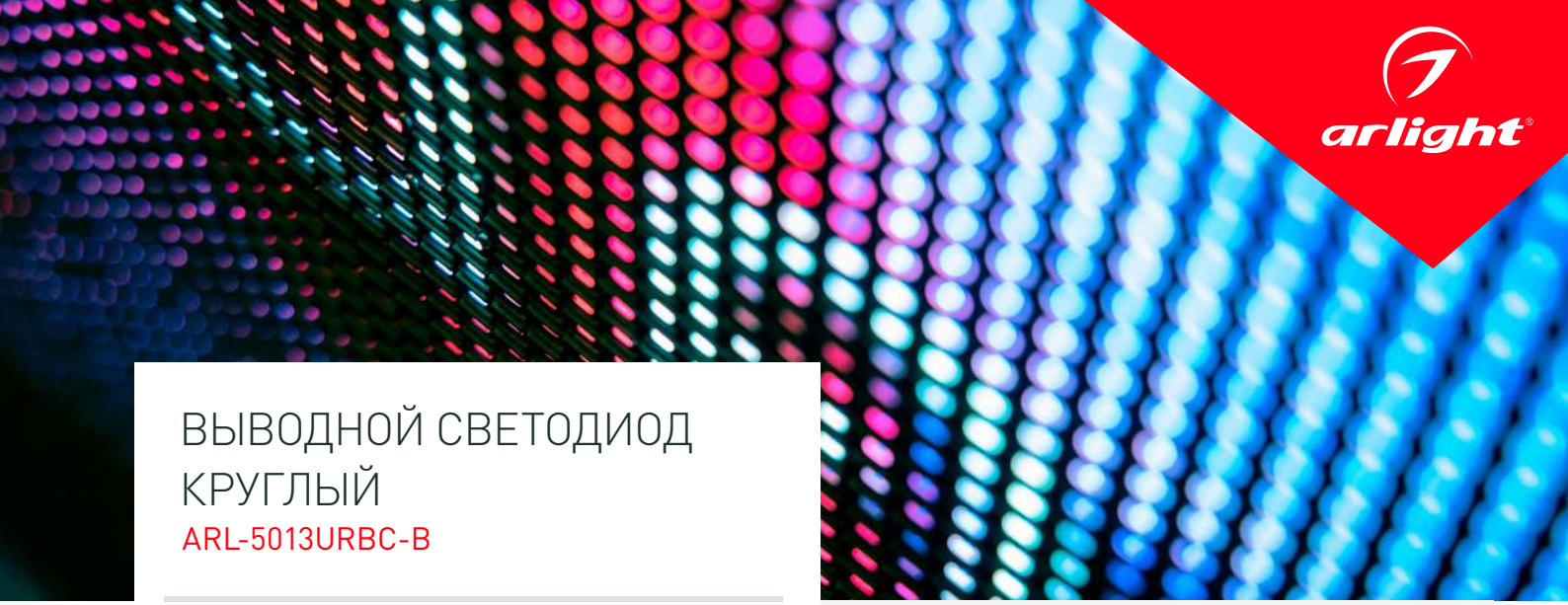


ВЫВОДНОЙ СВЕТОДИОД КРУГЛЫЙ

ARL-5013URBC-B

5 mm

DIFFUSED

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

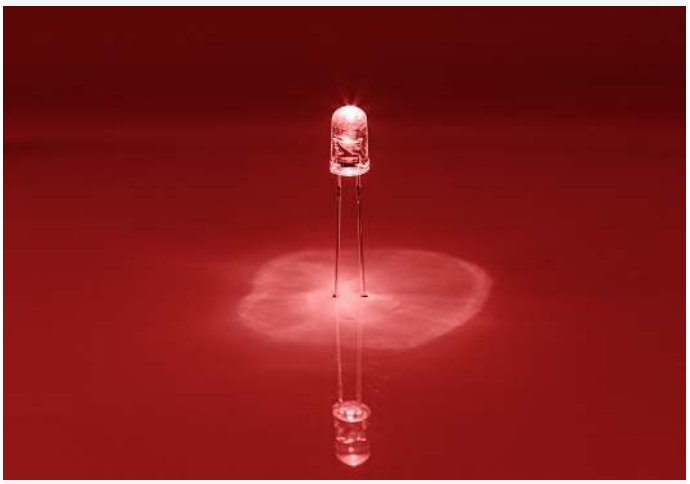
- New trend creations.
- Low energy consumptions.
- Low maintenance costs.
- High application design flexibility.
- High reliability.

