



# PRODUCT SPECIFICATION

**Model No: CSPR-N329SW4-B0R**

## Descriptions:

- LED Type : Superbright Lamp
- LED Package : Piranha LED Lamp
- Emitting Color : White
- Viewing Angle : 50°
- Stopper



CUSTOMER APPROVED SIGNATURES	APPROVED BY	CHECKED BY	PREPARED BY

**CHINA SEMICONDUCTOR CORPORATION**

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<b>Spec. No.</b>	PS-N329SW4-B0R
<b>Rev.</b>	A

**Model No: CSPR-N329SW4-B0R**

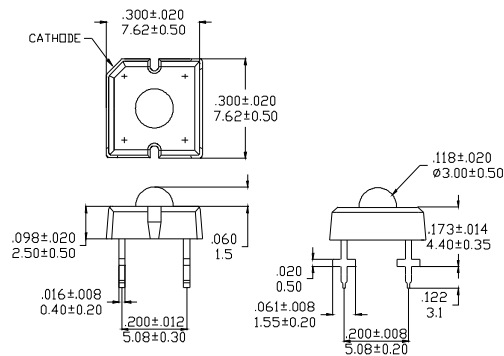
**Features -**

1. High Current Operation
2. High Luminous Output
3. High Reliability and Solid
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-N329SW4-B0R	InGaN	White	Water Transparent

**Package Outline Dimensions -**



\* Tolerance :  $\pm 0.25$ [0.01]      Unit :  $\pm$ inch[mm]



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■ Absolute Maximum Rating -

(Ta=25°C)

Parameter	Symbol	Rating	Unit
Power Dissipation	<b>Pd</b>	120	mW
Forward Current (DC)	<b>IF</b>	40	mA
Peak Forward Current *	<b>IFP</b>	100	mA
Reverse Voltage	<b>VR</b>	5	V
Operating Temp.	<b>Topr</b>	-30 ~ +80	°C
Storage Temp.	<b>Tstg</b>	-40 ~ +100	°C
Lead Soldering Temperature	<b>Tsol</b>	Max. 260°C for 5 sec Max. (3mm from the epoxy bulb)	

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

■ Electro-optical Characteristics -

(Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward Voltage	<b>VF</b>	-----	3.5	4.0	V	IF=30mA
Luminous Flux	<b>Φv</b>	2000	3500	-----	mlm	
Chromaticity	<b>X</b>	-----	0.31	-----	-----	
Coordination	<b>Y</b>	-----	0.32	-----	-----	
Viewing Angle	<b>2θ 1/2</b>	-----	50	-----	deg	
Reverse Current	<b>IR</b>	-----	-----	50	μA	VR=5V



■ Luminous Flux Rank Limits (  $I_f = 30\text{mA}$  )

unit : mlm

Part No. Code	CSPR-N329SW4-B0R	
	min.	max.
D	2000	2500
E	2500	3000
F	3000	3500
G	3500	4000
H	4000	5000
J	5000	6000

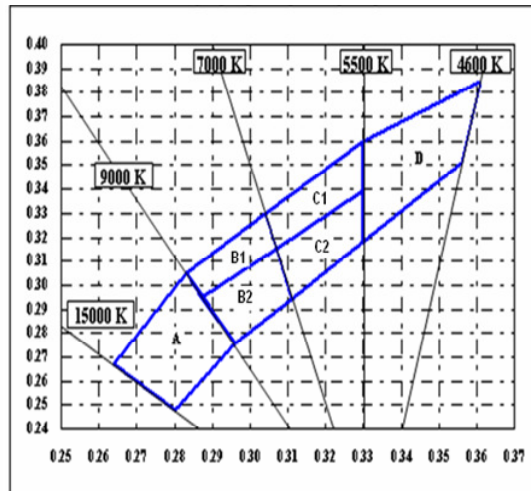
■ Color Rank Limits (  $I_f = 30\text{mA}$  )

Rank A Color Temperature:9000-15000K						
A						
X	0.28	0.264	0.283	0.296	0.28	
Y	0.248	0.267	0.305	0.276	0.248	

Rank B Color Temperature:7000-9000K											
B1					B2						
X	0.287	0.283	0.304	0.307	0.287	X	0.296	0.287	0.307	0.311	0.296
Y	0.295	0.305	0.33	0.315	0.295	Y	0.276	0.295	0.315	0.294	0.276

Rank C Color Temperature:5500-7000K											
C1					C2						
X	0.307	0.304	0.33	0.33	0.307	X	0.311	0.307	0.33	0.33	0.311
Y	0.315	0.33	0.36	0.339	0.315	Y	0.294	0.315	0.339	0.310	0.294

Rank D Color Temperature:4600-5500K											
D1					D2						
X	0.33	0.33	0.361	0.356	0.33						
Y	0.318	0.36	0.385	0.351	0.318						



