



PRODUCT SPECIFICATION

Model No : CSPR-U30AHR4-A0R

Descriptions:

- LED Type : Superbright Lamp
- LED Package : Piranha LED Lamp
- Emitting Color : Red
- Viewing Angle : 60°
- Stopper



CUSTOMER APPROVED SIGNATURES	APPROVED BY	CHECKED BY	PREPARED BY

CHINA SEMICONDUCTOR CORPORATION

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Model No : CSPR-U30AHR4-A0R

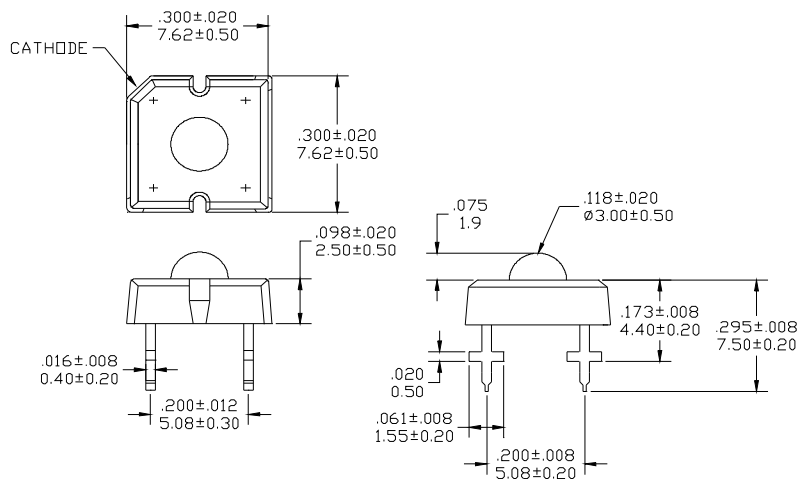
■ Features -

1. High Current Operation
2. High Luminous Output
3. High Reliability and Solid Performance
4. Optimal Optical/Mechanical Design
5. Packaged in Tubes for Use with Automatic Pick and Place Equipment
6. Rohs Compliant

■ Device Selection Guide -

Part No.	Chip		LED Lens
	Material	Emitted Color	
CSPR-U30AHR4-A0R	AlInGaP	Red	Water Transparent

■ Package Outline Dimensions -



* Tolerance : $\pm \frac{0.01}{0.25}$ Unit : $\pm \frac{\text{inch}}{\text{mm}}$

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Absolute Maximum Rating -

(Ta=25°C)

Parameter	Symbol	Rating	Unit
Power Dissipation	Pd	196	mW
Forward Current (DC)	IF	70	mA
Peak Forward Current *	IFP	100	mA
Reverse Voltage	VR	5	V
Operating Temp.	Topr	-30 ~ +80	°C
Storage Temp.	Tstg	-40 ~ +100	°C
Lead Soldering Temperature	Tsol	Max. 260°C for 5 sec Max. (3mm from the epoxy bulb)	

* Pulse width ≤ 0.1 msec. duty $\leq 1/10$

Electro-optical Characteristics -

(Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward Voltage	VF	-----	2.3	2.8	V	IF=70mA
Luminous Intensity	Iv	6600	13000	-----	mcd	
Luminous Flux	Φv	6000	8000	-----	mlm	
Dominant Wavelength	λd	-----	615	-----	nm	
Peak Wavelength	λp	-----	625	-----	nm	
Viewing Angle	2θ 1/2	-----	60	-----	deg	
Reverse Current	IR	-----	-----	100	μA	VR=5V



■ Luminous Flux Rank Limits ($I_F = 70mA$)

unit : mlm

Part No Code	CSPR-U30AHR4-A0R	
	min.	max.
D	2000	2500
E	2500	3000
F	3000	3500
G	3500	4000
H	4000	5000

■ Dominant Wavelength Rank Limits ($I_F = 70mA$)

unit : nm

Part No Code	CSPR-U30AHR4-A0R	
	min.	max.
A5	612	616
A6	616	620
R1	620	625
R2	625	630

■ Forward Voltage Rank Limits ($I_F = 70mA$)

unit : v

Part No Code	CSPR-U30AHR4-A0R	
	min.	max.
C	1.8	2.0
D	2.0	2.2
E	2.2	2.4
F	2.4	2.6
G	2.6	2.8

Notes:

1. Tolerance of measurement of luminous Flux $\pm 15\%$
2. Tolerance of measurement of dominant wavelength $\pm 2nm$
3. Tolerance of measurement of forward voltage $\pm 0.05v$
4. All data are measured by CSC's test equipment.
5. One delivery will include several color rank, VF rank and Iv ranks of the products.
6. The quantity-ratio of the ranks is decided by CSC.
7. Please confirm with CSC salesman, if your request different from standard specification.