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.

DEVICE SELECTION GUIDE

LED Part No.	CHIP		Lens Color
	Material	Emitted Color	
ARL-5013URBW-B	**AlGaInP**	**Red**	**Water Diffused**
	InGaN	**Blue**	

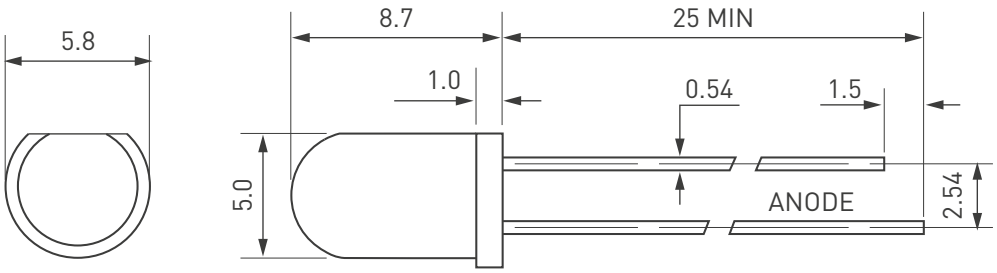


USAGE NOTES:

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.

ATTENTION!
ELECTROSTATIC SENSITIVE DEVICES.
OBSERVE PRECAUTIONS FOR HANDLING.

PACKAGE DIMENSIONS



Unit: mm.

Notes:

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 °C)

Parameter	Symbol	Absolute Maximum Rating	Unit
Forward Pulse Current	**I_{FPM}**	**70**	**mA**
Forward Current	**I_{FM}**	**30**	**mA**
Reverse Voltage	**V_R**	**5**	**V**
Power Dissipation	**P_D**	**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 °C)

Parameter	Symbol	Device	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	**Iv**	**Red**	**500**	**—**	**750**	**mcd**	**If=20mA**
		Blue	**500**	**—**	**750**		
Viewing Angle	**$2\theta_{1/2}$**	**Red**	**40**	**—**	**50**	**Deg**	**(Note 1)**
		Blue					
Peak Emission Wavelength	**λ_P**	**Red**	**620**	**625**	**630**	**nm**	**If=20mA**
		Blue	**460**	**465**	**470**		
Spectral Line Half-Width	**$\Delta\lambda$**	**Red**	**25**	**30**	**35**	**nm**	**If=20mA**
		Blue	**30**	**35**	**40**		
Turn on Time	**Duty**	**1/20**				**ms**	**If=20mA**
Blinking Frequency	**Fled**	**1.8**				**Hz**	**If=20mA**
Forward Voltage	**V_F**	**Red**	**3.0**	**—**	**5.0**	**V**	**If=20mA**
		Blue					
Reverse Current	**I_R**	**Red**	**—**	**—**	**10**	**μA**	**VR=5V**
		Blue					

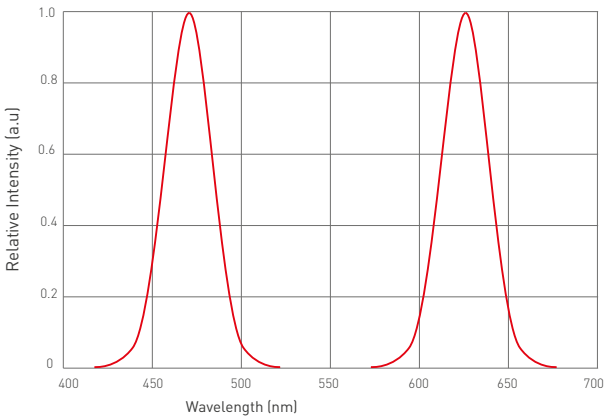
Note:

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

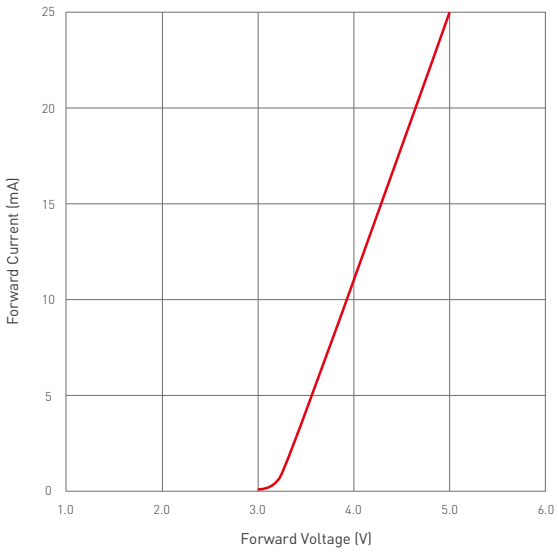
2. $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

