



**ABSOLUTE MAXIMUM RATINGS ( $T_{amb}=25^{\circ}\text{C}$ , UNLESS OTHERWISE SPECIFIED)**

PARAMETER	SYMBOL	Rating Values	UNIT
Junction Temperature	$T_j$	125	$^{\circ}\text{C}$
Forward Current*	$I_F$	1400	mA
Forward Pulse Current*	$I_{fp}$	2000	mA
Power Dissipation*	$P_O$	3200	mW
Reverse Voltage	$V_R$	Not designed for reverse operation	
Operating Temperature	$T_{opr}$	-40 to +105	$^{\circ}\text{C}$
Storage Temperature	$T_{stg}$	-40 to +125	$^{\circ}\text{C}$
Soldering Temperature	$T_{sol}$	260 $^{\circ}\text{C}$ for 10sec	$^{\circ}\text{C}$
ESD (HBM)	--	$\pm 2000$	V

Note:1. The prerequisite for the maximum forward current or the maximum pulse forward current is that the junction temperature of the device is lower than the rated operating junction temperature;2.Forward Pulse current test conditions: Frequency 10kHz, duty ratio  $\leq 10\%$ ;

**OPTICAL ELECTRICAL CHARACTERISTICS ( $T_{amb}=25^{\circ}\text{C}$ , UNLESS OTHERWISE SPECIFIED)**

CHARACTERISTICS	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Radiant Flux*	$\Phi_e$	$I_F=700\text{mA}$	1040	1100	1160	mW
Peak Wavelength	$\lambda_p$	$I_F=700\text{mA}$	655	660	665	nm
Spectral Bandwidth(50%)	$\Delta\lambda$	$I_F=700\text{mA}$	--	18	--	nm
Forward Voltage	$V_F$	$I_F=700\text{mA}$	1.8	1.97	2.2	V
Reverse current	$I_R$	$V_R=5\text{V}$	--	--	10	$\mu\text{A}$
Radiation angle(50%)	$2\theta_{1/2}$	$I_F=700\text{mA}$	--	120	--	Deg
Photosynthetic Photon Flux	PPF	$I_F=700\text{mA}$	--	6.0	--	$\mu\text{mol/s}$
Photosynthetic Photon Efficiency	PPF/W	$I_F=700\text{mA}$	--	4.35	--	$\mu\text{mol/J}$
Electrical Thermal Resistance Junction/Solderpoint	$R_{thJ-S}$	$I_F=700\text{mA}$	--	1.0	--	$^{\circ}\text{C/W}$

Note: The tolerance of radiant flux measured value:  $\pm 5\%$ ; The tolerance of forward voltage measured value:  $\pm 0.1\text{V}$ .

**OPTICAL ELECTRICAL CHARACTERISTICS CODE ( $I_F=700\text{mA}$ ,  $T_{amb}=25^{\circ}\text{C}$ )**

Forward Voltage Code (Unit: V)					
Code	MIN.	MAX.	Code	MIN.	MAX.
A1	1.8	1.9	B1	2.0	2.1
A2	1.9	2.0	B2	2.1	2.2
Code	Radiant Flux Code (Unit: mW)		PPF* (Unit: $\mu\text{mol/s}$ )		PPF/W* (Unit: $\mu\text{mol/J}$ )
	MIN.	MAX.	MIN.	MAX.	TYP.
8U	1040	1080	5.68	5.90	4.20
9U	1080	1120	5.90	6.12	4.35
AU	1120	1160	6.12	6.38	4.52

Note: PPF values are for reference only; PPF/W values are for reference only.

