SunLED
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**Part Number: XSM2MOK983W**

SUPER FLUX LED LAMP

## Features

- High current operation for greater luminous output
- Low power consumption and thermal resistance
- Can be used with automatic insertion equipment
- RoHS Compliant

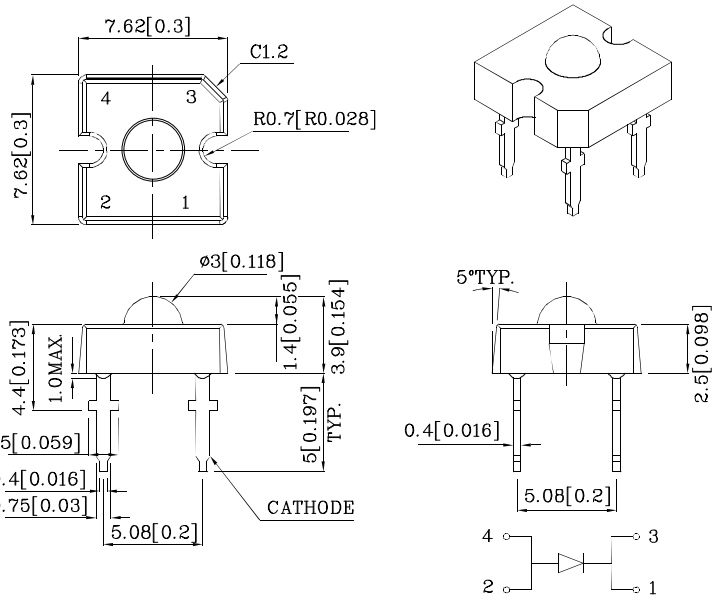
## Benefits:

- Rugged design allows for easy maintenance
- Robust package for optimum reliability

## Typical Applications:

- Automotive side markers
- Gaming and entertainment lighting
- Signs and road hazard indicators

## Package Schematics




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

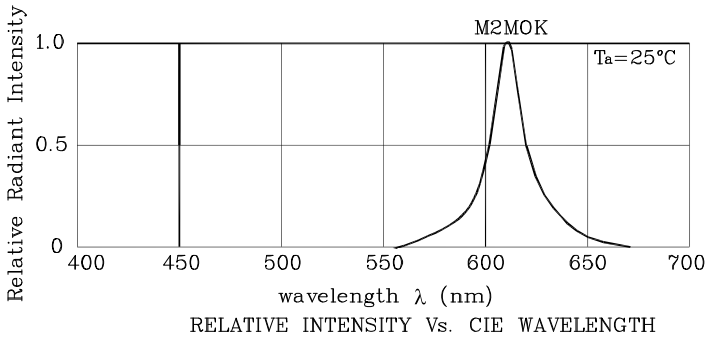
| **Absolute Maximum Ratings ($T_A$=25°C)** | | **M2MOK (AlGaInP)** | **Unit** |
|---|---|---|---|
| Reverse Voltage | $V_R$ | 5 | V |
| DC Forward Current | $I_F$ | 70 | mA |
| Power Dissipation | $P_D$ | 210 | mW |
| Operating Temperature | $T_A$ | -40 ~ +85 | °C |
| Storage Temperature | Tstg | -55 ~ +85 | |
| Lead Solder Temperature [1.5mm Below Seating Plane.][1] | | 260°C For 5 Seconds | |

1.No Reflow soldering .

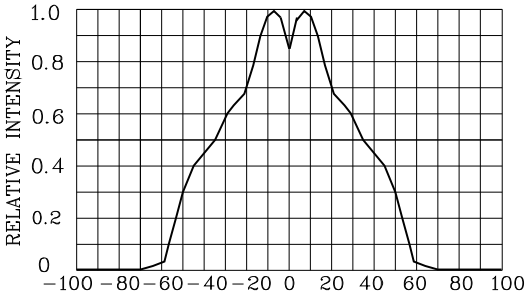
| **Operating Characteristics ($T_A$=25°C)** | | **M2MOK (AlGaInP)** | **Unit** |
|---|---|---|---|
| Forward Voltage (Min.) ($I_F$=70mA) | $V_F$ | 2.0 | V |
| Forward Voltage (Typ.) ($I_F$=70mA) | $V_F$ | 2.4 | V |
| Forward Voltage (Max.) ($I_F$=70mA) | $V_F$ | 3.0 | V |
| Reverse Current (Max.) ($V_R$=5V) | $I_R$ | 10 | uA |
| Wavelength of Peak Emission CIE127-2007*(Typ.) ($I_F$=70mA) | λP | 611* | nm |
| Wavelength of Dominant Emission CIE127-2007*(Typ.) ($I_F$=70mA) | λD | 605* | nm |
| Spectral Line Full Width At Half Maximum (Typ.) ($I_F$=70mA) | △λ | 17 | nm |
| Capacitance (Typ.) ($V_F$=0V, f=1MHz) | C | 27 | pF |
| Thermal Resistance (Typ.) | Rθj-pin | 125 | °C/W |

