Kingbright

**SUBMINIATURE SOLID STATE LAMP**

PRELIMINARY SPEC

P/N: KM-27SYC-08

SUPER BRIGHT YELLOW

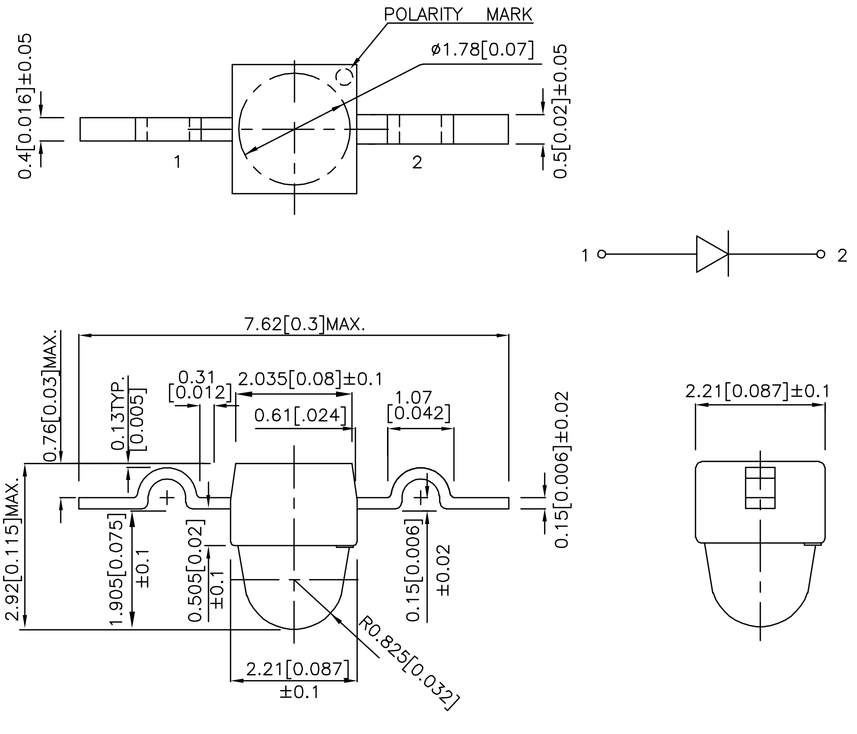
## Features

- ●SUBMINIATURE PACKAGE.
- ●WIDE VIEWING ANGLE.
- ●YOKE LEAD.
- ●LONG LIFE-SOLID STATE RELIABILITY.
- ●LOW PACKAGE PROFILE.
- ●PACKAGE : 1000PCS / REEL.
- ●RoHS COMPLIANT.

## Description

The Super Bright Yellow device is made with DH InGaAlP (on GaAs substrate) light emitting diode chip.

## Package Dimensions



Notes:
1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25(0.01") unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.
4. Specifications are subject to change without notice.

## Selection Guide

| Part No. | Dice | Lens Type | Iv (mcd) @ 20mA | | Viewing Angle |
|---|---|---|---|---|---|
| | | | Min. | Typ. | 2θ1/2 |
| KM-27SYC-08 | SUPER BRIGHT YELLOW (InGaAIP) | WATER CLEAR | 480 | 1500 | 20° |

Note:
1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

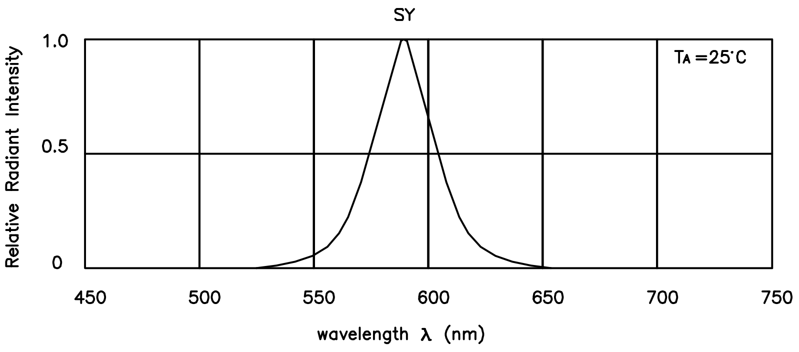
## Electrical / Optical Characteristics at $T_A$=25°C

| Symbol | Parameter | Device | Typ. | Max. | Units | Test Conditions |
|---|---|---|---|---|---|---|
| λpeak | Peak Wavelength | Super Bright Yellow | 590 | | nm | $I_F$=20mA |
| λD | Dominant Wavelength | Super Bright Yellow | 588 | | nm | $I_F$=20mA |
| Δλ1/2 | Spectral Line Half-width | Super Bright Yellow | 28 | | nm | $I_F$=20mA |
| C | Capacitance | Super Bright Yellow | 25 | | pF | $V_F$=0V;f=1MHz |
| $V_F$ | Forward Voltage | Super Bright Yellow | 2.0 | 2.5 | V | $I_F$=20mA |
| $I_R$ | Reverse Current | Super Bright Yellow | | 10 | uA | $V_R$ = 5V |

## Absolute Maximum Ratings at $T_A$=25°C

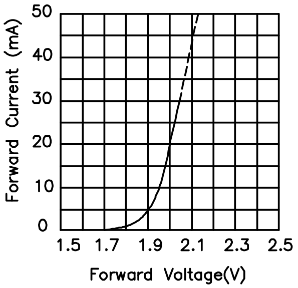
| Parameter | Super Bright Yellow | Units |
|---|---|---|
| Power dissipation | 125 | mW |
| DC Forward Current | 30 | mA |
| Peak Forward Current [1] | 150 | mA |
| Reverse Voltage | 5 | V |
| Operating / Storage Temperature | -40°C To +85°C | |

Note:
1. 1/10 Duty Cycle, 0.1ms Pulse Width.

