



LIGITEK

LIGITEK ELECTRONICS CO.,LTD.
Property of Ligitek Only

10W Power Light LED

Preliminary



Lead-Free Parts

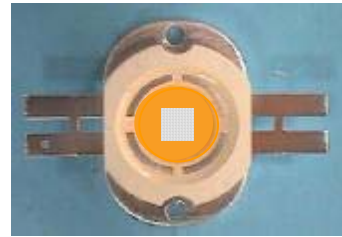
LGXV-0225A7X-P

DATA SHEET

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

REV. : A

DATE : 24-Mar-2009

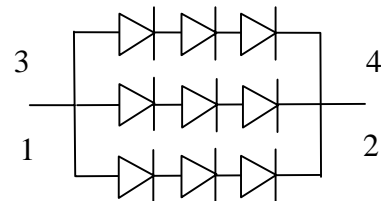
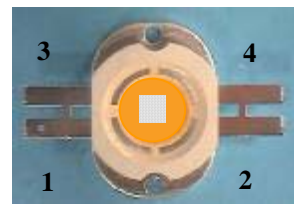
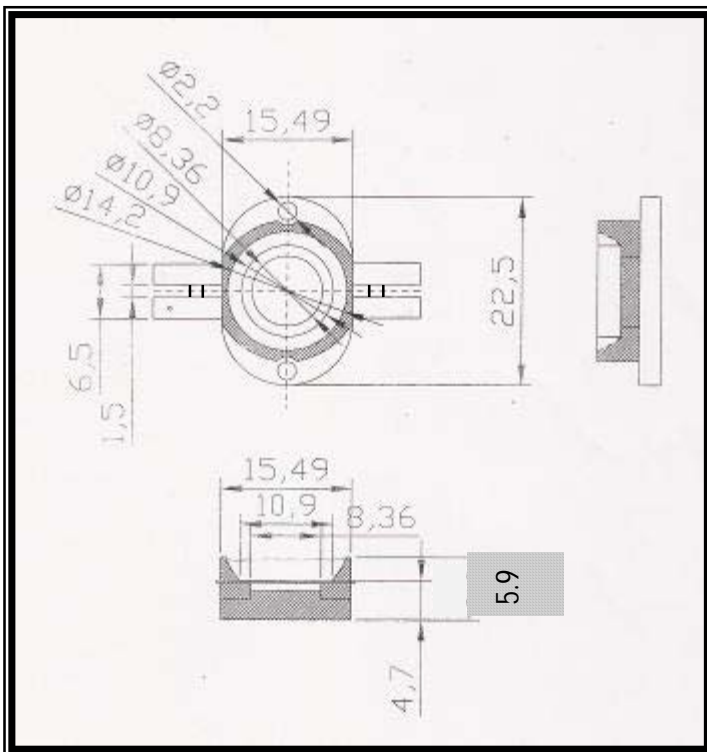


Features :

- 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 ± 0.1 mm unless otherwise noted



Absolute Maximum Ratings at $T_A = 25^\circ\text{C}$

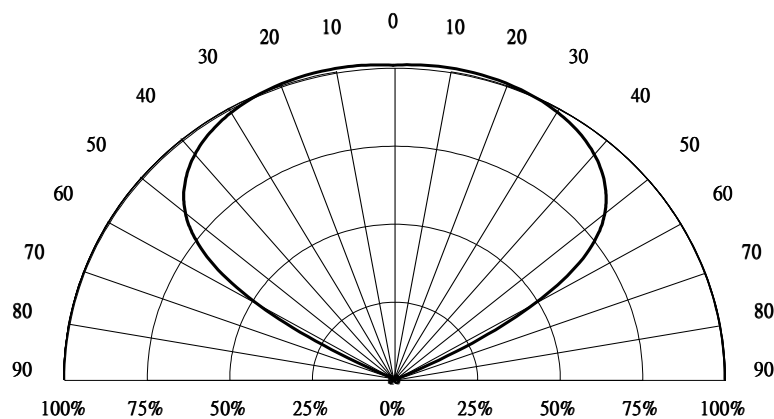
Parameter	Max.	Unit
DC Forward Current	1400	mA
Peak Pulse Current (Duty=0.1, 1kHz)	1800	mA
Power Dissipation	16.8	W
LED Junction Temperature	120	$^\circ\text{C}$
Operating Temperature	-25 $^\circ\text{C}$ to +100 $^\circ\text{C}$	
Storage Temperature	-40 $^\circ\text{C}$ to +120 $^\circ\text{C}$	

