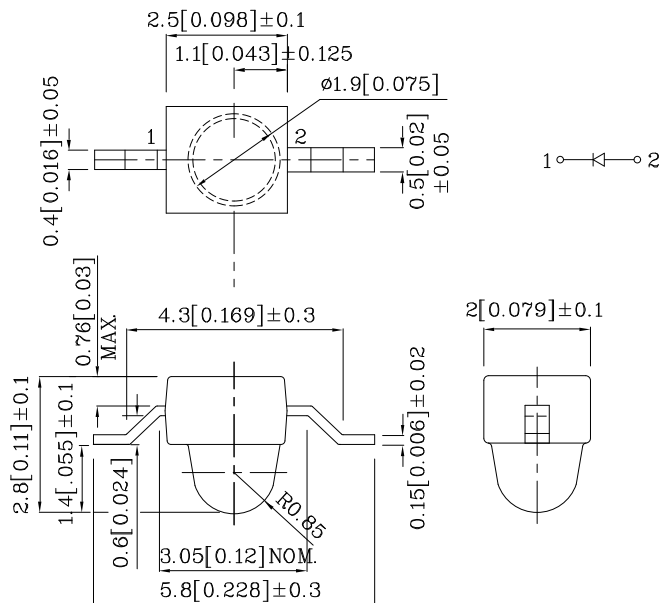


## PRELIMINARY SPEC

## Features

- SUBMINIATURE PACKAGE.
- WIDE VIEWING ANGLE.
- Z-BEND LEAD.
- LONG LIFE-SOLID STATE RELIABILITY.
- LOW PACKAGE PROFILE.
- PACKAGE : 1000PCS / REEL.
- MOISTURE SENSITIVITY LEVEL : LEVEL 3.
- RoHS COMPLIANT.



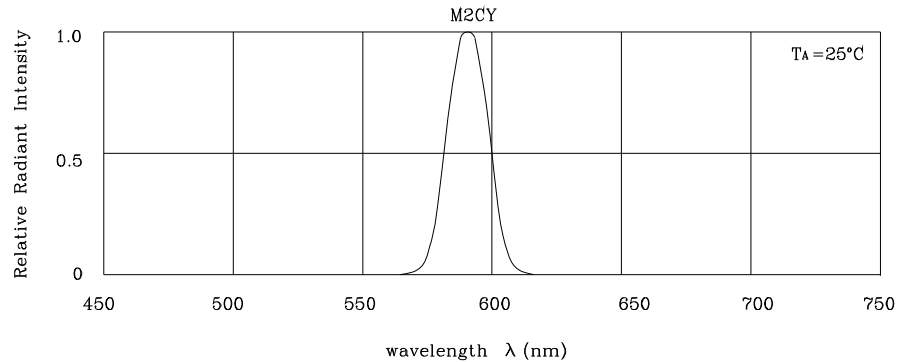
Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.25(0.01")$  unless otherwise noted.
3. Specifications are subject to change without notice.

| Absolute Maximum Ratings<br>(TA=25°C)                          |      | M2CY<br>(AlInGaP) | Unit |
|----------------------------------------------------------------|------|-------------------|------|
| Reverse Voltage                                                | VR   | 5                 | V    |
| Forward Current                                                | IF   | 30                | mA   |
| Forward Current (Peak)<br>1/10 Duty Cycle<br>0.1ms Pulse Width | iFS  | 140               | mA   |
| Power Dissipation                                              | PT   | 84                | mW   |
| Operating Temperature                                          | TA   | -40 ~ +85         | °C   |
| Storage Temperature                                            | Tstg | -40 ~ +85         |      |

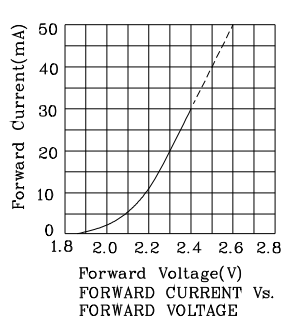
| Operating Characteristics<br>(TA=25°C)                          |                 | M2CY<br>(AlInGaP) | Unit |
|-----------------------------------------------------------------|-----------------|-------------------|------|
| Forward Voltage (Typ.)<br>(IF=20mA)                             | VF              | 2.3               | V    |
| Forward Voltage (Max.)<br>(IF=20mA)                             | VF              | 2.8               | V    |
| Reverse Current (Max.)<br>(VR=5V)                               | IR              | 10                | uA   |
| Wavelength Of Peak<br>Emission (Typ.)<br>(IF=20mA)              | $\lambda$ P     | 590               | nm   |
| Wavelength Of Dominant<br>Emission (Typ.)<br>(IF=20mA)          | $\lambda$ D     | 589               | nm   |
| Spectral Line Full Width<br>At Half-Maximum (Typ.)<br>(IF=20mA) | $\Delta\lambda$ | 20                | nm   |
| Capacitance (Typ.)<br>(VF=0V, f=1MHz)                           | C               | 45                | pF   |

