LIGITEK

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

Preliminary

Lead-Free Parts

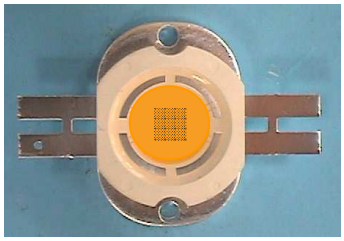
LGXV-0225A7X

DATA SHEET

DOC. NO : IMQW0905-LGXV-0225A7X

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.

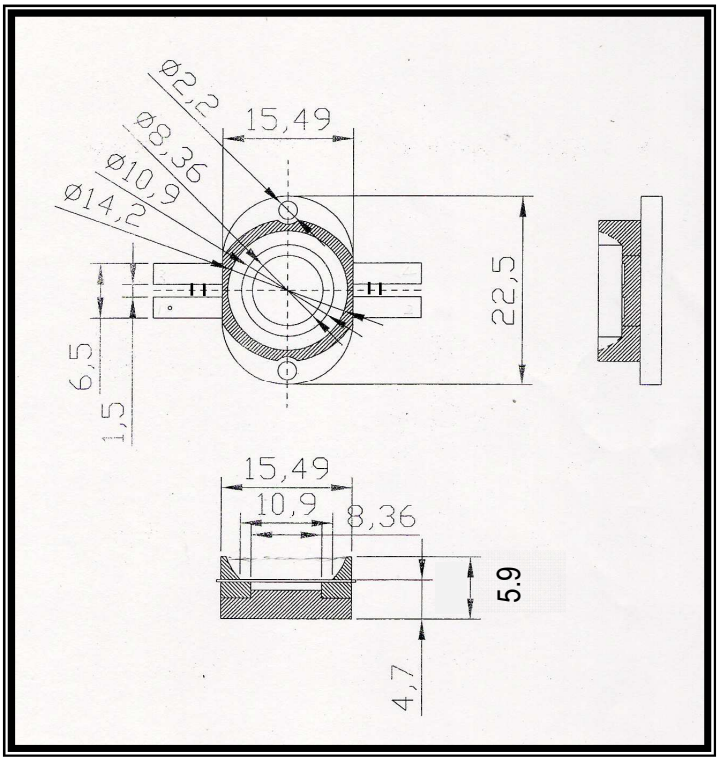
■More Energy Efficient than Incandescent and most Halogen lamps.

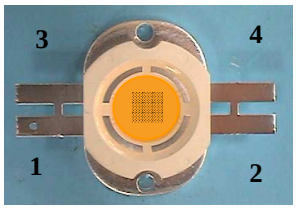
■NO UV.

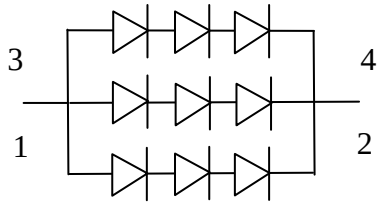
Typical Applications：

■Lighting.

■Speciality lighting.







NOTE:

■All dimensions are millimeter.

■Tolerance is ±0.1mm unless otherwise noted

Preliminary

Absolute Maximum Ratings at T_A =25℃

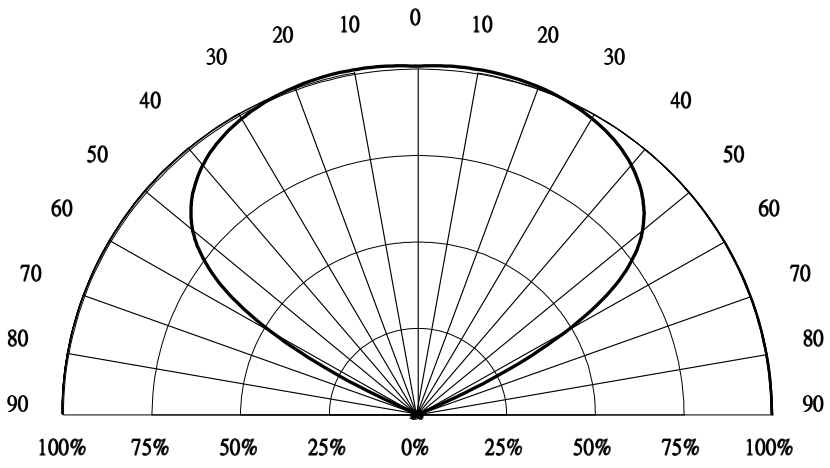
Parameter	Max.	Unit
DC Forward Current	1400	mA
Peak Pulse Current (Duty=0.1，1kHz)	1800	mA
Power Dissipation	16.8	W
LED Junction Temperature	120	℃
Operating Temperature	-25℃ to +100℃	
Storage Temperature	-40℃ to +120℃	

