

ARL-5013URC-B (7206R1C-CSB-B)

Features

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

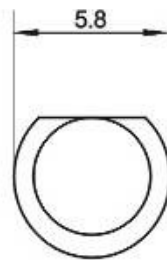
Description

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

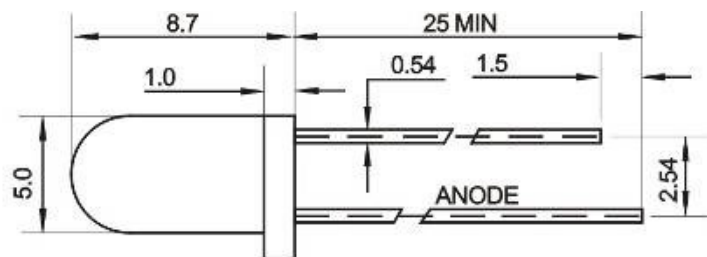
Application

- 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

Package Dimensions



UNIT:mm



Usage Notes:

1. Surge will damage the LED
2. When using LED, it must use a protective resistor in series with DC current about 20mA

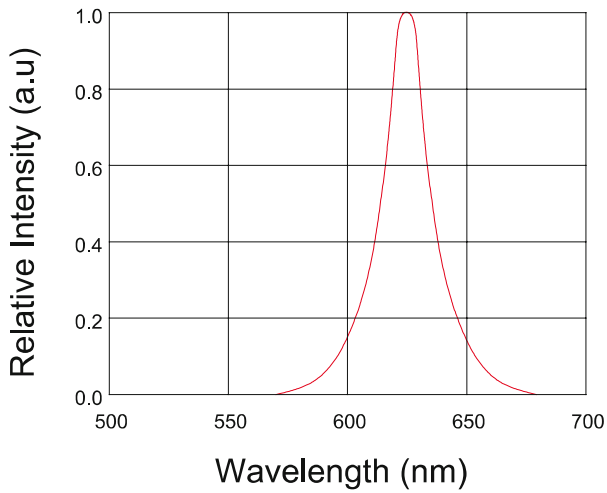
| Part No. | Chip | | Lens Color |
|----------------------------------|----------|---------------|-------------|
| | Material | Emitted Color | |
| ARL-5013URC-B (7206R1C-CSB-B) | AlGaInP | Red | Water clear |

Absolute Maximum Rating at Ta=25°C

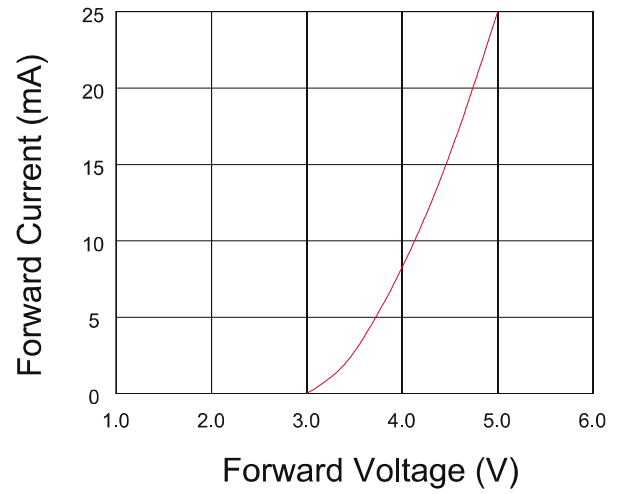
| Parameter | Symbol | Value | Units |
|--|-----------|----------|-------|
| Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width) | I_{FPM} | 100 | mA |
| Forward Current | I_{FM} | 30 | mA |
| Reverse Voltage | V_R | 5 | V |
| Power Dissipation | P_D | 100 | mW |
| Operating Temperature | T_{opr} | -40~+80 | °C |
| Storage Temperature | T_{stg} | -40~+100 | °C |
| Soldering Heat (5s) | T_{sol} | 260 | °C |