## CHARACTERISTICS CURVE

Figure 1. Relative Radiant Flux vs. Forward Current

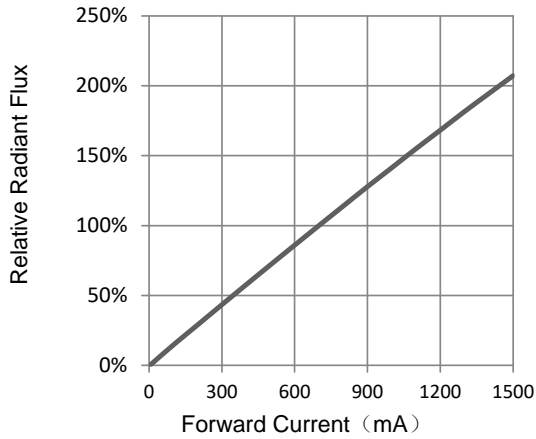


Figure 2. Forward Current vs. Forward Voltage

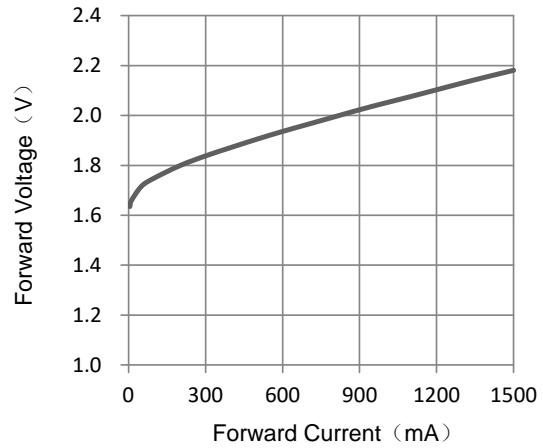


Figure 3. Forward Voltage vs. Ambient temperature

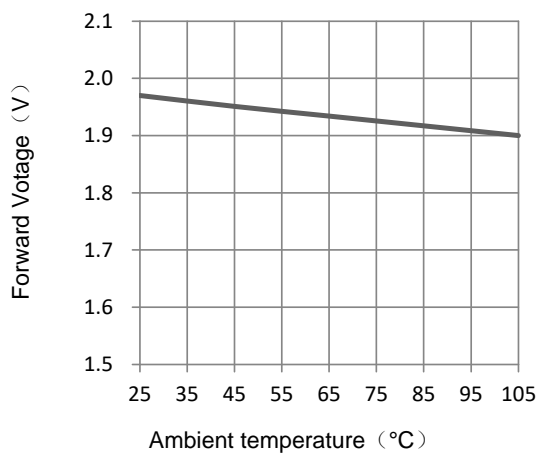


Figure 4. Relative Radiant Flux vs. Ambient temperature

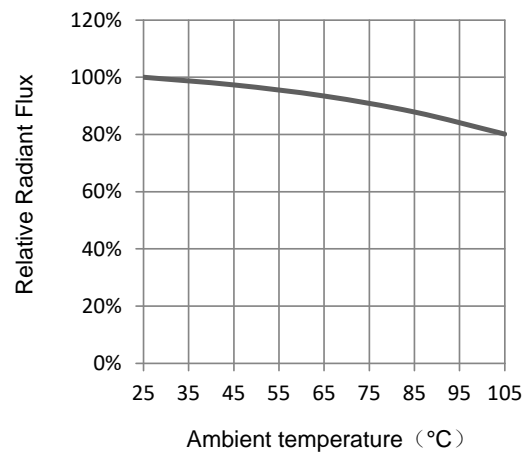


Figure 5. Relative Radiant Flux vs. Wavelength

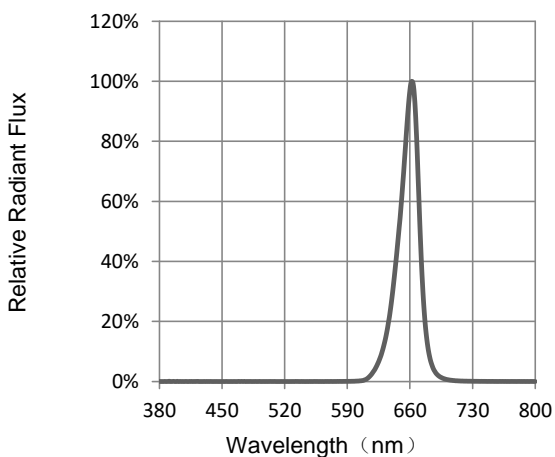
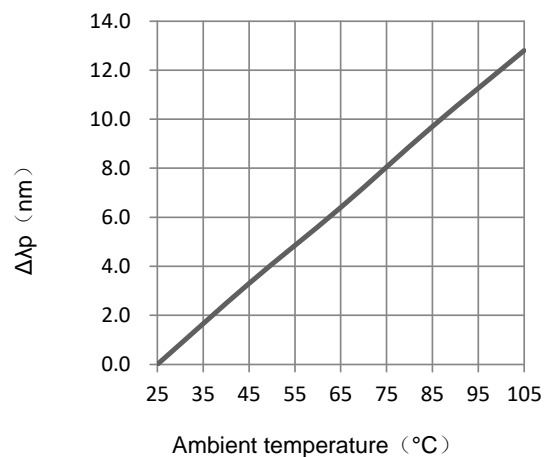
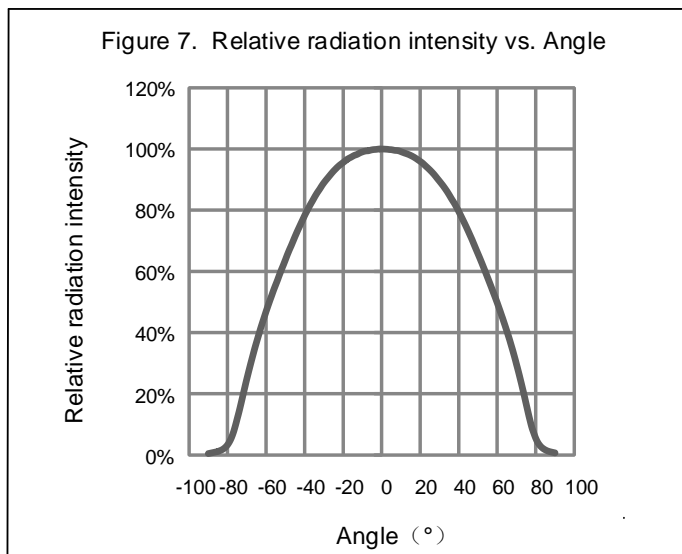