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	480	----	630	lm
Viewing Angle	$2\theta_{1/2}$	I_F = 1050mA	----	120	----	Deg.
Color Temperature	CCT	I_F = 1050mA	2670	----	4500	℃K
Chromaticity Coordinates	CIE-X CIE-Y	I_F = 1050mA	0.357 0.342	----	0.486 0.452	--

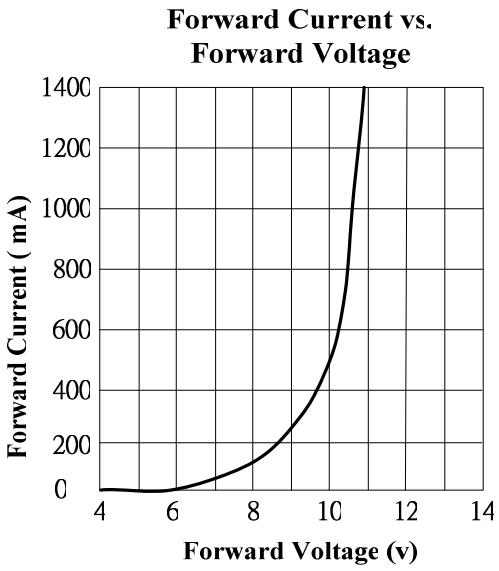
#:Please refer to CIE 1931 chromaticity diagram.
Recommend forward current for longer duration is 1050mA.
These values measured by Optical Spectrum Analyzer of LIGITEK