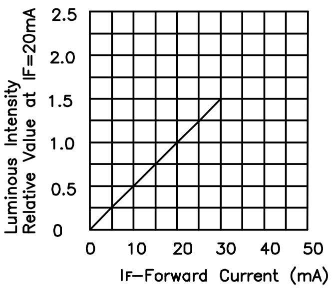


RELATIVE INTENSITY Vs. WAVELENGTH

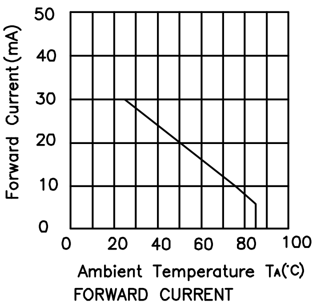
**Super Bright Yellow** **KM-27SYC-08**



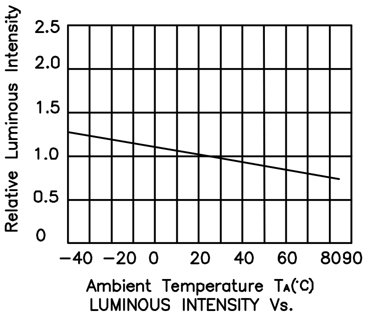
FORWARD CURRENT Vs.
FORWARD VOLTAGE



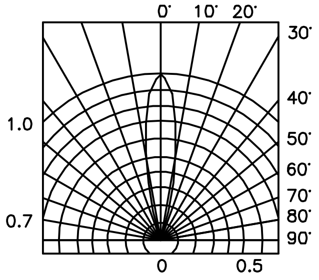
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE



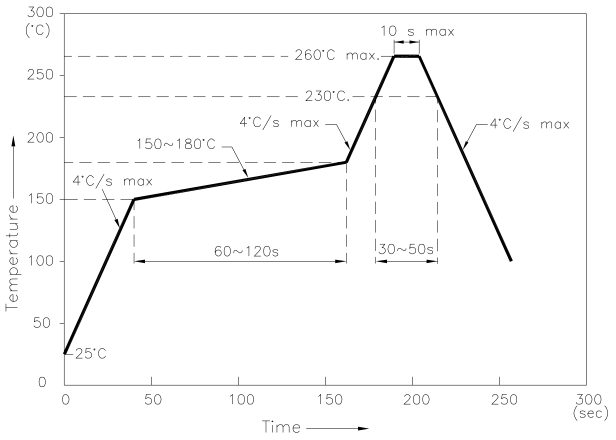
LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE



SPATIAL DISTRIBUTION

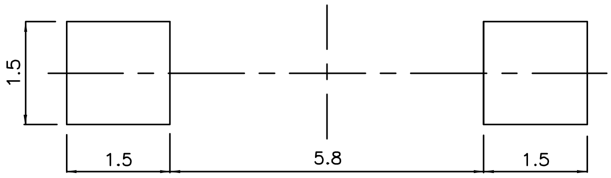
**KM-27SYC-08**

Reflow Soldering Profile For Lead-free SMT Process.

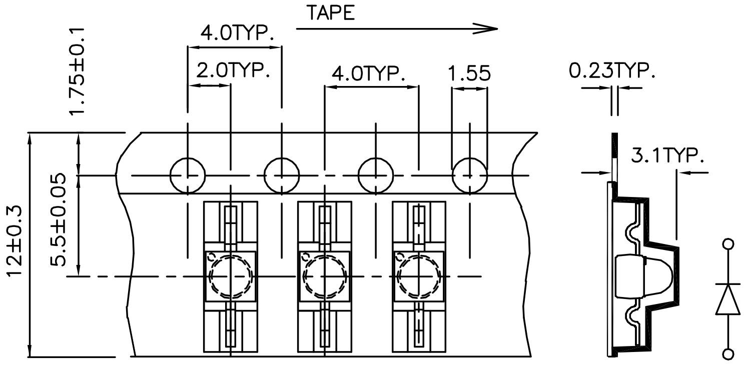


NOTES:
1.We recommend the reflow temperature 245°C(+/−5°C).The maximum soldering temperature should be limited to 260°C.
2.Don't cause stress to the epoxy resin while it is exposed to high temperature.
3.Number of reflow process shall be 2 times or less.

## Recommended Soldering Pattern (Units : mm)



## Tape Specifications (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.