



LWH05AF-15

LIGHT EMITTING DIODE

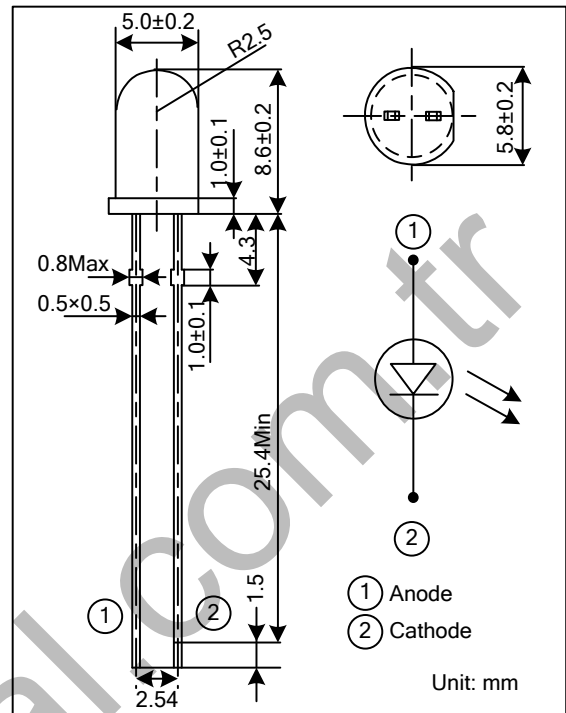
LED LAMP

DESCRIPTION

15 Degree 5mm Round LED Lamp in White Color with Water Clear Lens and Stopper. Dice Material: AlGaInP

APPLICATION

- * Advertising Signs
- * Indicators
- * Automotive Lighting



ORDERING INFORMATION

Ordering Number
LWH05AF-15

<p>L W H 0 5 A F - 1 5</p> <p>(1)View Angle (2)Package Outline (3)Encapsulate Type (4)Diameter of Lamp (5)Color Type (6)Product Type</p>	<p>(1) 15: $15^\circ \pm 3^\circ$ (2) F: Round with Brim (3) A: Colorless Transparent (4) 05: $\Phi 5$ (5) WH: White (6) L: Lamp</p>
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■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