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Typical Electrical / Optical Characteristics Curves -

(Ta = 25°C Unless Otherwise Noted)

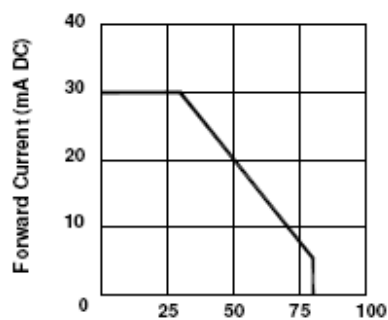


Fig 1. Forward Current Vs. Ambient Temperature

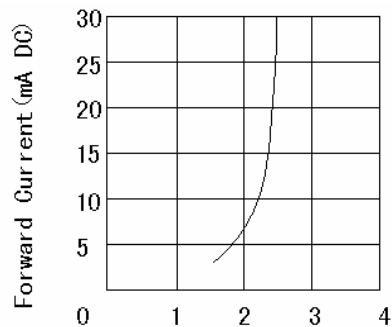


Fig 2 Forward Current Vs. Forward Voltage

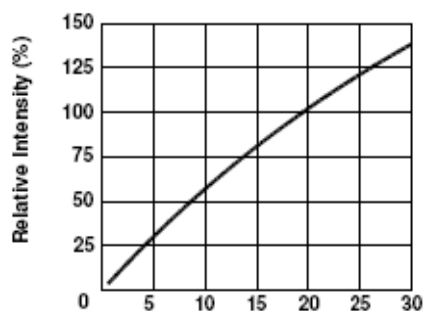


Fig 3. Relative Intensity Vs. Forward Current

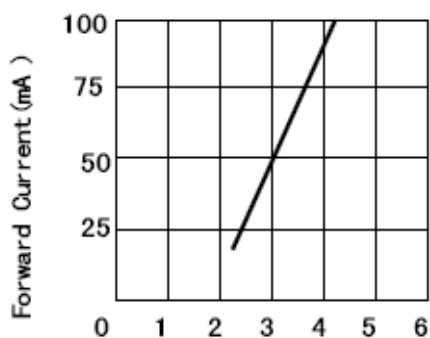


Fig 4 Peak Forward Voltage Vs. Forward Current (100us test pulse, 1% duty cycle)

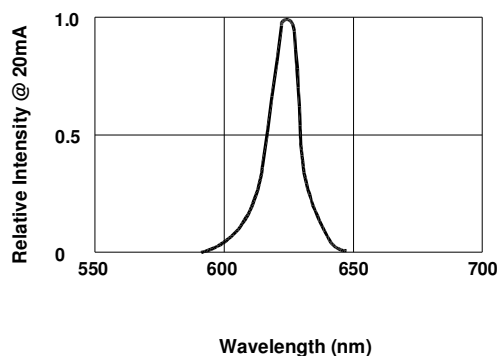


Fig 5. Relative Intensity Vs. Wavelength

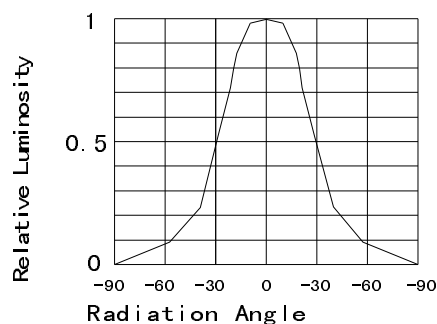
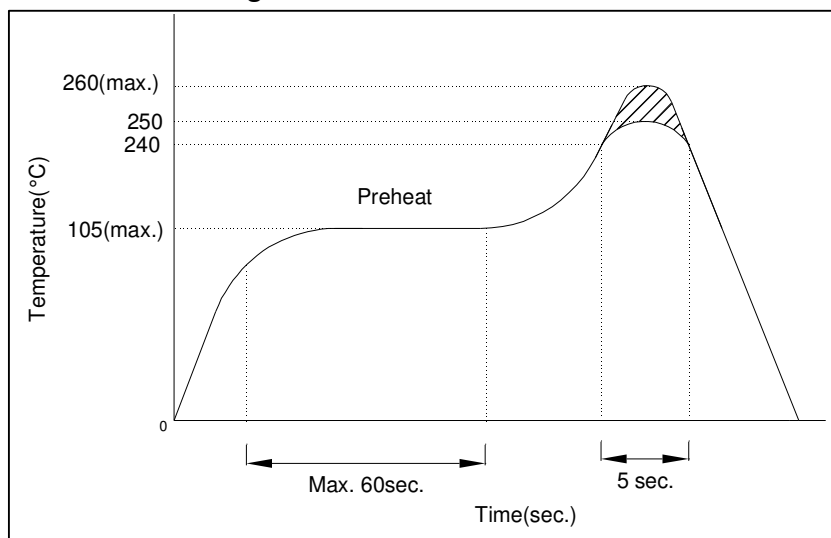


Fig 6. Relative Luminous Intensity vs. Radiation Angle

**Model No : CSPR-U30AHR4-A0R****■ Precautions For Use -****1. Recommended Soldering conditions****Wave Soldering****2. Soldering Iron**

Basic SPEC. is $\leq 5\text{sec.}$ When 260°C . If temperature is higher, time should be shorter ($+10^{\circ}\text{C} \rightarrow -1\text{sec.}$). Power dissipation of iron should be smaller than 15W, and temperature should be controllable. Surface temperature of the device should be under 230°C .

3. Static Electricity

- a. Static electricity or surge voltage damages LEDs..

It is recommended that a wrist band or an anti-electrostatic glove be used when handling the LEDs.

- b. All devices, equipment and machinery must be properly grounded. It is recommended that measures be taken against surge voltage to the equipment that mounts the LEDs.

Note: The specifications are subject to change without notice. Please contact us for updated information.