

### ВЫВОДНОЙ СВЕТОДИОД КРУГЛЫЙ ARL-5013URBC-B

### FEATURES

- Electricity control IC embedded.
- Fancy, fun, hottest in the market.
- Lens size with 5/8/10 mm options.
- ✓ Viewing angles 40°.
- ✓ Operating voltage range: DC 3–5 V.
- Blinking frequency: 1.8 Hz.
- ✓ Frequency tolerance: ±20%.
- ✓ RoHS compliant.

### DESCRIPTIONS

- New trend creations.
- Low energy consumptions.
- Low maintenance costs.
- High application design flexibility.
- High reliability.

### APPLICATIONS

- Toys / sports utilities.
- Miniature key chains.
- ✓ Effect lights.
- Display / decoration lights.
- Electronic displays and signals.
- Interior decoration lights.
- Indicator lights.
- Solar energy lights / garden lights.







#### USAGE NOTES:

The ultra bright LED is an electrostatic insensitive device, so static electricity and surge will damage the LED. It is required to wear a wrist-band when handling the LED. All device, equipment,machinery, desk and ground must be properly grounded. When using LED, it must use a protective resistor in series with DC current about 20 mA.

# DEVICE SELECTION GUIDE

LED Part No.	CH			
	Material	Emitted Color	Lens Color	
	AlGaInP	Red	Weber Differend	
ARL-5013URBW-B	InGaN	Blue	Water Diffused	



ATTENTION! ELECTROSTATIC SENSITIVE DEVICES. OBSERVE PRECAUTIONS FOR HANDLING.

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### PACKAGE DIMENSIONS



#### Unit: mm.

#### Notes:

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Other dimensions are in millimeters, tolerance is 0.25 mm except being specified.

Protruded resin under flange is 1.5 mm, Max LED.

Bare copper alloy is exposed at tie-bar portion after cutting.

# ABSOLUTE MAXIMUM RATING $(T_A = +25 \circ C)$

Parameter	Symbol	Absolute Maximum Rating	Unit
Forward Pulse Current	I <sub>FPM</sub>	70	mA
Forward Current	I <sub>FM</sub>	30	mA
Reverse Voltage	V <sub>R</sub>	5	v
Power Dissipation	P <sub>D</sub>	140	mW
Operating Temperature	Topr	-40 +80	°C
Storage Temperature	Tstg	-40 +100	°C
Soldering Heat (5s)	Tsol	260	°C

# ELECTRO-OPTICAL CHARACTERISTICS $(T_A = +25 \circ C)$

Parameter	Symbol	Device	Min.	Тур.	Max.	Unit	Test Condition
Luminous Intensity	lv	Red	500	_	750	mcd	lf=20mA
		Blue	500	-	750		
Viewing Angle	<b>20</b> 1/2	Red	40	_	50	Deg	(Note 1)
		Blue					
Peak Emission Wavelength	$\lambda_{P}$	Red	620	625	630	nm	lf=20mA
		Blue	460	465	470		
Spectral Line Half-Width	Δλ	Red	25	30	35	nm	lf=20mA
		Blue	30	35	40		
Turn on Time	Duty	1/20			ms	lf=20mA	
Blinking Frequency	Fled	1.8			Hz	lf=20mA	
Forward Voltage Reverse Current	V <sub>F</sub>	Red	3.0	_	5.0 10	۷ µA	lf=20mA
		Blue					
		Red					VR=5V
		Blue					

#### Note:

1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.

2.  $\theta_{\eta/2}$  is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

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# TYPICAL ELECTRO-OPTICAL CHARACTERISTICS CURVES



Forward Current VS Forward Voltage

Relative Intensity VS Ambient Temp



Forward Current VS Ambient Temp



Forward Current VS Relative Intensity



**Radiation Characteristics** 





### NOTES

- 1. Above specification may be changed without notice. Will reserve authority on material change for above specification.
- 2. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. Assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
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