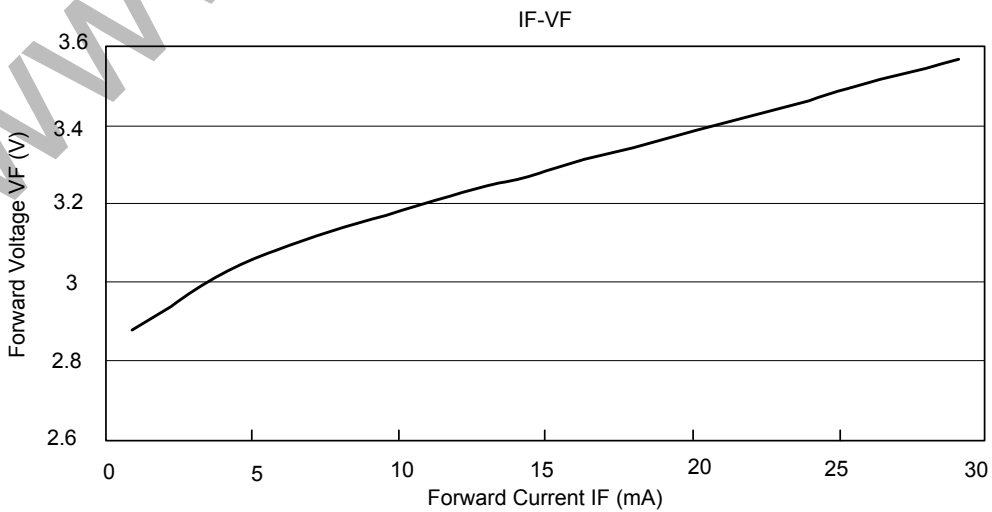
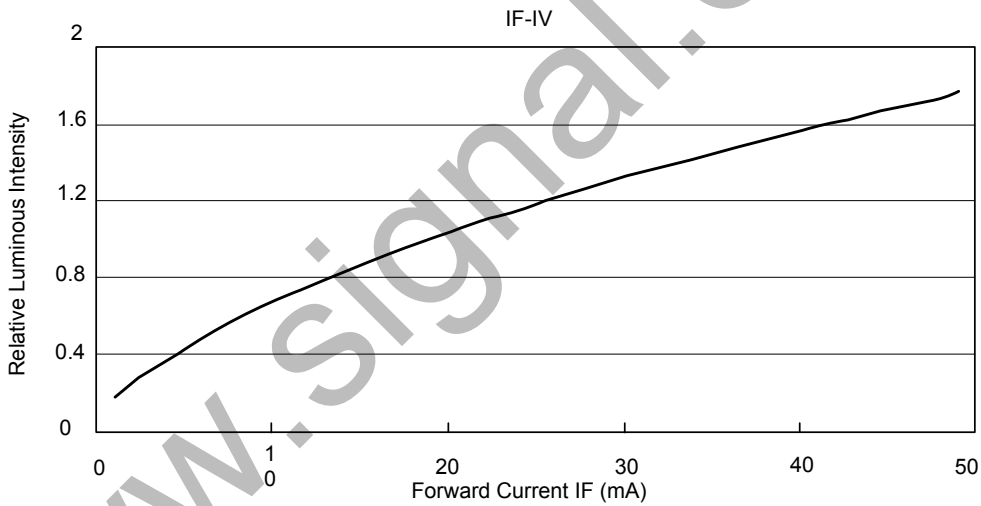
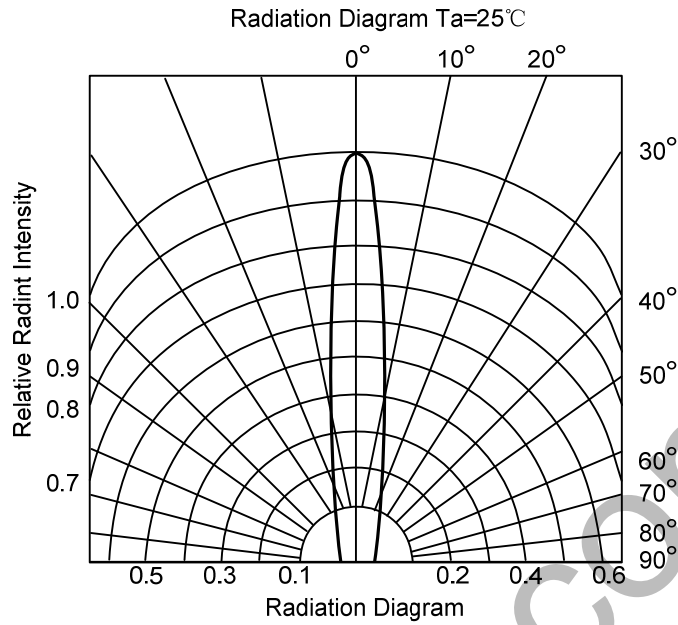
PARAMETER	SYMBOL	RATINGS	UNIT
Forward Current	I_F	30	mA
Peak Forward Current	I_{fp}	90	mA
Power Dissipation	P_D	120	mW
Reverse Voltage	V_r	5	V
Lead Soldering Temperature	T_{sol}	260(for 5seconds)	
Operating Temperature	T_{OPR}	-40 ~ +85	°C
Storage Temperature	T_{STG}	-40 ~ +100	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

