Spec. No.	PS-SC-UPCHRG4XX-YSX
Rev.	A

PRODUCT SPECIFICATION

Model No：CSSC-UPCHRG4XX-YSX

Descriptions:		
・ Product Type	:	Chip LED
・ Package Size	:	**1.6 × 0.8 × 0.6 mm**
・ Emitting Color	:	Red

CUSTOMER APPROVED SIGNATURES	APPROVED BY	CHECKED BY	PREPARED BY
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■ Absolute Maximum Rating Polarity–

（Ta=25℃）

Parameter	Symbol	Value	Unit
Forward current	I_F	25	mA
Pulse Forward Current	I_{FP}	60	mA
Reverse voltage	V_R	5	V
Power Dissipation	PD	55	mW
Operating temperature range	T_{op}	-40~ +85	℃
Storage temperature range	T_{stg}	-40 ~ +85	℃
Soldering Temperature	T_{sld}	Reflow Soldering: 245° C	for 10sec.
		Hand Soldering:350 ° C	for 3sec.

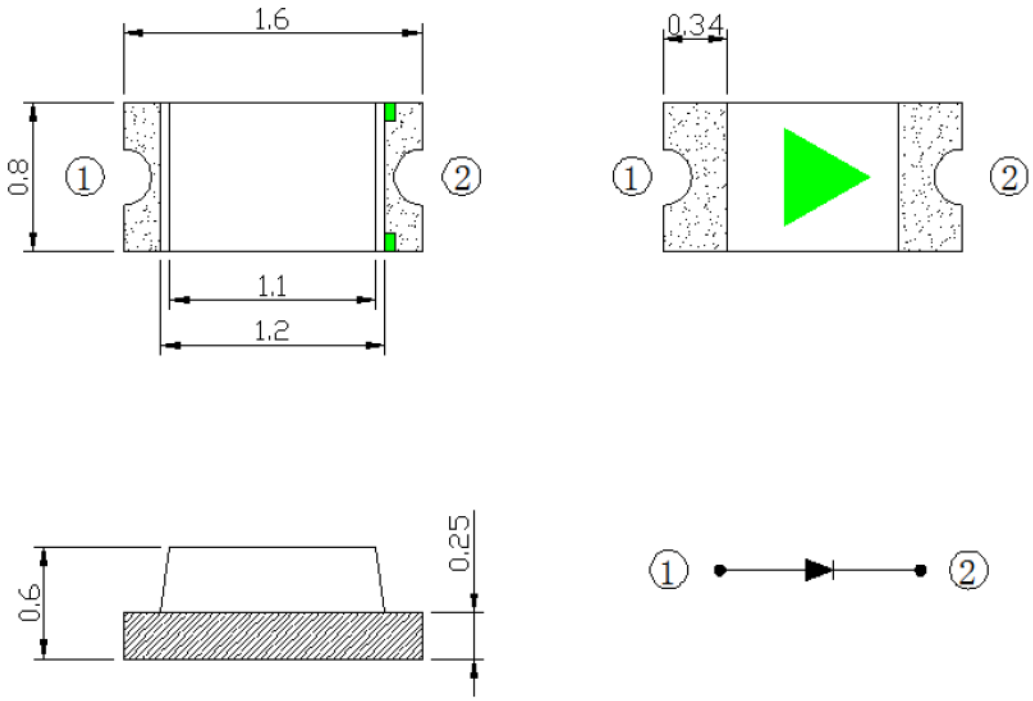
1. IFP Conditions : 1/10 Duty Cycle, 0.1 msec Pulse Width
2. The device can not operated under continuous reverse voltage.

■ Electrical / Optical Characteristics –

（Ta=25℃）

Parameter	Symbol	Value			Unit	Test Condition
		Min	Typ	Max		
Forward voltage	Vf	1.9	--	2.2	V	I_F=20mA
Luminous Intensity	IV	70	--	200	mcd	
Dominant Wavelength	Λd	618	--	625	nm	
Viewing angle at 50% Iv	2θ1/2	--	120	--	Deg	
Reverse current	Ir	--	--	10	μA	V_R=7V