| Part Number | Emitting Color | Emitting Material | Lens-color  | Luminous Intensity (IF=20mA)<br>mcd | Wavelength<br>nm<br>λ P | Viewing Angle<br>2 θ 1/2 |     |
|-------------|----------------|-------------------|-------------|-------------------------------------|-------------------------|--------------------------|-----|
|             |                |                   |             | min.                                | typ.                    |                          |     |
| ZM2CY46W-9  | Yellow         | AlInGaP           | Water Clear | 1200                                | 2990                    | 590                      | 20° |

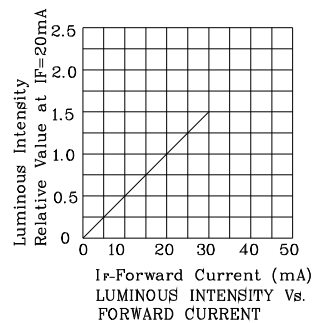


RELATIVE INTENSITY Vs. WAVELENGTH

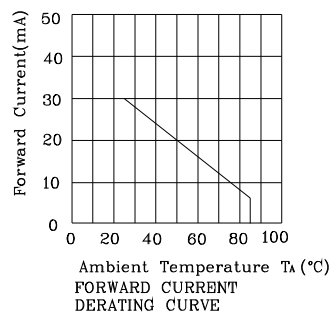
### ❖ M2CY



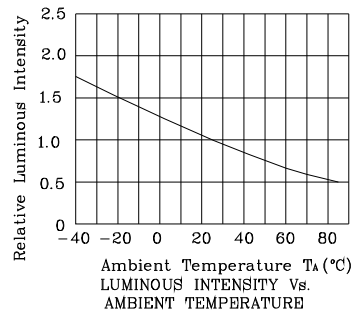
FORWARD CURRENT Vs. FORWARD VOLTAGE



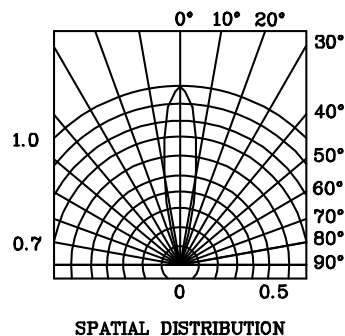
LUMINOUS INTENSITY Vs. FORWARD CURRENT



FORWARD CURRENT DERATING CURVE

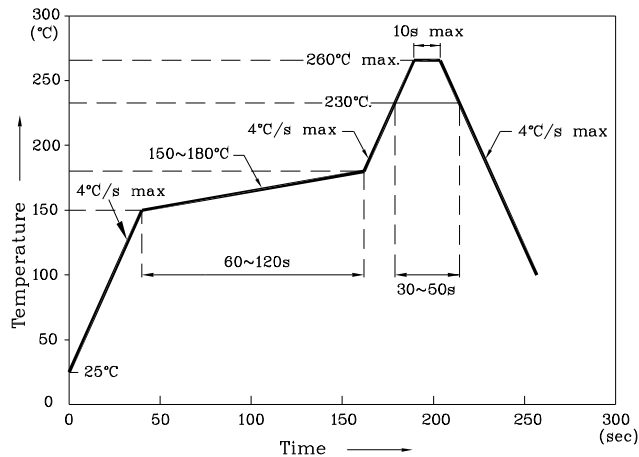


LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE



SPATIAL DISTRIBUTION

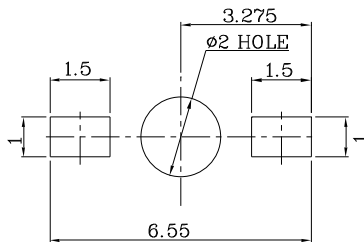
Reflow Soldering Profile For Lead-free SMT Process.



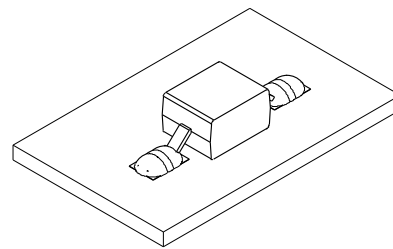
Notes:

1. Maximum soldering temperature should not exceed 260°C.
2. Recommended reflow temperature: 145°C-260°C.
3. Do not put stress to the epoxy resin during high temperatures conditions.