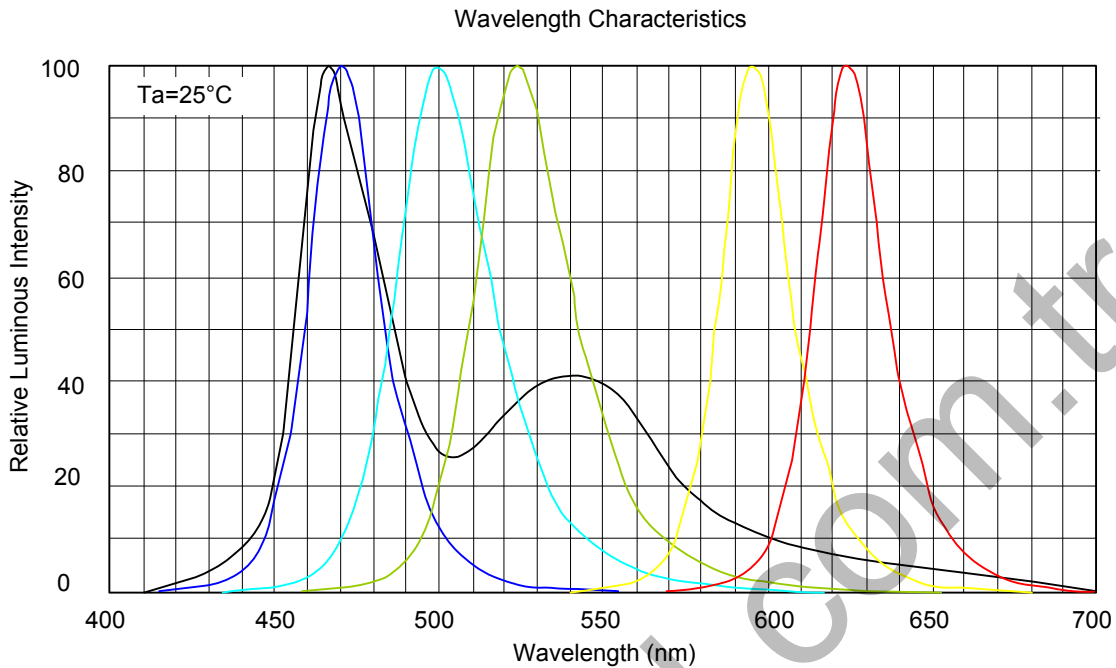
■ ELECTRICAL OPTICAL CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Luminous Intensity	IV	$I_F=20mA$	8000		10000	mcd
			10000		12000	
			12000		15000	
			15000		18000	
			18000		21000	
Viewing Angle	2θ1/2	$I_F=20mA$		15		deg
Forward Voltage	V_F	$I_F=20mA$	3.1		3.3	V
Reverse Current	I_R	$V_R=5V$			50	μA
Chromaticity Coordinates	X	$I_F=20mA$		0.29		
	Y	$I_F=20mA$		0.30		

■ TYPICAL ELECTRO-OPTICAL CHARACTERISTICS CURVES



■ TYPICAL ELECTRO-OPTICAL CHARACTERISTICS CURVES(Cont.)



■ RELIABILITY ITEMS AND CONDITIONS

NO.	ITEMS	TEST CONDITIONS	Note	Number of Damaged
1	Resistance to Soldering Heat	260°C±5°C	10Sec.	PASS
2	Thermal Shock	-20°C~100°C 10Min. 5Sec. 10Min.	50Cycles	PASS
3	Temperature Cycle	-40°C 25°C 100°C 30Min. 5Min. 30Min.	100Cycles	PASS
4	Hi-Temp. Storage	100°C	1000Hrs	PASS
5	Low-Temp. Storage	-40°C	1000Hrs	PASS
6	Hi-Temperature/Hi-Humidity Test	60°C/90%RH	1000Hrs	PASS
7	Operating Life	I _F =20mA	1000Hrs	PASS
8	Life Time 1	20mA@ROOM TEMP	1000Hrs	PASS
9	Life Time 2	20mA@-40°C	1000Hrs	PASS
10	ON/OFF Test	I _F =20mA Pulse width 0.1msec max. Duty cycle 1/10	1000,000Cycles	PASS

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