LIGITEK

LIGITEK ELECTRONICS CO.,LTD.
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10W Power Light LED

Preliminary

Lead-Free Parts

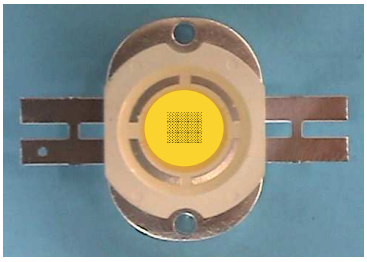
LGXW-0225A7X-P

DATA SHEET

DOC. NO : IMQW0905-LGXW-0225A7X-P

REV. : A

DATE : 24-Mar-2009



Features：

■Highest Flux White.

■High reliability and Very long operating life.(up to 20K hours)

■Low voltage DC operated.

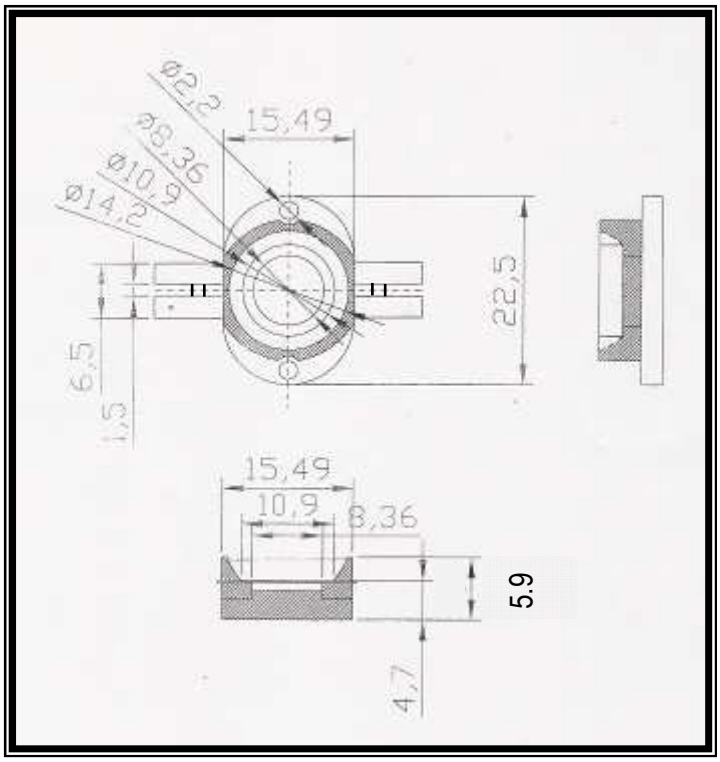
■More Energy Efficient than Incandescent and most Halogen lamps.

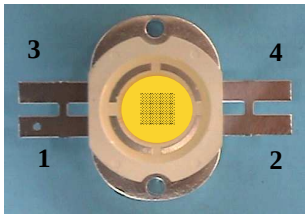
■NO UV.

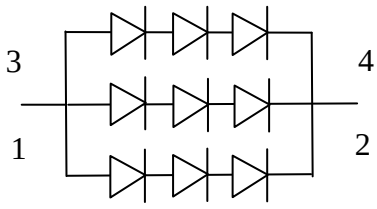
Typical Applications：

■Lighting.

■Speciality lighting.







NOTE:

■All dimensions are millimeter.

■Tolerance is±0.1mm unless otherwise noted.

Absolute Maximum Ratings at T_A =25℃

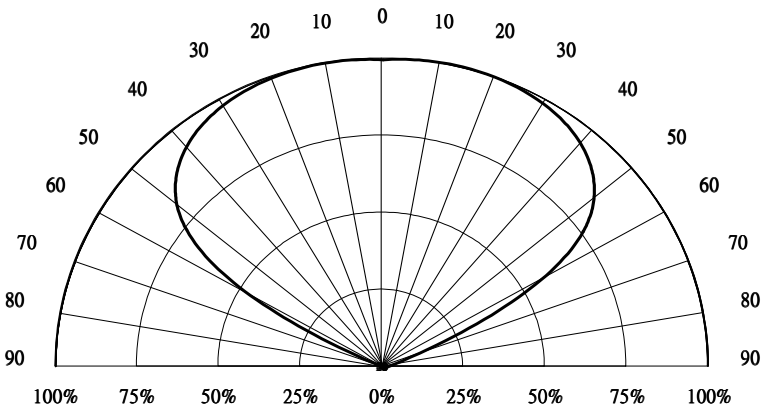
Parameter	Max.	Unit
DC Forward Current	1400	mA
Peak Pulse Current (Duty=0.1，1kHz)	1800	mA
Power Dissipation	16.8	W
LED Junction Temperature	120	℃
Operating Temperature	-25℃ to +100℃	
Storage Temperature	-40℃ to +120℃	

