Technical Data Sheet

5mm Round LED,T-1 3/4

Features

◆Popular T-1 3/4 diameter package
◆Choice of various viewing angles
◆Viewing angle=15°
◆ Reliable and robust

Descriptions

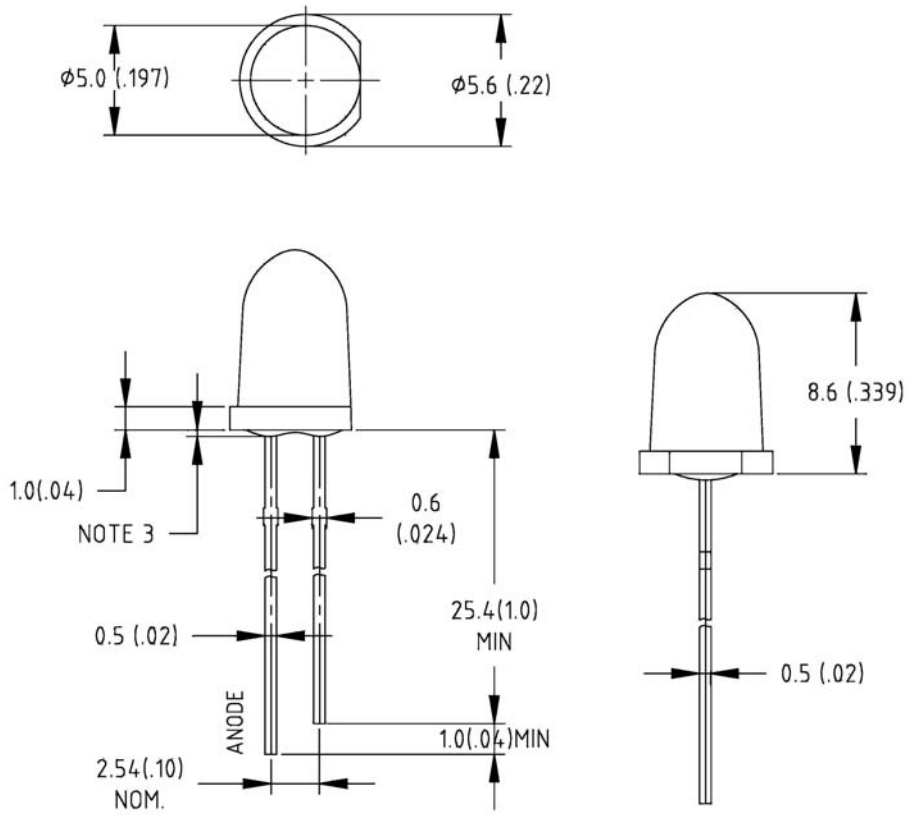
◆The series is specially designed for applications requiring higher brightness
◆The LED lamps are available with different colors, intensities , epoxy colors , etc.

Applications

◆ TV set
◆ Monitor
◆ Telephone
◆ Computer

Part NO.	Material	Lens Color	Source Color
LLW51570	lnGaN	Water Clear	White

Package Dimension:



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25(.010")mm unless otherwise noted.
3. Protruded resin under flange is 1.0mm(.04") max
4. Specifications are subject to change without notice.
5. Caution in ESD:

   Siatic Electricity and surge damages the LED. lt is recommend to use a wrist band or anti-electrostatic glove when handling the LED.All devices, equipment and machinery must be properly grounded.

Absolute Maximum Ratings at Ta=25℃

Parameter	MAX.	Unit
Power Dissipation	100	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	100	mA
Continuous Forward Current	35	mA
Electrostatic Discharge(ESD)	150	V
Reverse Voltage	5	V
Operating Temperature Range	-40℃ to +80℃	
Storage Temperature Range	-40℃ to +100℃	
Lead Soldering Temperature [4mm(.157”) From Body]	260℃ for 5 Seconds	