Typical optical characteristics curves

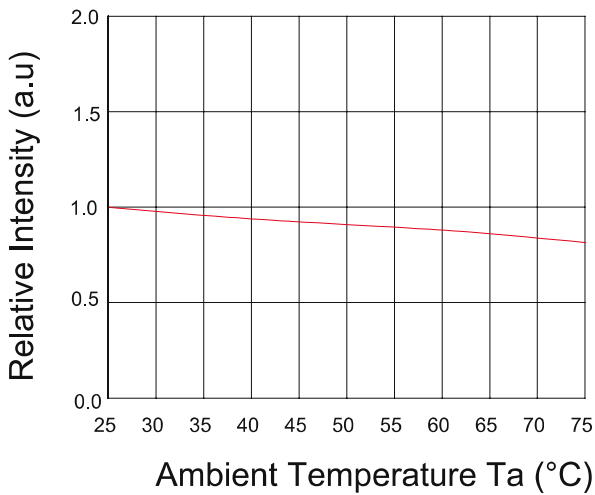
Relative Intensity VS. Wavelength



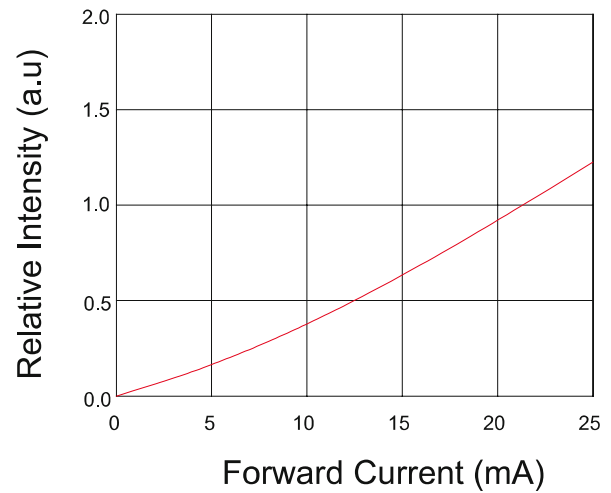
Forward Current VS. Forward Voltage



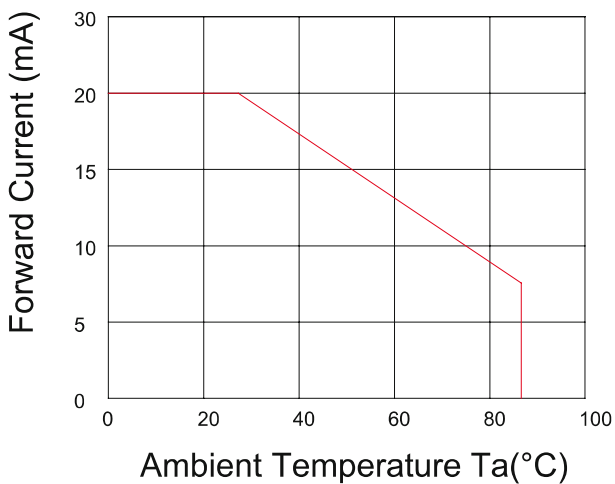
Relative Intensity VS. Ambient Temp



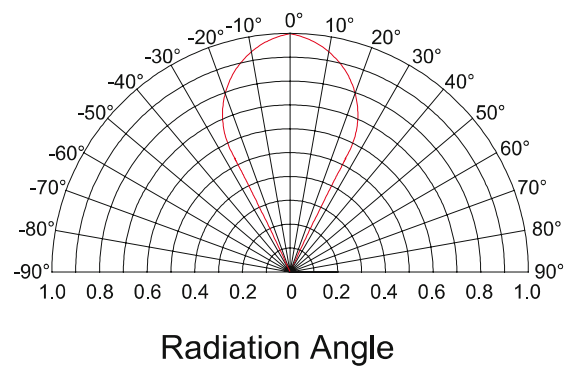
Forward Current VS. Relative Intensity



Forward Current VS. Ambient Temp.



Radiation Characteristics



Electrical / Optical Characteristics at Ta=25°C

| Parameter | Symbol | Min. | Typ. | Max | Units | Test Conditions |
|---------------------------|-------------------|------|------|------|-------|---------------------|
| Luminous Intensity | I _v | 2000 | -- | 4500 | mcd | IF=20mA |
| Viewing Angle | 2θ _{1/2} | -- | 40 | -- | Deg | (Note 2) |
| Peak Emission Wave-length | λ _p | 620 | 630 | 635 | nm | IF=20mA |
| Spectral Line Half-Width | Δλ | 15 | 20 | 25 | nm | IF=20mA |
| Turn on time | Duty | | 1/20 | | ms | IF=20mA |
| Blinking Frequency | Fled | 1.8 | -- | 2.4 | Hz | IF=20mA |
| Forward Voltage | V _F | 3.0 | -- | 5.0 | V | IF=20mA |
| Reverse Current | I _R | -- | -- | 10 | μA | V _R = 5V |

Note:

1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2. θ_{1/2} is the off-axis angle at which the luminous intensity is half the axial luminous intensity.