■ Forward Voltage Rank Limits (  $I_f = 30\text{mA}$  )

unit : V

Part No. Code	CSPR-N329SW4-B0R	
	min.	max.
J	3.0	3.2
K	3.2	3.4
L	3.4	3.6
M	3.6	3.8
N	3.8	4.0

Notes:

1. Tolerance of measurement of luminous Flux :±15%
2. Tolerance of measurement of Color Coordinates :±0.01
3. Tolerance of measurement of forward voltage :±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. Forward Voltage

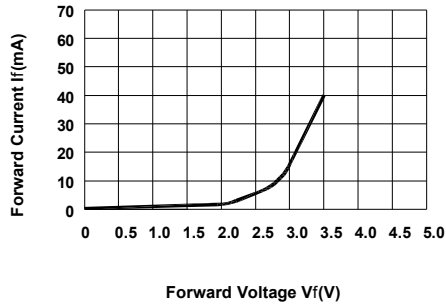


Fig 2. Relative Luminous Flux Vs. Forward Current

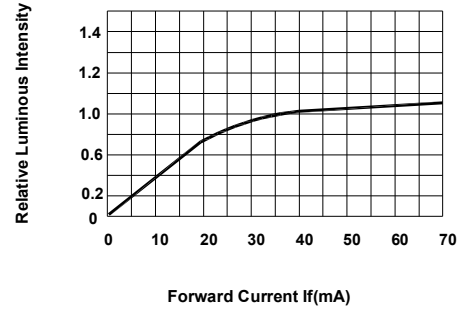


Fig 3. Forward Current Vs. Ambient Temperature  
(R<sub>θj-a</sub> = 300°C/W)

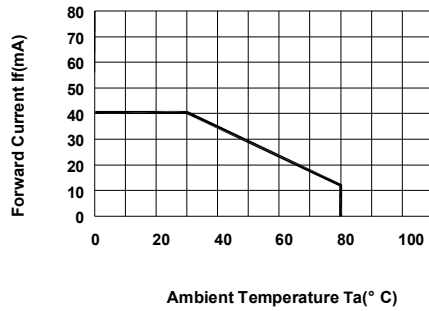


Fig 4. Relative Intensity Vs. Wavelength

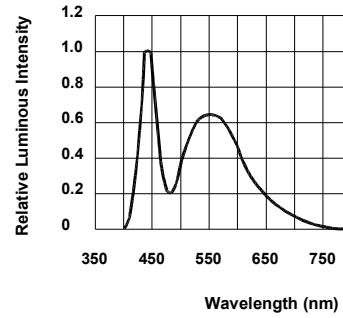
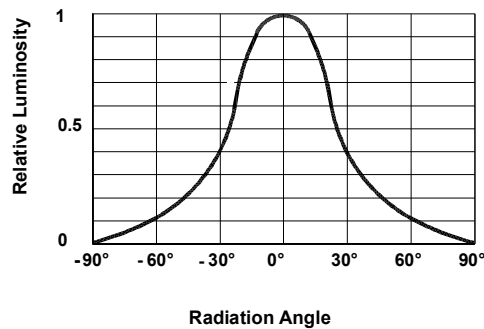


Fig 5. Radiation Diagram



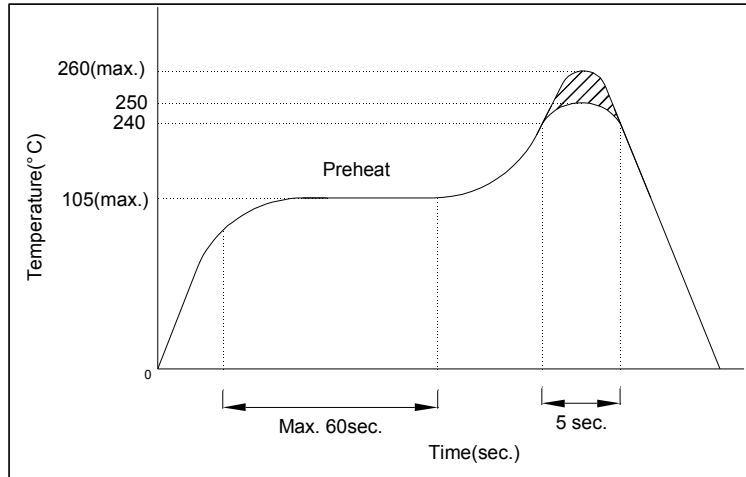


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■ **Precautions For Use -**

**1. Recommended Soldering conditions**

**Wave Soldering**



**2. Soldering Iron**

Basic SPEC. is  $\leq 5\text{sec.}$  When  $260^{\circ}\text{C}$ . 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  $230^{\circ}\text{C}$ .

**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.

■ **Revision History**

Rev. NO	Date	Change Description
A	2009-7-28	

CSC has the right to update the information without notice, Please confirm with CSC salesman for the latest version.