Electrical and Optical Characteristics at T_A =25℃

Parameter	Symbol	Test Condition	Value			Unit
			Min.	Typ.	Max.	
Forward Voltage	V_F	I_F = 1050mA	9	----	12	V
Luminous Flux	Φ_V	I_F = 1050mA	430	----	580	lm
Viewing Angle	2 θ 1/2	I_F = 1050mA	----	120	----	Deg.
Color Temperature	CCT	I_F = 1050mA	4500	----	10000	℃K
Chromaticity Coordinates	CIE-X CIE-Y	I_F = 1050mA	0.274 0.270	----	0.367 0.400	--

#:Please refer to CIE 1931 chromaticity diagram.
Recommend forward current for longer duration is 1050mA.
These values measured by Optical Spectrum Analyzer of LIGITEK

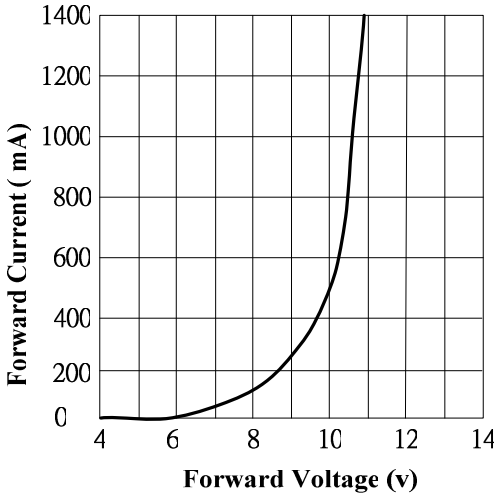
Spatial Distribution



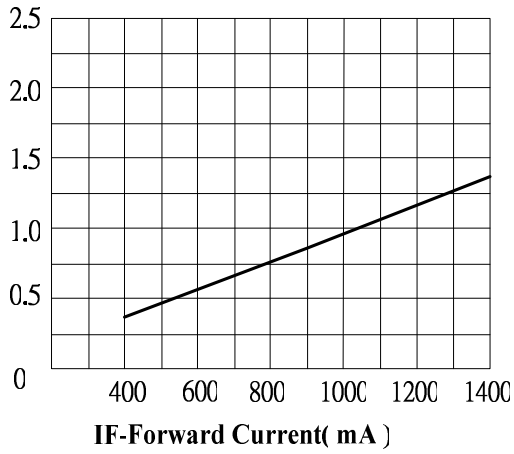
Typical Electrical / Optical Characteristics Curves

(25℃ Ambient Temperature Unless Otherwise Noted)

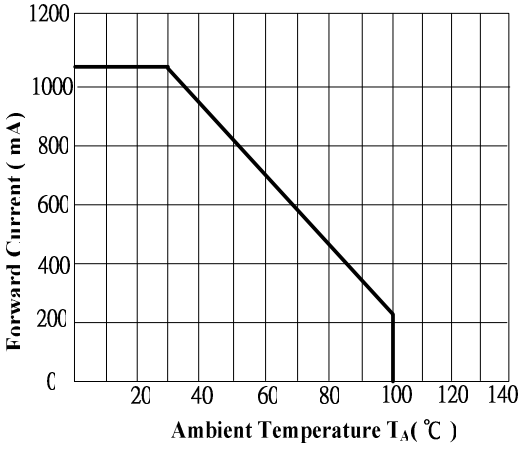
Forward Current vs. Forward Voltage



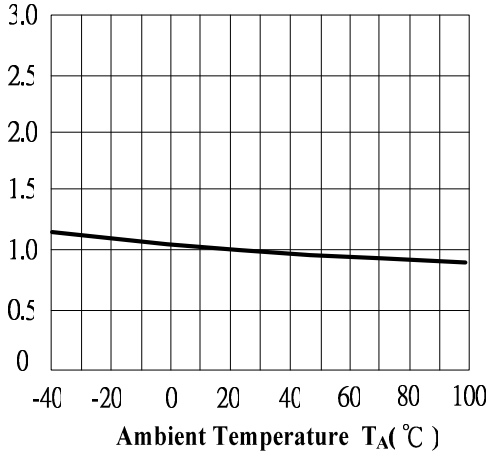
Relative Light Output vs. Forward Current



Forward Current vs. Derating Curve



Relative Light Output vs. Ambient Temperature



Ranks Combination

Vf		A4	A5	A6
V_F@1050mA	(Voltage)	9~10	10~11	11~12

Luminous Flux		AF	AG	AH
Iv@1050mA	(Lm)	430~480	480~530	530~580

Chromaticity Coordinate#		E1	E2	F1	F2	F3
CIE(X/Y) @1050mA	CIE(X/Y)	(0.274,0.300) (0.303,0.332) (0.307,0.310) (0.282,0.283)	(0.282,0.283) (0.307,0.310) (0.311,0.293) (0.289,0.270)	(0.301,0.342) (0.314,0.354) (0.317,0.325) (0.306,0.317)	(0.306,0.317) (0.317,0.325) (0.319,0.301) (0.311,0.293)	(0.314,0.354) (0.328,0.368) (0.329,0.336) (0.317,0.325)
Color Temperature		7000~10000	7000~10000	6300~7000	6300~7000	5650~6300
CCT@1050mA	(°K)					
Chromaticity Coordinate#		F4	G1	G2	H1	H2
CIE(X/Y) @1050mA	CIE(X/Y)	(0.317,0.325) (0.329,0.336) (0.330,0.310) (0.319,0.301)	(0.328,0.368) (0.348,0.385) (0.346,0.360) (0.329,0.345)	(0.329,0.345) (0.346,0.360) (0.343,0.332) (0.330,0.320)	(0.348,0.385) (0.367,0.400) (0.362,0.373) (0.346,0.360)	(0.346,0.360) (0.362,0.373) (0.357,0.342) (0.343,0.332)
Color Temperature		5650~6300	5000~5650	5000~5650	4500~5000	4500~5000
CCT@1050mA	(°K)					

