**Product Code: YL-7050F-C7H3034000**

## PRODUCT CHARACTERISTICS (Tj = 25 ˚C;  IF = 1200 mA)

| Parameter | | Values | Unit |
|---|---|---|---|
| **Chromaticity coordinates acc. To CIE 1931 (typ.)** | | CIE-x : 0.323<br>CIE-y : 0.333 | |
| **Viewing Angle (FWHM)** | | 120 | ° |
| **Forward voltage** | **(min.)** | 9.4 | V |
| | **(typ.)** | 10.0 | V |
| | **(max.)** | 10.6 | V |
| **Reversed Current** | | not designed for reversed operation | |
| **Thermal resistance junction / board** | **(typ.)** | 2.0 | K/W |
| **Radiating surface** | | 4.5 | $mm^2$ |

## JEDEC MOISTURE SENSITIVITY

| Level | Floor Life | |
|---|---|---|
| | Time | Conditions |
| **1** | unlimited | ≦ 30°C / 85 % RH |

## BRIGHTNESS GROPES

| Item | Group | Form Factor | Measured Test Condition<br>1200 mA Pulsed Operation<br>Case Temperature $T_c$ = 25°C<br>Minimum Luminous Flux (lm) |
|---|---|---|---|
| **7050 PKG** | Z19 | 1x3 | 870 |
| | Z20 | 1x3 | 970 |
| | Z21 | 1x3 | 1080 |
| | Z22 | 1x3 | 1200 |

Notes:
• YesLED maintains a tolerance of ±7% on flux
• Calculated flux values are for reference only

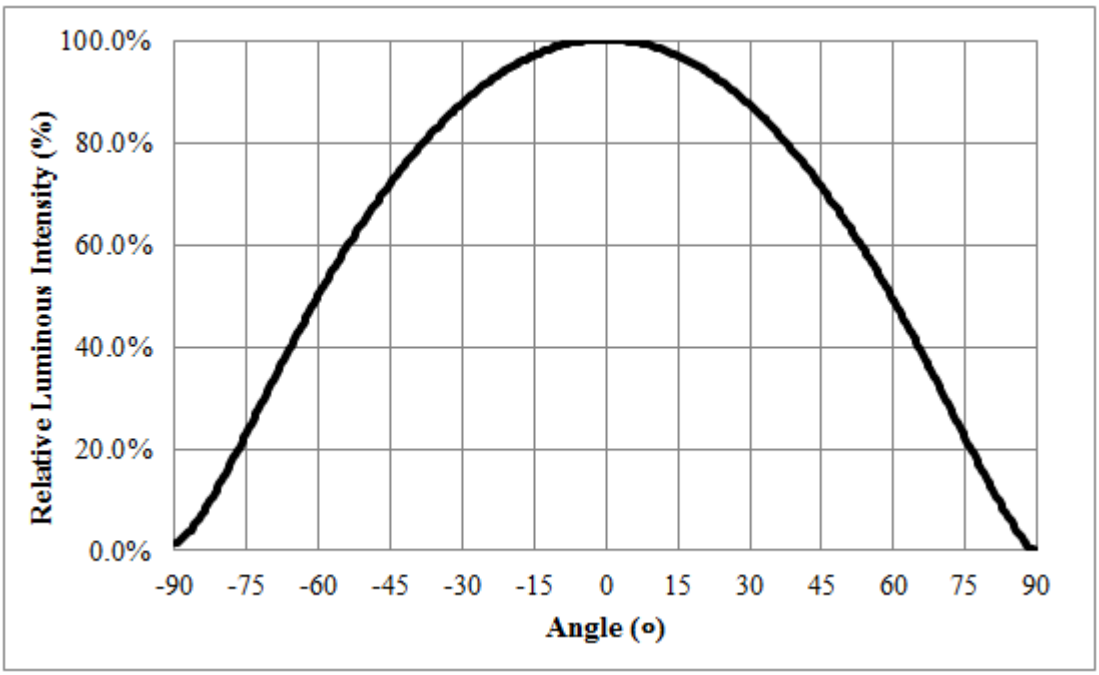
## PERFORMANCE GROUPS – FORWARD VOLTAGE (IF = 1200 mA)

| Group code | Minimum Forward Voltage (V) | Maximum Forward Voltage (V) |
|---|---|---|
| **KF** | 9.0 | 9.6 |
| **KG** | 9.6 | 10.2 |
| **KH** | 10.2 | 10.8 |

