



# AX180UYC-1

Emitting Light Diode

## Description

- Size: 2.1\*2.4mm with 1,8mm lens.
- Emitted color: Ultra yellow.
- Lens color: Water clear.
- Lead type: Axial lead

## Main Features

- Instant light less than 100ns turn on time.
- Superior resistance to moisture.
- Low drive current, recommend forward current:  $I_F = 10\text{-}20\text{mA}$ .
- **Pb-free.**
- Cool beam, safe to touch.
- Reliable and rugged.

## Absolute Maximum Rating $T_A=25^\circ\text{C}$

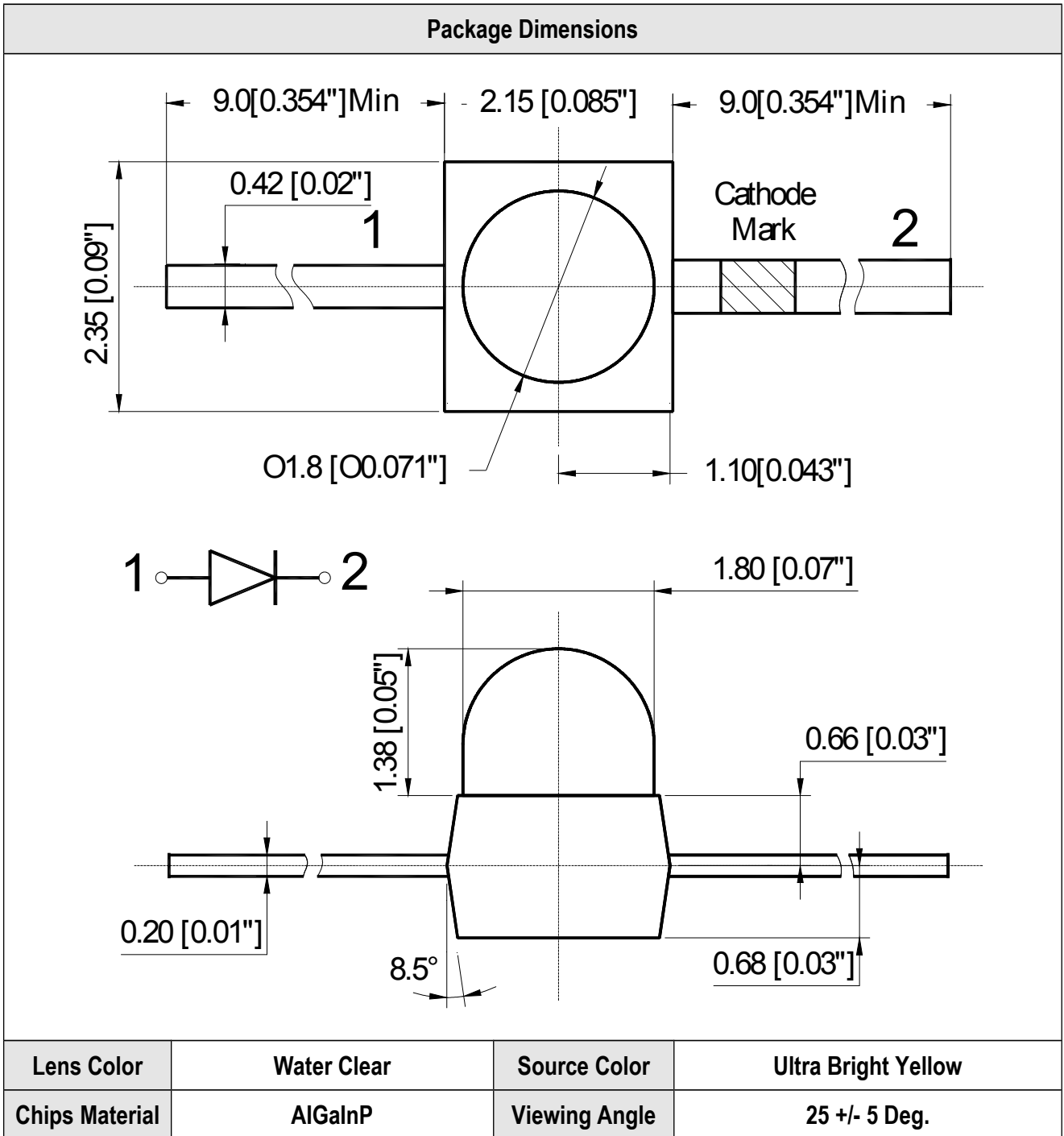
Parameter	Symbol	Rating	Unit	Notice
Power Dissipation	$P_d$	80	mW	---
DC Forward Current	$I_F$	25	mA	---
Pulse Forward Current	$I_F(\text{PEAK})$	80	mA	Duty 1/10 @ 1KHz
Reverse Voltage	$V_R$	5	V	Under 100uA
Operating Temperature Range	$T_{\text{OPR}}$	-20 to +80	$^\circ\text{C}$	---
Storage Temperature Range	$T_{\text{STG}}$	-25 to +85	$^\circ\text{C}$	Humidity should be under 50%
Lead Soldering Temperature	$T_{\text{SOL}}$	260 +/-5	$^\circ\text{C}$	4mm (0.157") from mold body Less then 5 Second