#:Please refer to CIE 1931 chromaticity diagram. The quantity ratio of the ranks is decided by LIGITEK

Note:

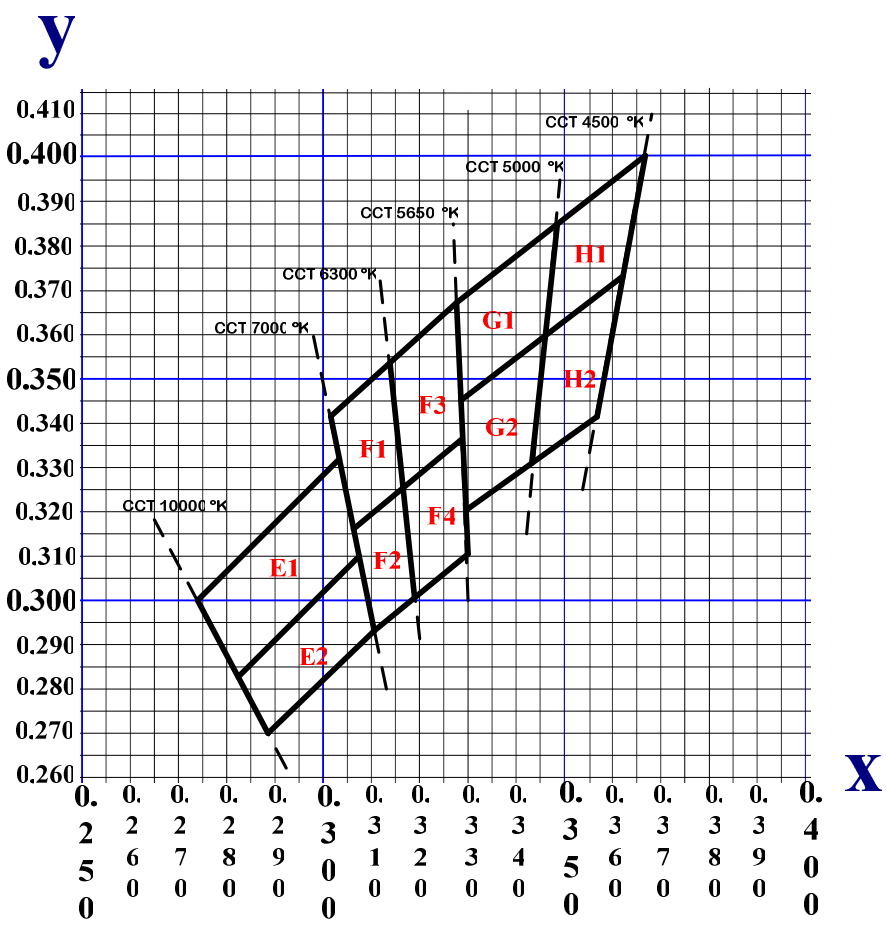
1.The products are sensitive to static electricity and care must be fully taken when handling products.

2.Measurement Uncertainty of the Luminous Intensity: ±10%

3. Measurement Uncertainty of the Chromaticity Coordinate: ±0.01

4. Measurement Uncertainty of the Voltage: ±0.05V

Color Bins for Cool White



Color Bins for Cool White

Bin Code	CIE X/Y	Typical CCT ˚K
E1	(0.274,0.300) (0.303,0.332) (0.307,0.310) (0.282,0.283)	7000~10000
E2	(0.282,0.283) (0.307,0.310) (0.311,0.293) (0.289,0.270)	7000~10000
F1	(0.301,0.342) (0.314,0.354) (0.317,0.325) (0.306,0.317)	6300~7000
F2	(0.306,0.317) (0.317,0.325) (0.319,0.301) (0.311,0.293)	6300~7000
F3	(0.314,0.354) (0.328,0.368) (0.329,0.336) (0.317,0.325)	5650~6300
F4	(0.317,0.325) (0.329,0.336) (0.330,0.310) (0.319,0.301)	5650~6300
G1	(0.328,0.368) (0.348,0.385) (0.346,0.360) (0.329,0.345)	5000~5650
G2	(0.329,0.345) (0.346,0.360) (0.343,0.332) (0.330,0.320)	5000~5650
H1	(0.348,0.385) (0.367,0.400) (0.362,0.373) (0.346,0.360)	4500~5000
H2	(0.346,0.360) (0.362,0.373) (0.357,0.342) (0.343,0.332)	4500~5000