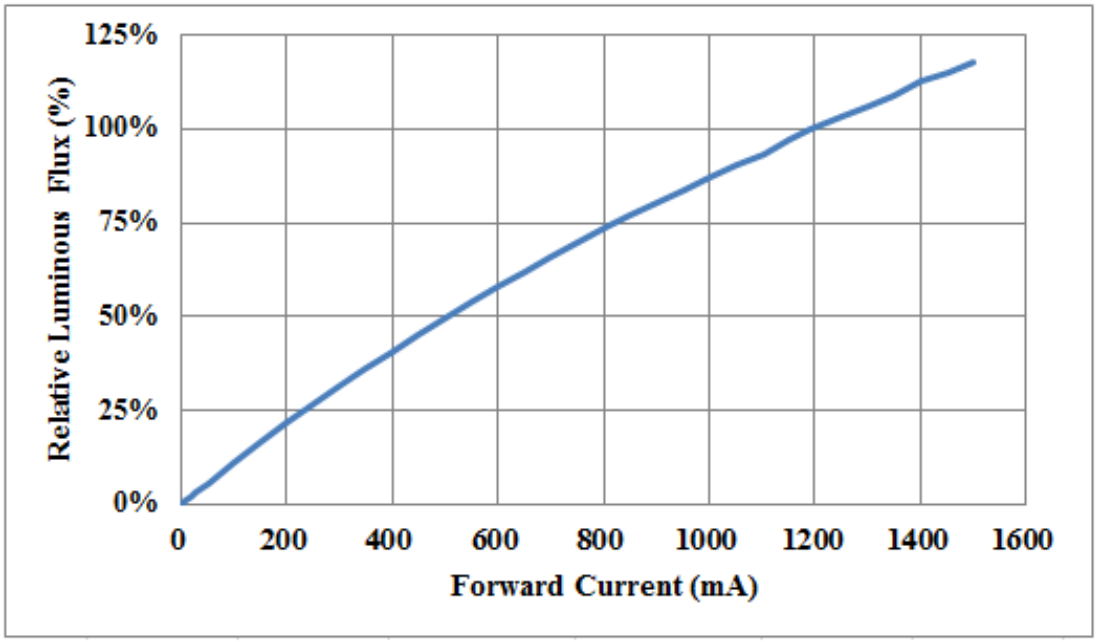
## MAXIMUM RATINGS

| Parameter | | Values | Unit |
|---|---|---|---|
| **Operating temperature range** | | -40 … 125 | ˚C |
| **Storage temperature range** | | -40 … 125 | ˚C |
| **Junction temperature** | | 150 | ˚C |
| **Forward Current** | **(typ.)** | 1200 | mA |
| | **(max.)** | 1500 | mA |
| **Reversed voltage** | | not designed for reversed operation | V |

