength $\lambda_p = 630\text{nm}$
- Viewing angle: 15°



SELECTION GUIDE

Chip Material	Chip Emitted	Lens Color	Viewing Angle
AlGaInP	Super Red	Water Clear	15°



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ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

PARAMETER	SYMBOL	MAX. RATING	Unit
Power Dissipation	P_D	120	mW
Peak Forward Current (1/10 Duty Cycle @1KHz)	I_{PF}	100	mA
Continuous Forward Current	I_{AF}	50	mA
Reverse Voltage	V_R	5.0	V
Operating Temperature Range	T_{OPR}	-40~+85	°C
Storage Temperature Range	T_{STG}	-40~+85	°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_V	$I_F = 20\text{mA}$	3000	4000		mcd
Forward Voltage	V_F	$I_F = 20\text{mA}$		2.0	2.4	V
Reverse Current	I_R	$V_R = 5\text{V}$			10	uA
Viewing Angle	2θ1/2	$I_F = 20\text{mA}$		15		deg.
Peak Wavelength	λ_P	$I_F = 20\text{mA}$		630		nm
Dominant Wavelength	λ_D	$I_F = 20\text{mA}$		625		nm
Spectrum Radiation Bandwidth	$\Delta\lambda$	$I_F = 20\text{mA}$		20		nm

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



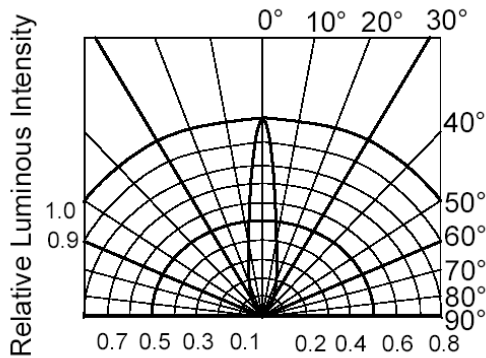
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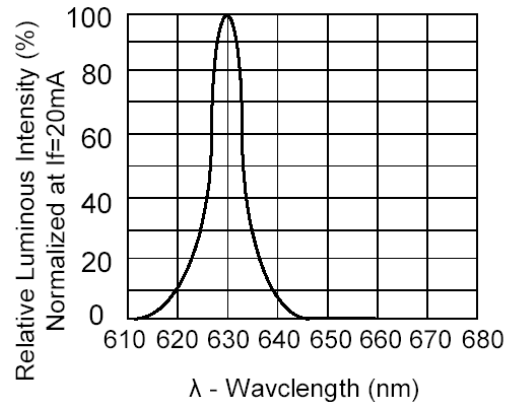
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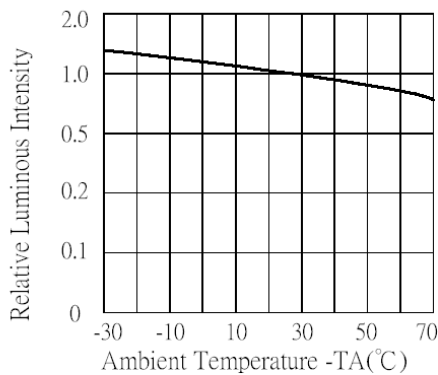
TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES



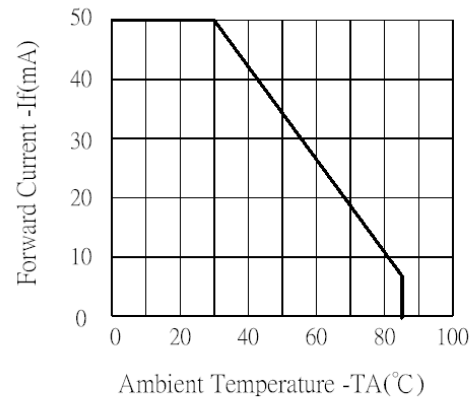
RADIATION DIAGRAM



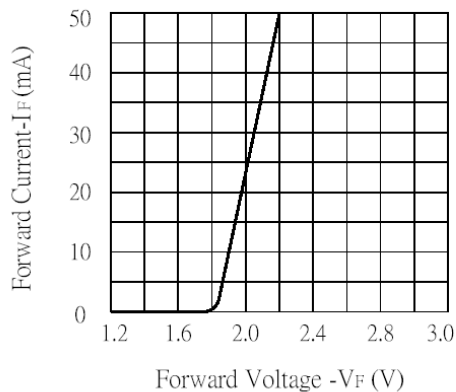
RELATIVE LUMINOUS INTENSITY Vs. WAVELENGTH



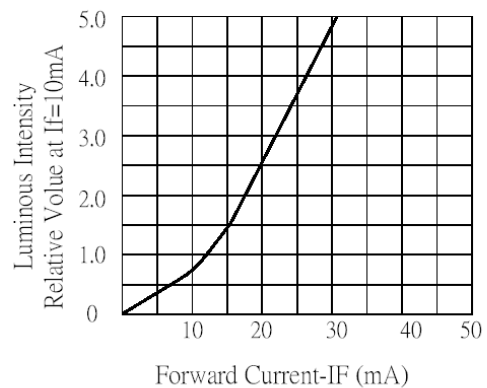
LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE



FORWARD CURRENT Vs. AMBIENT TEMPERATURE



FORWARD CURRENT Vs. FORWARD VOLTAGE



LUMINOUS INTENSITY Vs. FORWARD CURRENT