| Part Number | Emitting Color | Emitting Material | Lens-color | Luminous Intensity CIE127-2007* ($I_F$=70mA) cd | | Luminous Flux CIE127-2007* ($I_F$=70mA) lm | Wavelength CIE127-2007* λP nm | Viewing Angle 2θ 1/2 |
|---|---|---|---|---|---|---|---|---|
| | | | | min. | typ. | typ. | | |
| XSM2MOK983W | Orange | AlGaInP | Water Clear | 6<br>3.2* | 8.99<br>4.79* | 8.5* | 611* | 70° |

1.Luminous intensity is measured with an integrating sphere after the device has stabilized.
2.θ 1/2 is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.
3.LEDs are binned according to their Luminous intensity.
* Luminous intensity / luminous flux value and wavelength are in accordance with CIE127-2007 standards.

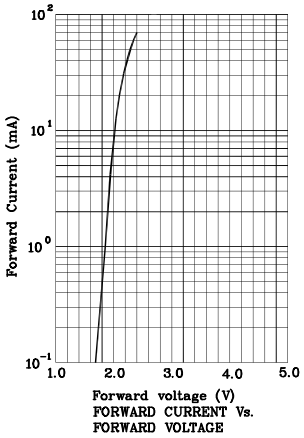


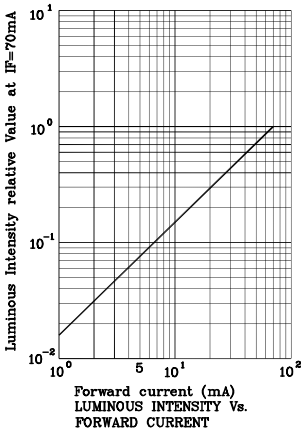

RELATIVE INTENSITY Vs. CIE WAVELENGTH

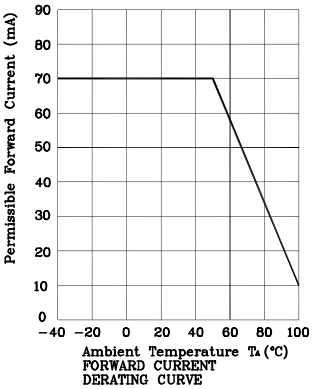


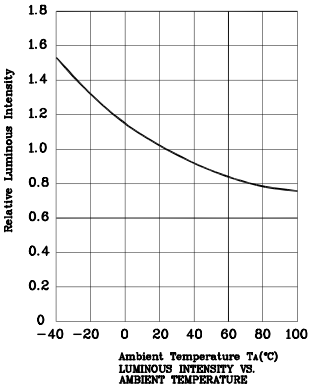

RELATIVE INTENSITY VS OFF AXIS ANGLE

## ❖ M2MOK

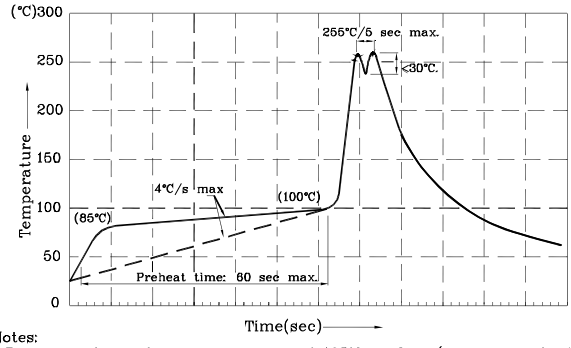



Wave Soldering Profile For Thru-Hole Products (Pb-Free Components)