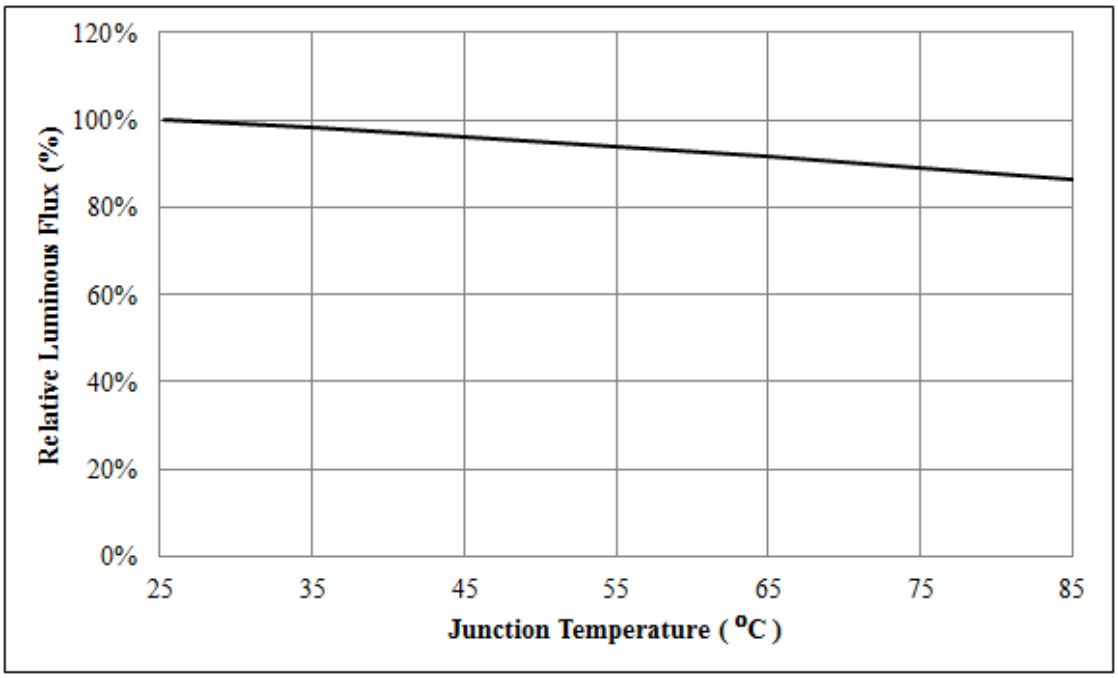
## TYPICAL SPATIAL DISTRIBUTION —WHITE



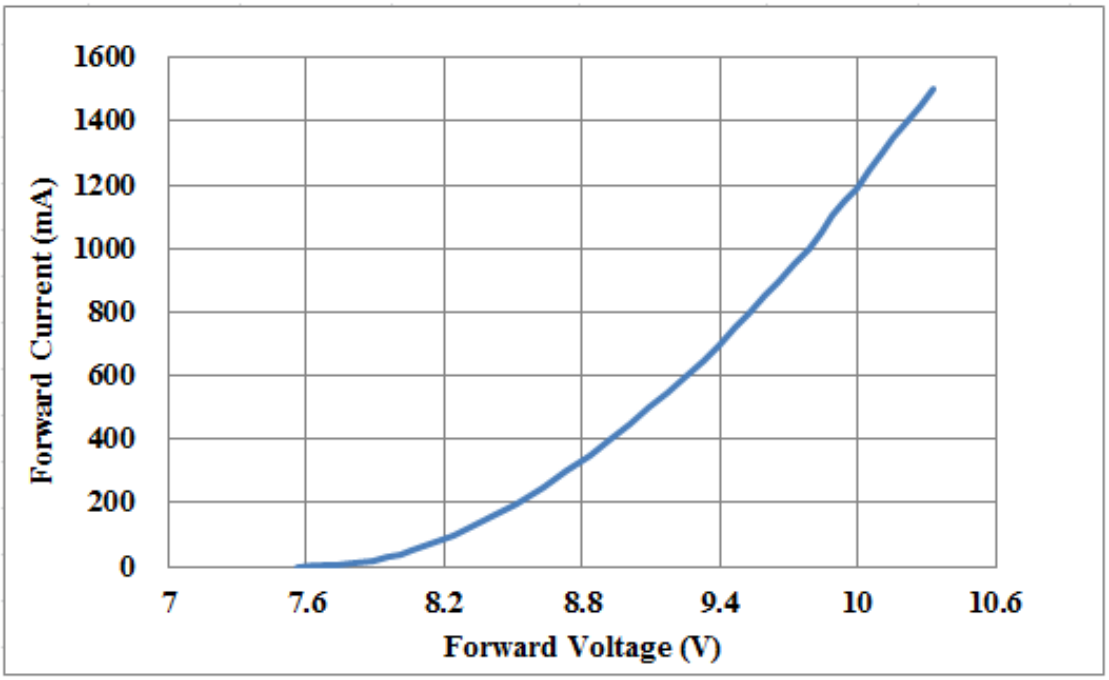

## RELATIVE LUMINOUS FLUX VS. CURRENT (TS = 25 °C)



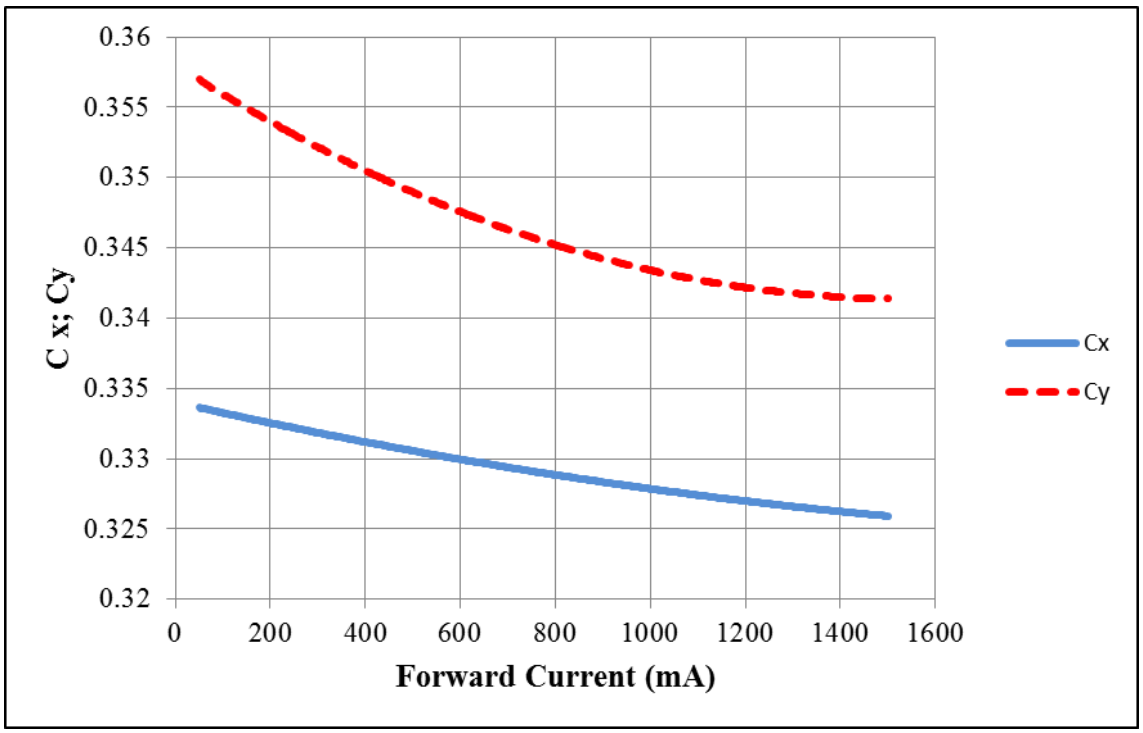