Electrical Optical Characteristics at Ta=25℃

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	Iv	4000	5000	7000	mcd	I_f=20mA (Note 1)
Viewing Angle	$2\theta_{1/2}$	---	15	--	Deg	(Note 2)
$x=\frac{X}{X+Y+Z}=\frac{Red}{Red+Green+Blue}$	x	---	0.30	---	---	I_F=20mA (Note 3)
$y=\frac{Y}{X+Y+Z}=\frac{Green}{Red+Green+Blue}$	y	---	0.31	---	---	I_F=20mA (Note 3)
Forward Voltage	V_F	3.0	3.6	4.0	V	I_F=20mA
Reverse Current	I_R	---	---	10	μA	V_R=5V

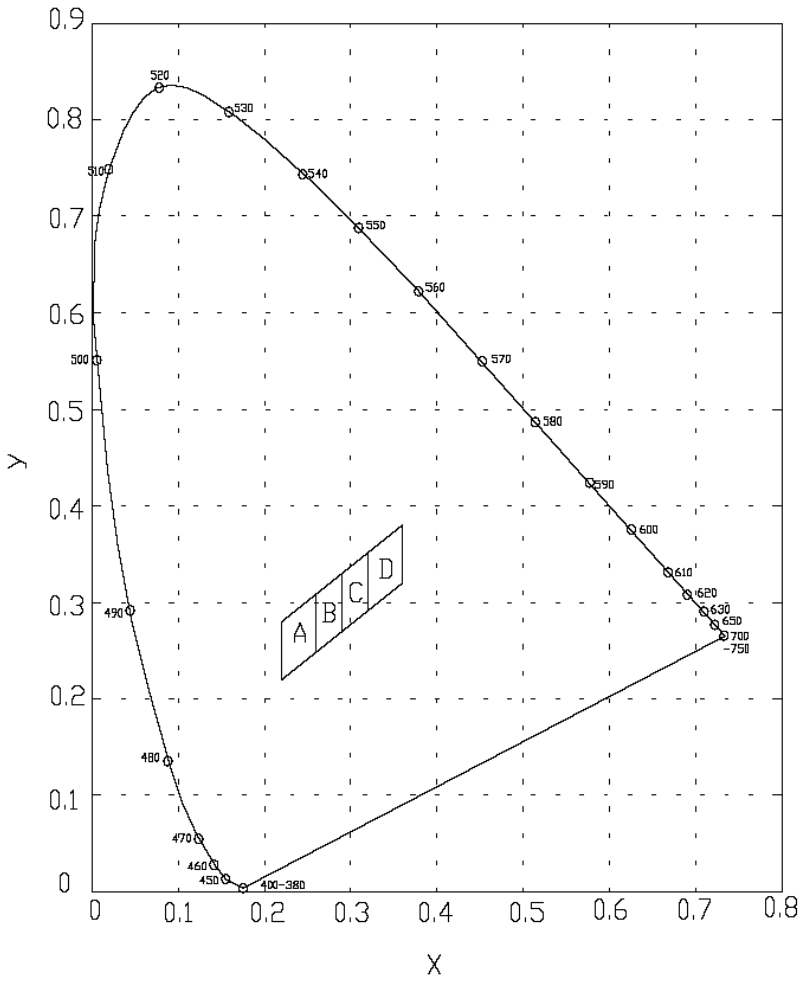
Note:

1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2. $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
3. It use many parameters that correspond to the CIE 1931 2° . X,Y, and Z are CIE 1931 2° values of Red, Green and Blue content of the measurement.

◆Chromaticity Coordinates Specifications for Bin Grading

Rank	Chromaticity Coordinates				
A	x	0.22	0.22	0.26	0.26
	y	0.22	0.28	0.31	0.25
B	x	0.26	0.26	0.29	0.29
	y	0.25	0.31	0.33	0.27
C	x	0.29	0.29	0.32	0.32
	y	0.27	0.33	0.35	0.29
D	x	0.32	0.32	0.36	0.36
	y	0.29	0.35	0.38	0.32
*Tolerance	x±0.02			y±0.02	