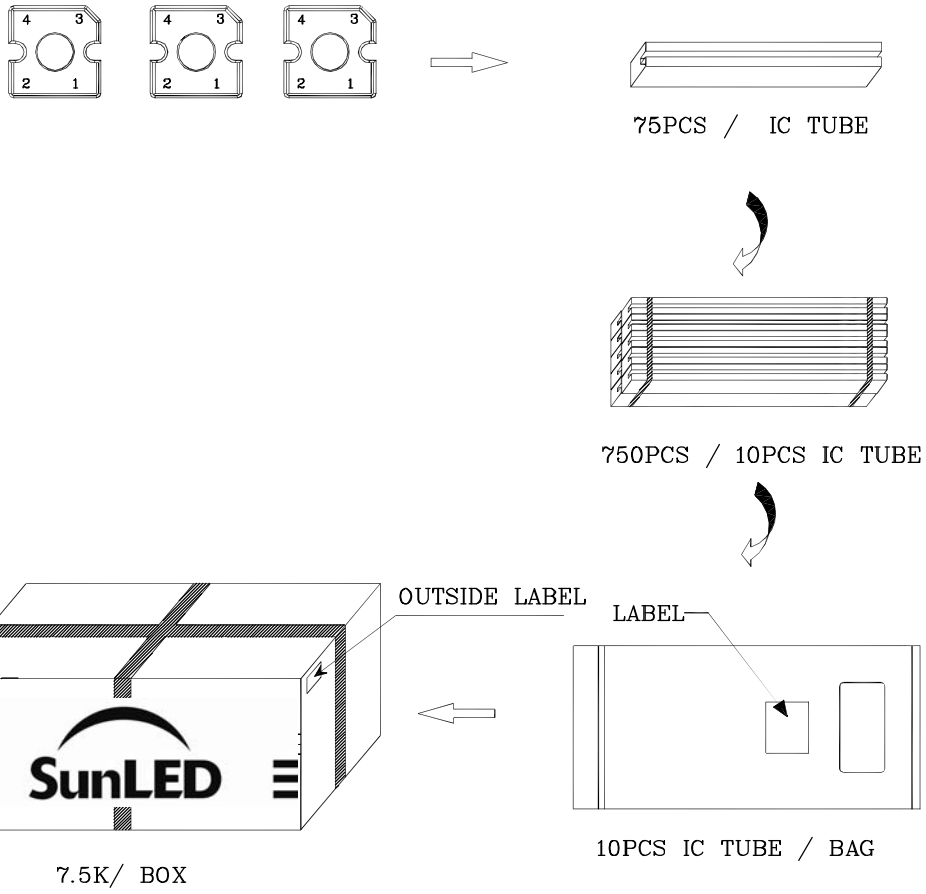


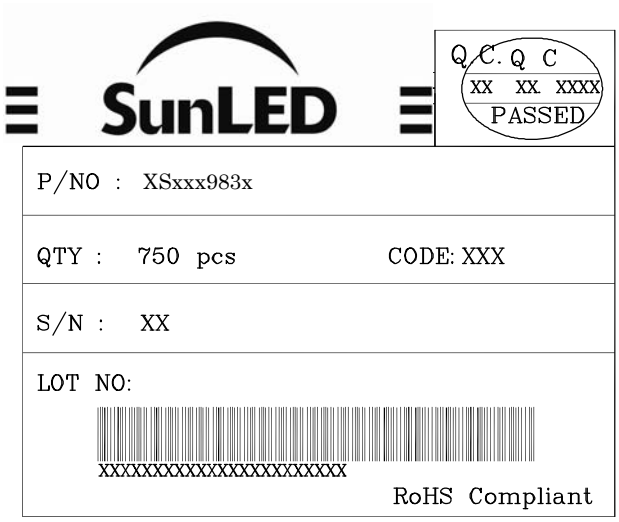

Notes:
1. Recommend pre-heat temperature of 105°C or less (as measured with a thermocouple attached to the LED pins) prior to immersion in the solder wave with a maximum solder bath temperature of 260°C
2. Peak wave soldering temperature between 245°C ~ 255°C for 3 sec (5 sec max).
3. Do not apply stress to the epoxy resin while the temperature is above 85°C.
4. Fixtures should not incur stress on the component when mounting and during soldering process.
5. SAC 305 solder alloy is recommended.
6. No more than one wave soldering pass.

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

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