## Part Selection Electrical / Optical Characteristics At $T_A=25^\circ\text{C}$

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit.
Forward Voltage	$V_F$	$I_F = 20\text{mA}$	---	2.00	2.40	V
Reverse Current	$I_R$	$V_R = 5\text{V}$	—	---	10	$\mu\text{A}$
Luminous Intensity ( Note 1 )	$I_v$	$I_F = 20\text{mA}$	455	780	1560	mcd
Peak Emission Wavelength	$\lambda_p$	$I_F = 20\text{mA}$	585	590	595	nm
Spectral Line Half Width	$\Delta\lambda$	$I_F = 20\text{mA}$	18	20	23	nm
Dominant Wavelength ( Note 2 )	$\lambda_d$	$I_F = 20\text{mA}$	586	591	596	nm

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

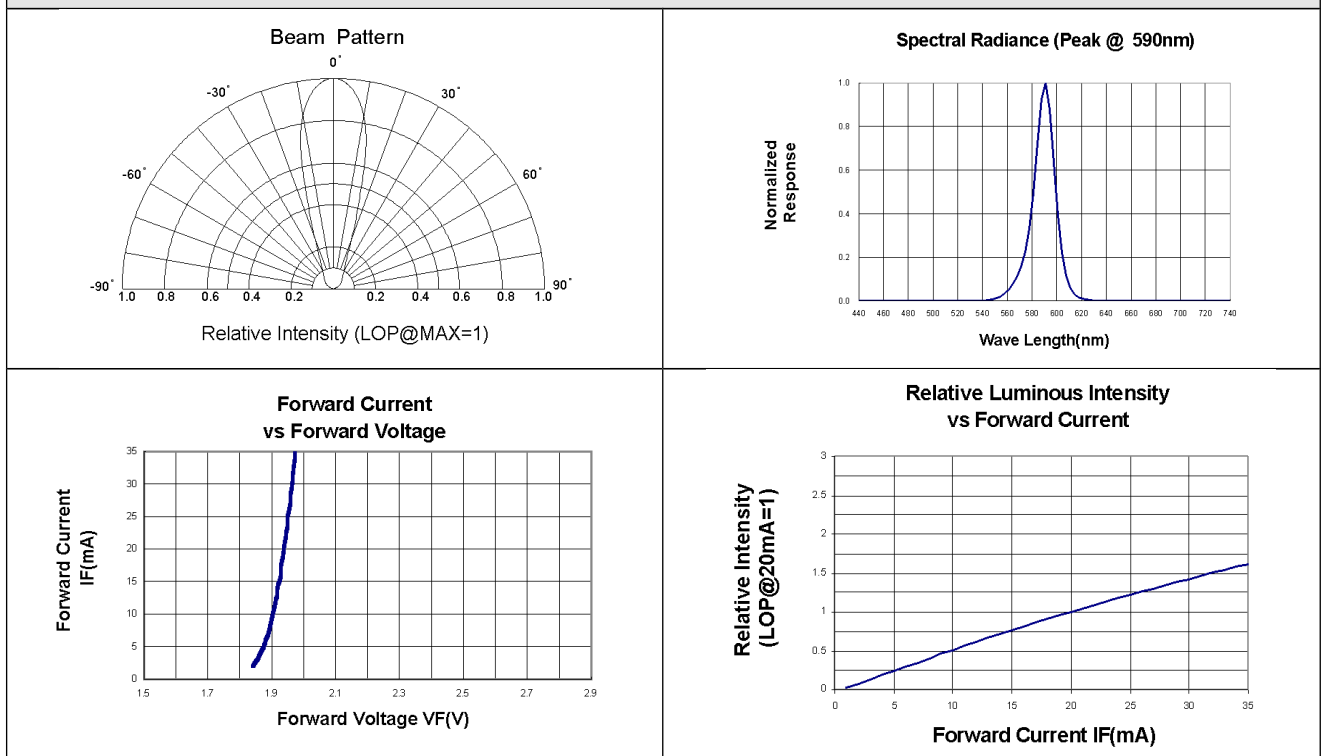
**Note 2 :** The dominant wavelength ( $\lambda_d$ ) is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.



**NOTES:**

- All dimensions are in millimeters (inches).
- Tolerance is  $\pm 0.25$  mm (.010") unless otherwise noted.
- Protruded resin under flange is 1.0mm(.04") max
- Lead spacing is measured where the leads emerge from the package.
- Specifications are subject to change without notice.

### Typical Electrical / Optical Characteristic Curves At 25°C Ambient Temperature



#### NOTE:

- $\theta_{1/2}$  is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
- Clean only in isopropanol, ethanol, Freon TF (or equivalent).
- When using this product, Please observe the absolute maximum rating and the instructions for use outlined from use of the product, which does not comply with the absolute maximum rating and the instructions included in these specification sheet.
- **Q.A Outgoing inspection standard:**  
Major Defect 0.65 A.Q.L. Minor Defect 1.5 A.Q.L
- Check at a distance of 30cm from the LED to the eye defects.
- **Lead Forming:**  
If forming is required, it must be done before soldering. Form pin leads by securing under 5mm from body and bedding with radio pliers or the equivalent to avoid pressure on resin. When the LED is mounted into a P.C.board, pitch spacing should be aligned to prevent cause any stress to the resin. Any unsuitable stress applied to resin may break bonding wire in LED, which will cause failure.
- **Over-current-proof:**  
Customer must apply resistors for protection; otherwise slight voltage shift will cause big current change (Burn out will happen).
- **Parallel connection:**  
Customer must apply series resistor in each LED under parallel connection. Otherwise VF difference will cause LED array lighting not even.
- Specifications are subject to change without notice.