■ Product size (Unit: mm) –

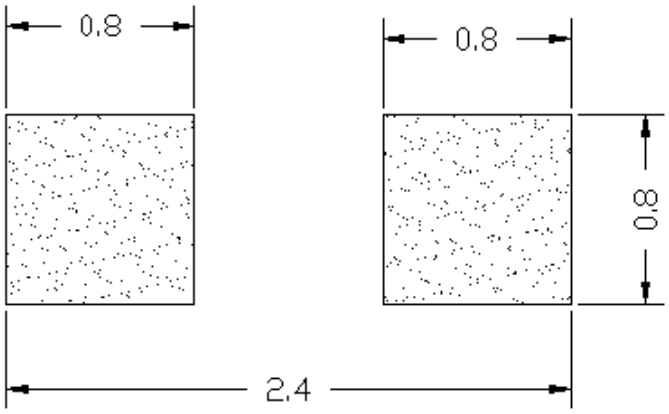


NOTES：

1.All dimensions are in millimeters (inches)

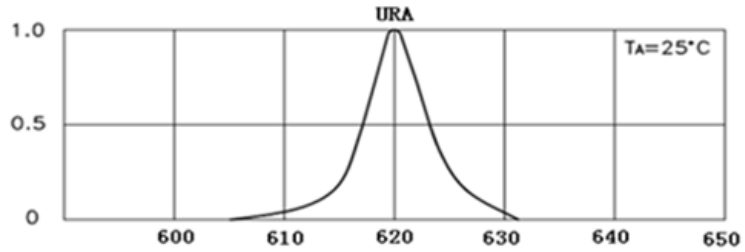
2.Tolerances are ±0.05mm unless otherwise noted