TYPICAL ELECTRO-OPTICAL CHARACTERISTICS CURVES

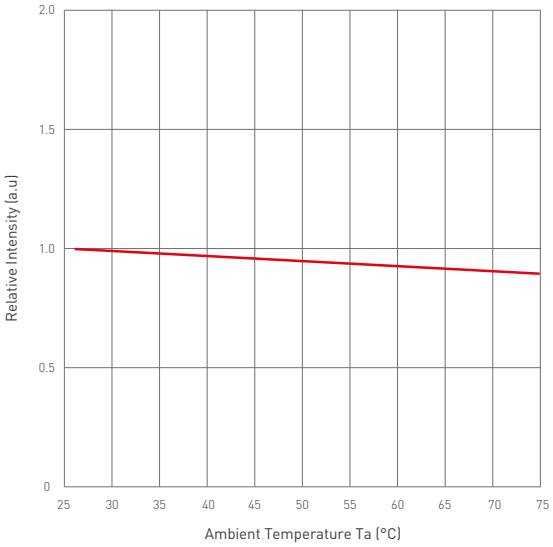
Relative Intensity VS Wavelength



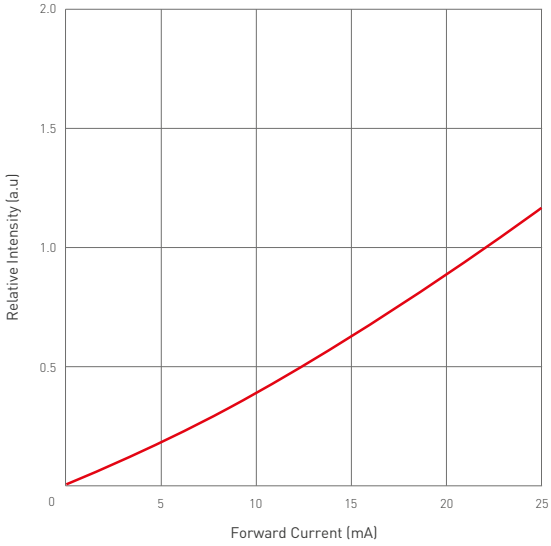
Forward Current VS Forward Voltage



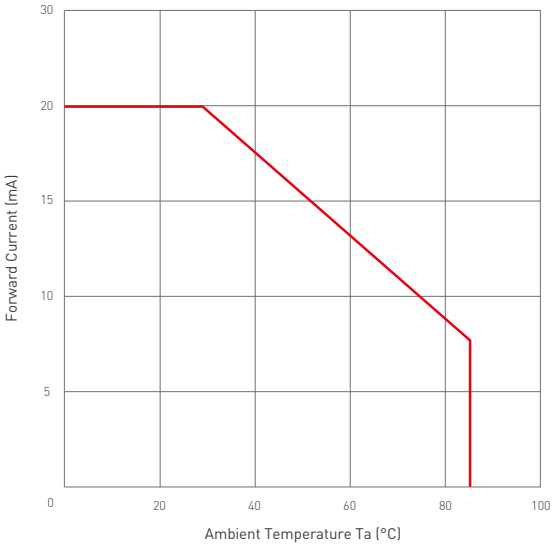
Relative Intensity VS Ambient Temp



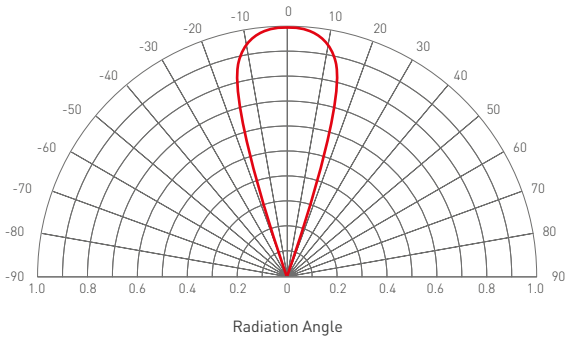
Forward Current VS Relative Intensity



Forward Current VS Ambient Temp



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.

3. These specification sheets include materials protected under copyright of the corporation. Please don't reproduce or cause anyone to reproduce them without consent.