Figure 6. Relative Peak Wavelength vs. Ambient temperature



Note: The temperature curves and the wavelength curve at  $I_f=700\text{mA}$ , the current curve at  $T_{\text{amb}}=25\text{ }^{\circ}\text{C}$ .

## CHARACTERISTICS CURVE

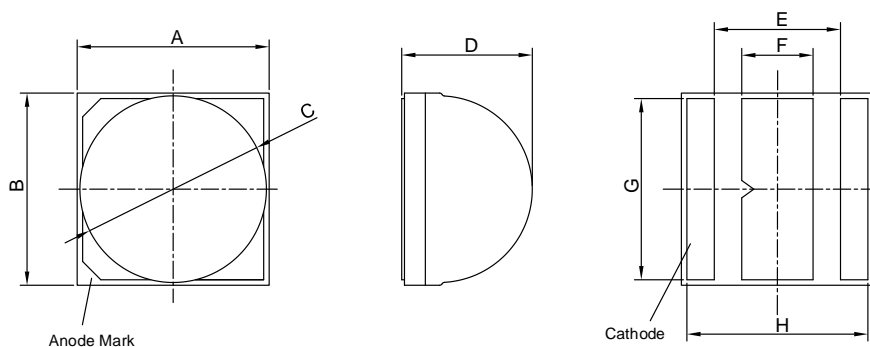


Note:  $I_F=700\text{mA}$ ,  $T_{\text{amb}}=25\text{ }^{\circ}\text{C}$ .

## PACKAGE OUTLINE

**LCA-3.5x3.5x2.4-A**

**UNIT: mm**

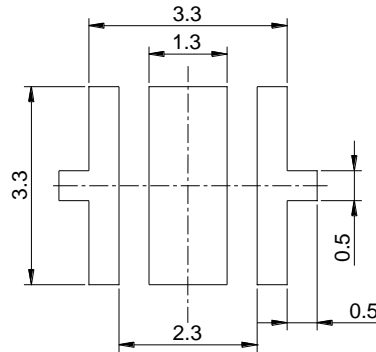


SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	3.35	3.45	3.55
B	3.35	3.45	3.55
C	3.30	3.40	3.50
D	2.28	2.38	2.48
E	2.20	2.30	2.40
F	1.20	1.30	1.40
G	3.20	3.30	3.40
H	3.20	3.30	3.40

**RECOMMENDED SOLDER PAD**

**LCA-3.5x3.5x2.4-A**

**UNIT: mm**



Tolerance unless noted:  $\pm 0.1$  mm



**DEVICES OPERATE NOTES:**

Electrostatic charges may exist in many things. Please take following preventive measures to prevent effectively the electric circuit as a result of the damage which is caused by discharge:

- The operator must put on wrist strap which should be earthed to against electrostatic.
- Equipment cases should be earthed.
- All tools used during assembly, including soldering tools and solder baths, must be earthed.
- Devices should be packed in antistatic/conductive containers for transportation.

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Rev.: 1.1

Revision History:

1. Modify some optical electrical characteristics
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Rev.: 1.0

Revision History:

2. First release
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