■ Recommended Soldering Pad Design (Unit: mm)–

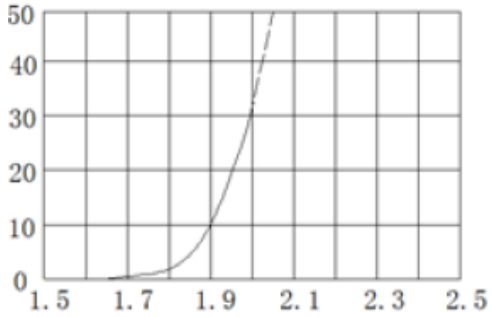


■ Optical Characteristic Curves –

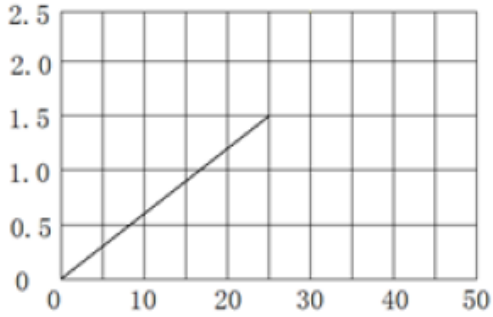
Relative Intensity vs.Wavelength



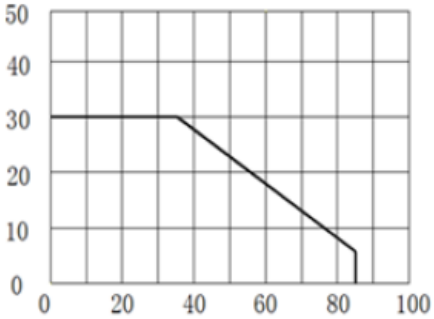
Forward Current vs.Forward Voltage



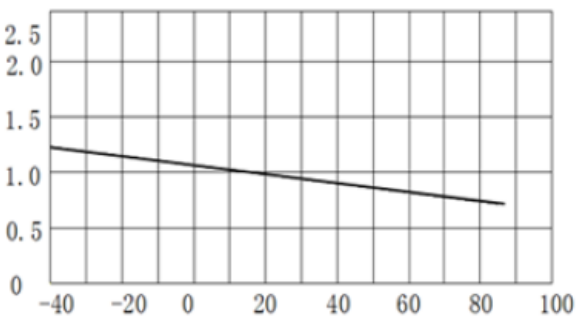
Relative Intensity vs.Forward Currenr



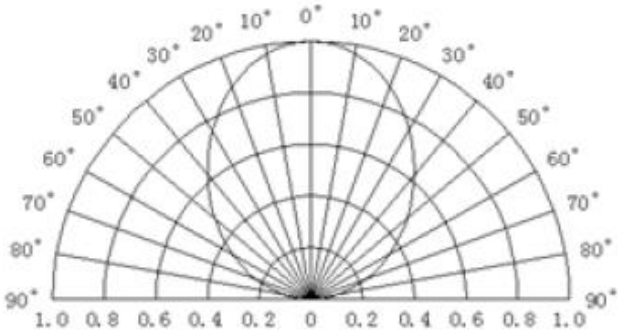
Forward Current vs.Ambient Temperature



Relative Intensity vs.Ambient Temperature



Relative Luminosity VS. Radiation Angle



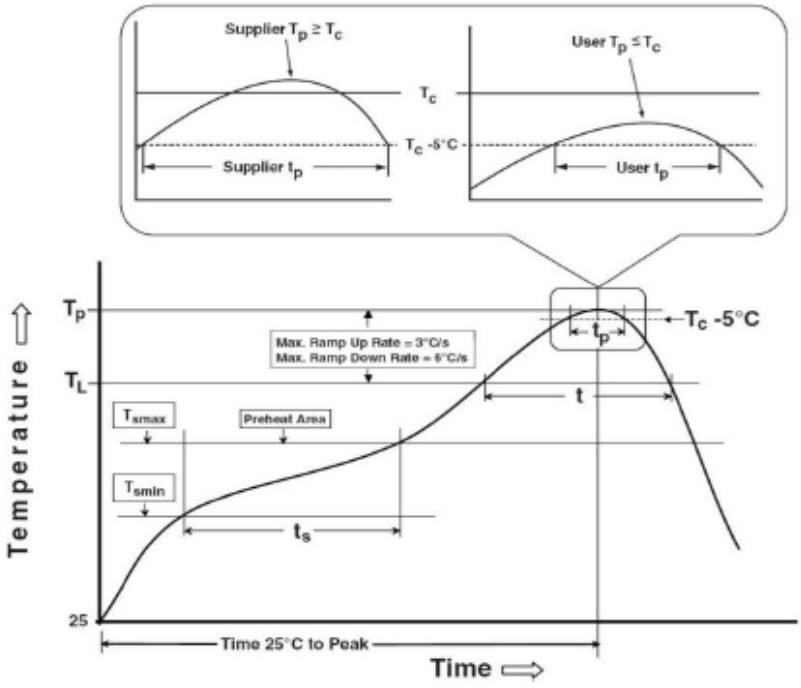
■ Cautions –

Table of Classification Reflow Profiles

Profile Feature	Sn-Pb Eutectic Assembly	Pb-Free Assembly
Preheat & Soak Temperature min (Tsmin) Temperature max (Tsmax) Time (Tsmin to Tsmax) (ts)	100 °C 150°C 60-120 seconds	150 °C 200 °C 60-120 seconds
Average ramp-up rate (Tsmax to Tp)	3 °C/second max	3 °C/second max
Liquidous temperature (TL) Time at liquidous (tL)	183 °C 60-150 seconds	217 °C 60-150 seconds
Peak package body temperature (Tp)*	230 °C ~235 °C	255 °C ~260 °C
Classification temperature (Tc)	235 °C	260 °C
Time (tp) within 5 °C of the specified Classification temperature (Tc)	20 seconds	30 seconds
Average ramp-down rate (Tp to Tsmax)	6 °C/second max	6 °C/second max
Time 25 °C to peak temperature	6 minutes max	8 minutes max

1. Tolerance for peak profile temperature (Tp) is defined as a supplier minimum and a user maximum.

2.Tolerance for time at peak profile temperature (tp) is defined as a supplier minimum and a user maximum.



Precautions

1. Storage:

●Moisture proof and anti-electrostatic package with moisture absorbent material is used, to keep moisture to aminimum.

●Before opening the package, the product should be kept at 30℃ or less and humidity less than 60% RH, and beused within a year.

●After opening the package, the product should be stored at 30℃ or less and humidity less than 10%RH. It is recommended that the product be operated at the workshop condition of 30℃ or less and humidity less than 60%RH.

●If the moisture absorbent material has fade away or the LEDs have exceeded the storage time, baking treatment should be performed based on the following condition: (70±5)℃ for 24 hours.

2. Static Electricity:

Static electricity or surge voltage damages the LEDs. Damaged LEDs will show some unusual characteristic such as the forward voltage becomes lower, or the LEDs do not light at the low current. even not light.

All devices, equipment and machinery must be properly grounded. At the same time, it is recommended that wrist bands or anti-electrostatic gloves, anti-electrostatic containers be used when dealing with the LEDs.

3. Vulcanization:

LED curing is due to sulfur being in bracket and the +1 price of silver in the chemical reaction generated Ag2S in the process. It will lead to the capacity of reflecting of silver layer reducing, light color temperature drift and serious decline ,seriously affecting the performance of the product.So we should take corresponding measures to avioding vulcanization, such as to avoid using sulphur volatile substances and keeping away from high sulphur content of the material.

■ Packaging –

Tape Specification:4,000pcs Per Reel