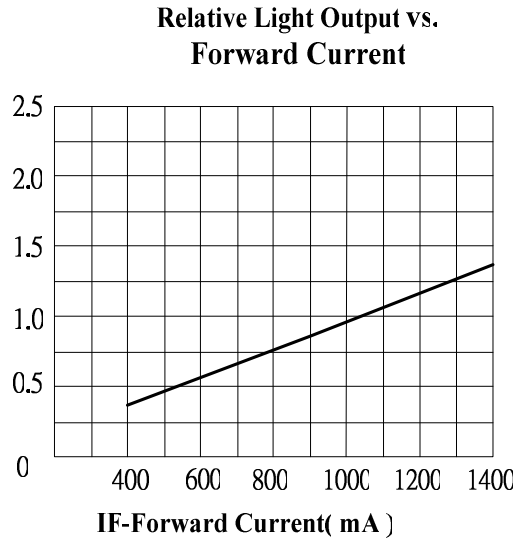
Spatial Distribution

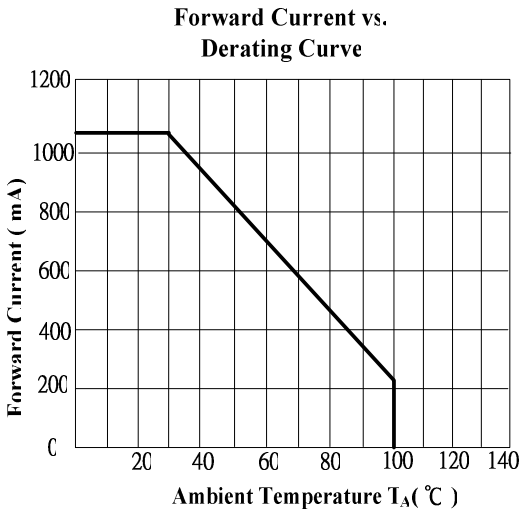


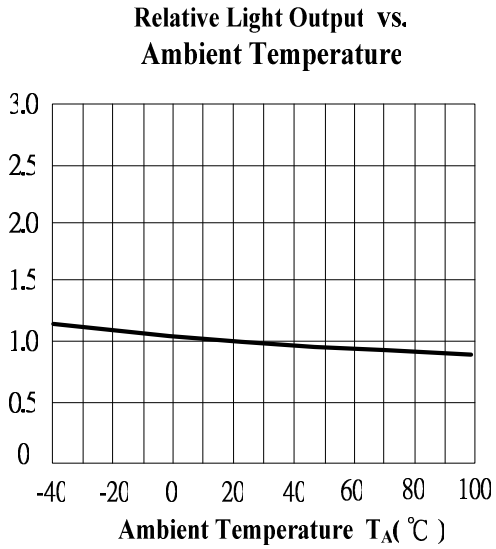
Typical Electrical / Optical Characteristics Curves

(25℃ Ambient Temperature Unless Otherwise Noted)









Ranks Combination

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

Luminous Flux		AG	AH	AJ
Iv@1050mA	(Lm)	480~530	530~580	580~630

Chromaticity Coordinate#		J1	J2	J3	J4	J5
CIE(X/Y) @1050mA	CIE(X/Y)	(0.367,0.400) (0.383,0.410) (0.377,0.382) (0.362,0.373)	(0.362,0.373) (0.377,0.382) (0.370,0.350) (0.357,0.342)	(0.383,0.410) (0.402,0.421) (0.392,0.390) (0.377,0.382)	(0.377,0.382) (0.392,0.390) (0.382,0.356) (0.370,0.350)	(0.402,0.421) (0.420,0.430) (0.409,0.399) (0.392,0.390)
Color Temperature		4100~4500	4100~4500	3800~4100	3800~4100	3500~3800
CCT@1050mA	(°K)					
Chromaticity Coordinate#		J6	K1	K2	K3	K4
CIE(X/Y) @1050mA	CIE(X/Y)	(0.392,0.390) (0.409,0.399) (0.398,0.365) (0.382,0.356)	(0.420,0.430) (0.436,0.436) (0.423,0.403) (0.409,0.399)	(0.409,0.399) (0.423,0.403) (0.410,0.370) (0.398,0.365)	(0.436,0.436) (0.451,0.441) (0.437,0.410) (0.423,0.403)	(0.423,0.403) (0.437,0.410) (0.423,0.377) (0.410,0.370)
Color Temperature		3500~3800	3250~3500	3250~3500	3050~3250	3050~3250
CCT@1050mA	(°K)					
Chromaticity Coordinate#		K5	K6	K7	K8	-
CIE(X/Y) @1050mA	CIE(X/Y)	(0.451,0.441) (0.468,0.447) (0.453,0.415) (0.437,0.410)	(0.437,0.410) (0.453,0.415) (0.435,0.382) (0.423,0.377)	(0.468,0.447) (0.486,0.452) (0.468,0.419) (0.453,0.415)	(0.453,0.415) (0.468,0.419) (0.449,0.388) (0.435,0.382)	-
Color Temperature		2850~3050	2850~3050	2670~2850	2670~2850	-
CCT@1050mA	(°K)					

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

Note:

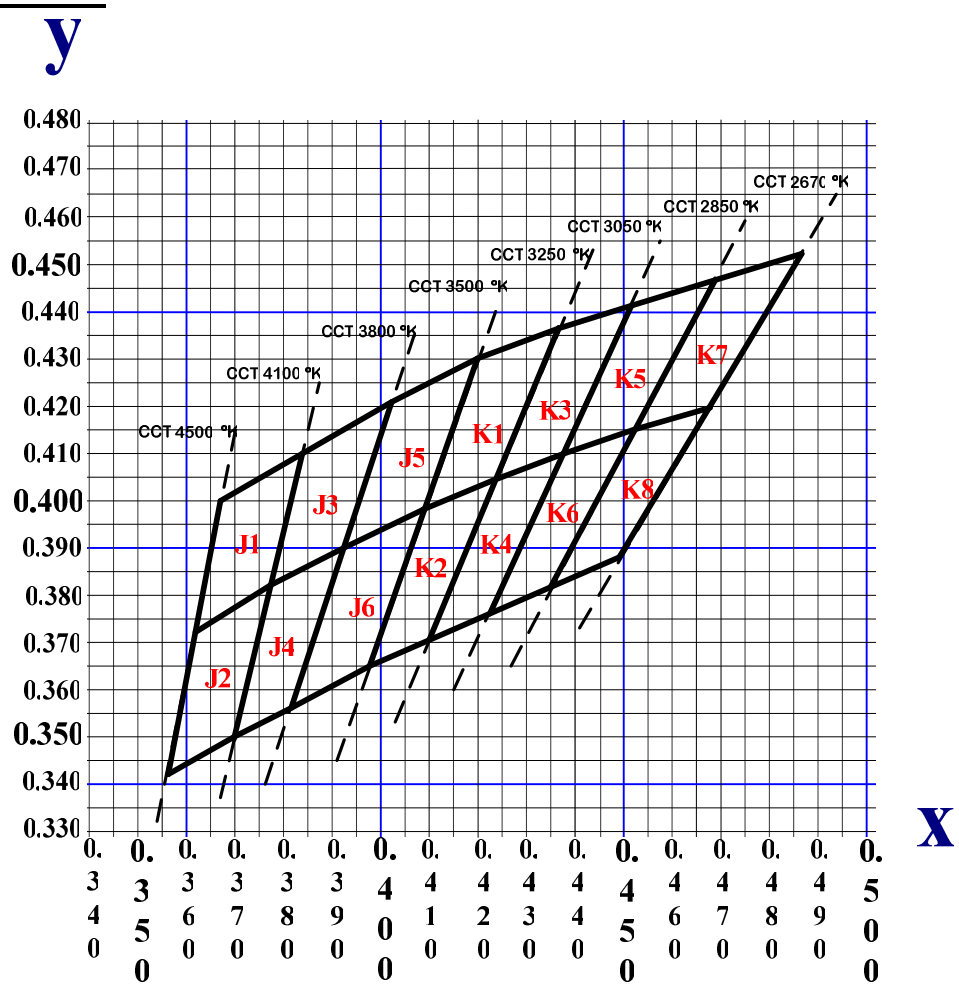
1.The products are sensitive to static electricity and care must be fully taken when handling products.

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 Warm white



Color Bins for Warm White

Bin Code	CIE X/Y	Typical CCT °K
J1	(0.367,0.400)(0.383,0.410)(0.377,0.382)(0.362,0.373)	4100~4500
J2	(0.362,0.373)(0.377,0.382)(0.370,0.350)(0.357,0.342)	4100~4500
J3	(0.383,0.410)(0.402,0.421)(0.392,0.390)(0.377,0.382)	3800~4100
J4	(0.377,0.382)(0.392,0.390)(0.382,0.356)(0.370,0.350)	3800~4100
J5	(0.402,0.421)(0.420,0.430)(0.409,0.399)(0.392,0.390)	3500~3800
J6	(0.392,0.390)(0.409,0.399)(0.398,0.365)(0.382,0.356)	3500~3800
K1	(0.420,0.430)(0.436,0.436)(0.423,0.403)(0.409,0.399)	3250~3500
K2	(0.409,0.399)(0.423,0.403)(0.410,0.370)(0.398,0.365)	3250~3500
K3	(0.436,0.436)(0.451,0.441)(0.437,0.410)(0.423,0.403)	3050~3250
K4	(0.423,0.403)(0.437,0.410)(0.423,0.377)(0.410,0.370)	3050~3250
K5	(0.451,0.441)(0.468,0.447)(0.453,0.415)(0.437,0.410)	2850~3050
K6	(0.437,0.410)(0.453,0.415)(0.435,0.382)(0.423,0.377)	2850~3050
K7	(0.468,0.447)(0.486,0.452)(0.468,0.419)(0.453,0.415)	2670~2850
K8	(0.453,0.415)(0.468,0.419)(0.449,0.388)(0.435,0.382)	2670~2850