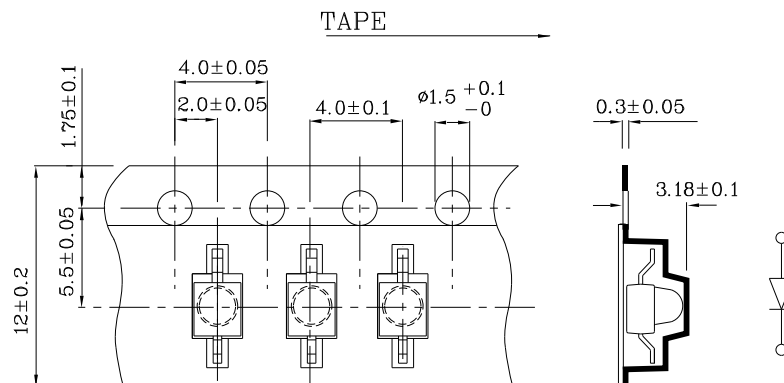
❖ **Recommended Soldering Pattern**  
(Units : mm;Tolerance:± 0.1)



❖ **The device has a single mounting surface. The device must be mounted according to the specifications.**



❖ **Tape Specification (Units : mm)**



Remarks:

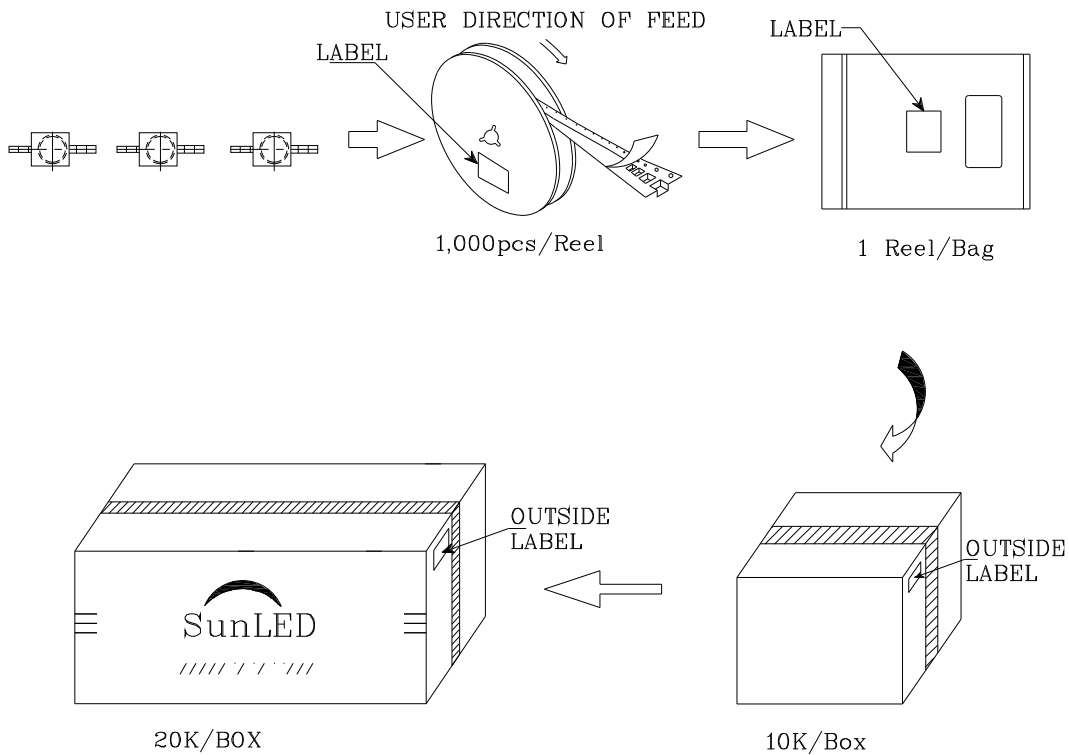
If special sorting is required (e.g. binning based on forward voltage, Luminous intensity / luminous flux, or wavelength), the typical accuracy of the sorting process is as follows:

1. Wavelength: +/-1nm
2. Luminous Intensity / Luminous Flux: +/-15%
3. Forward Voltage: +/-0.1V

Note: Accuracy may depend on the sorting parameters.

**PACKING & LABEL SPECIFICATIONS**

**ZM2CY46W-9**



|                                                            |           |                                  |
|------------------------------------------------------------|-----------|----------------------------------|
|                                                            |           | Q.C. Q C<br>XX XX XXXX<br>PASSED |
| P/NO : Zxxx46x-9                                           |           |                                  |
| QTY : 1,000 pcs                                            | CODE: XXX |                                  |
| S/N : XX                                                   |           |                                  |
| LOT NO :<br><br>XXXXXXXXXXXXXXXXXXXXXXXX<br>RoHS Compliant |           |                                  |