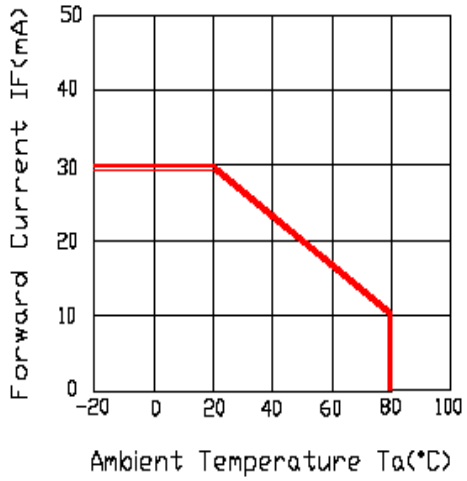
◆CIE Chromaticity Diagram



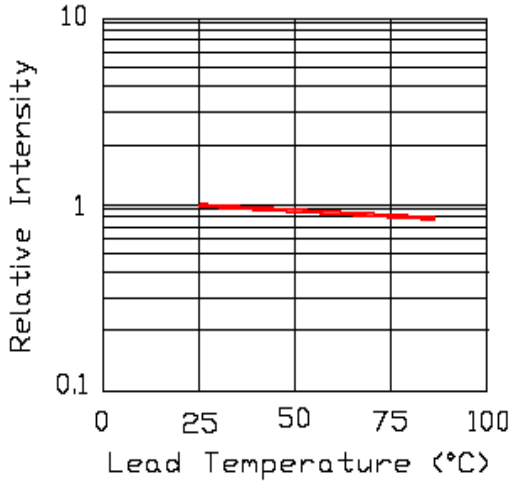
Typical Electrical / Optical Characteristics Curves

(25℃ Ambient Temperature Unless Otherwise Noted)

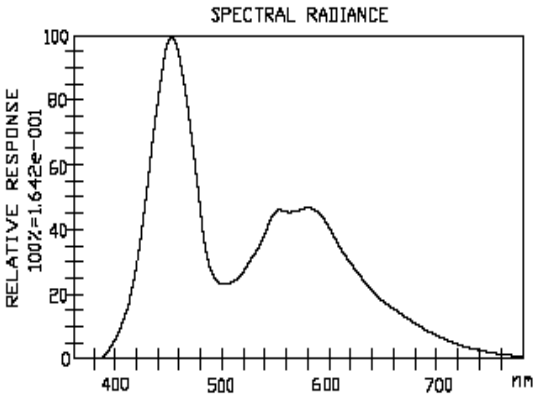
●Forward Current vs. Ambient Temperature



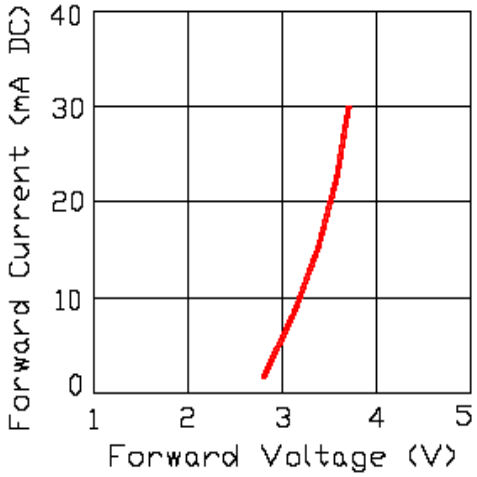
●Relative Intensity vs. Lead Temperature



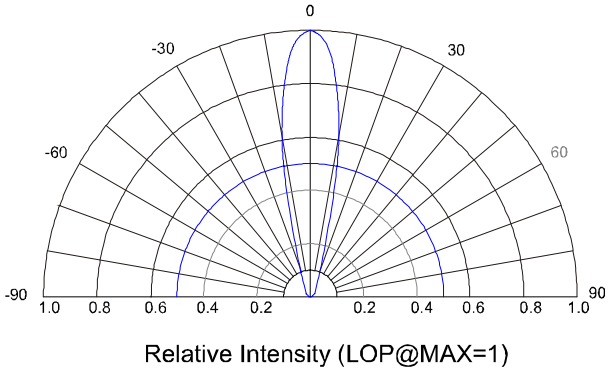
●Luminous Spectrum(Ta=25℃)



●Forward Current vs. Forward Voltage



Beam Pattern



Relative Intensity (LOP@MAX=1)