Electrical and Optical Characteristics at $T_A = 25^\circ\text{C}$

Parameter	Symbol	Test Condition	Value			Unit
			Min.	Typ.	Max.	
Forward Voltage	V_F	$I_F = 1050\text{mA}$	9	----	12	V
Luminous Flux	Φ_v	$I_F = 1050\text{mA}$	430	----	580	lm
Viewing Angle	$2\theta_{1/2}$	$I_F = 1050\text{mA}$	----	120	----	Deg.
Color Temperature	CCT	$I_F = 1050\text{mA}$	2670	----	4500	K
Chromaticity Coordinates	CIE-X	$I_F = 1050\text{mA}$	0.357	----	0.486	--
	CIE-Y		0.342		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

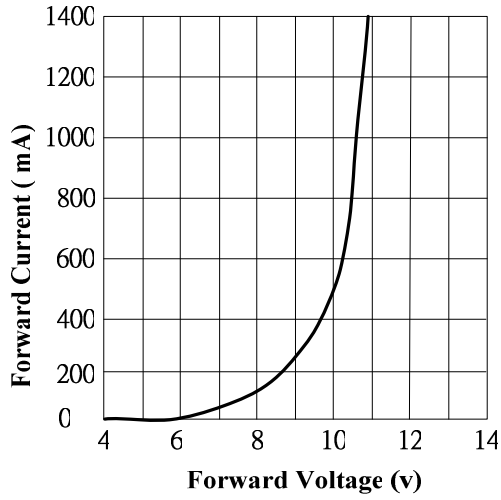




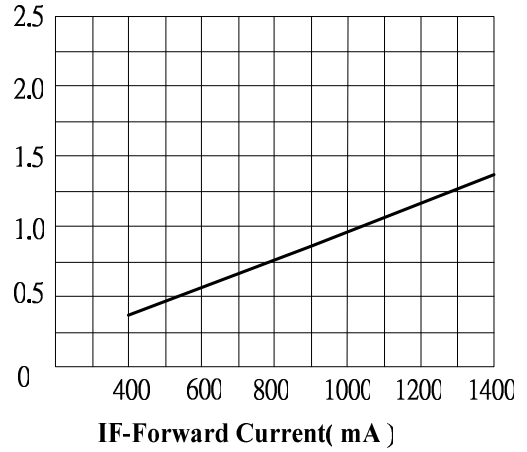
Typical Electrical / Optical Characteristics Curves

(25°C Ambient Temperature Unless Otherwise Noted)

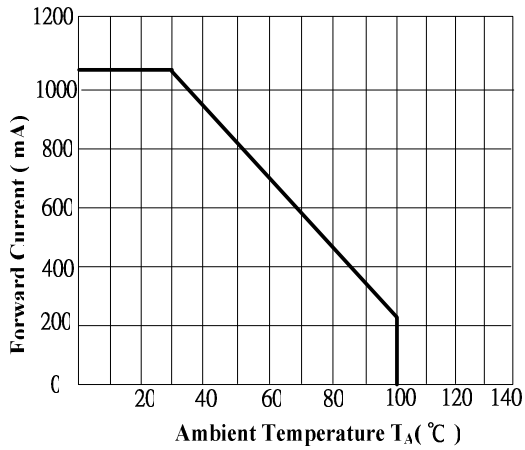
Forward Current vs. Forward Voltage



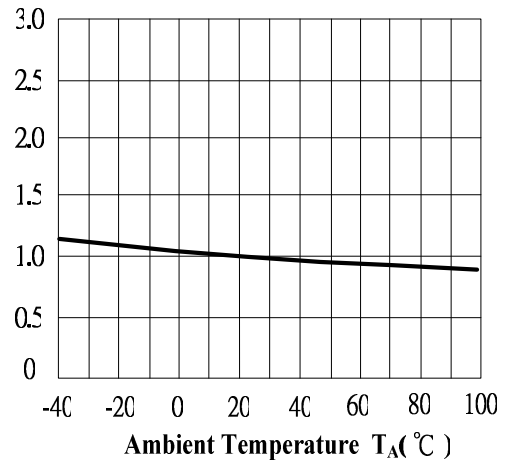
Relative Light Output vs. Forward Current



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
I _v @1050mA	(Lm)	430~480	480~530	530~580

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

#:Please refer to CIE 1931 chromaticity diagram.

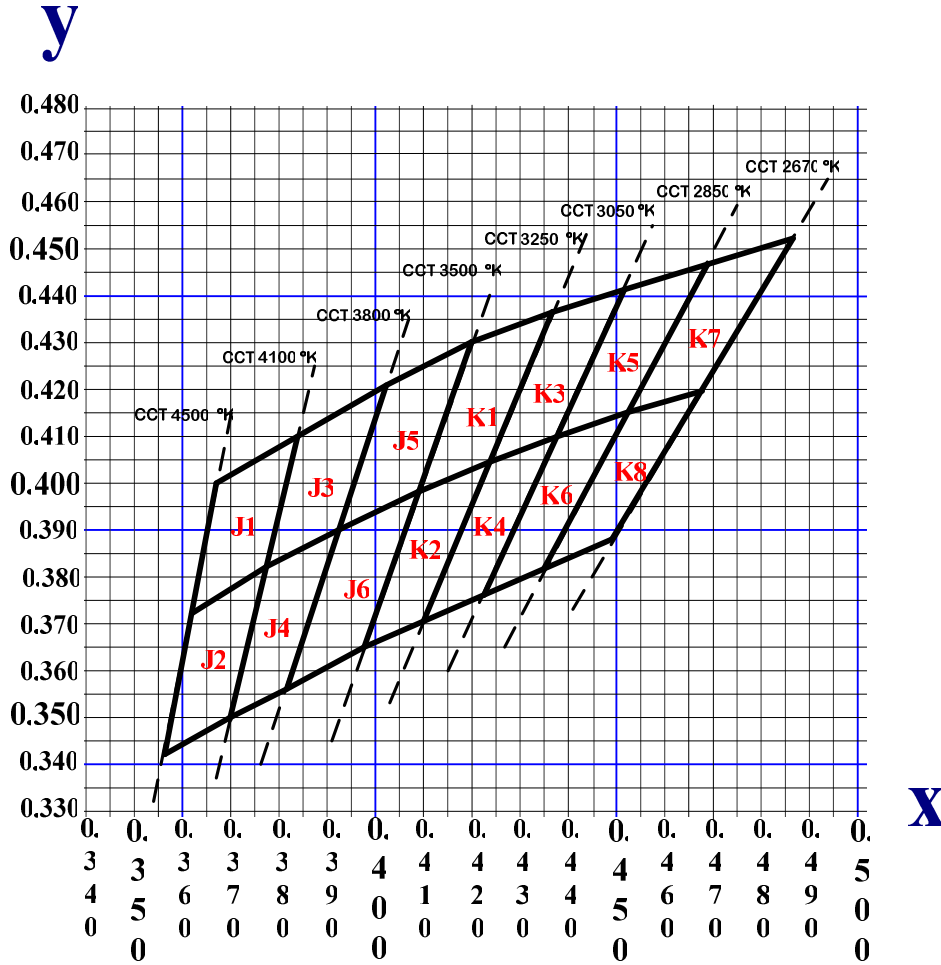
The quantity ratio of the ranks is decided by LIGITEK.

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: $\pm 10\%$
3. Measurement Uncertainty of the Chromaticity Coordinate: ± 0.01
4. Measurement Uncertainty of the Voltage: $\pm 0.05V$



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