## RELATIVE LUMINOUS FLUX VS. JUNCTION TEMPERATURE (IF = 1200 mA)



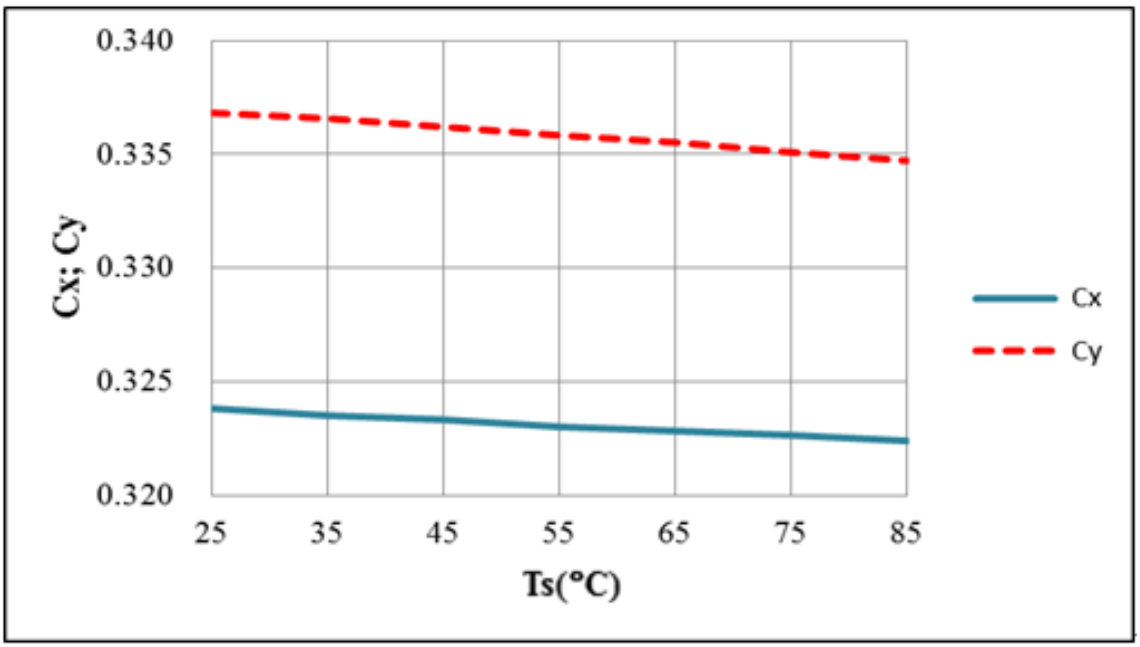

## FORWARD VOLTAGE VS. FORWARD CURRENT (TS = 25 °C)



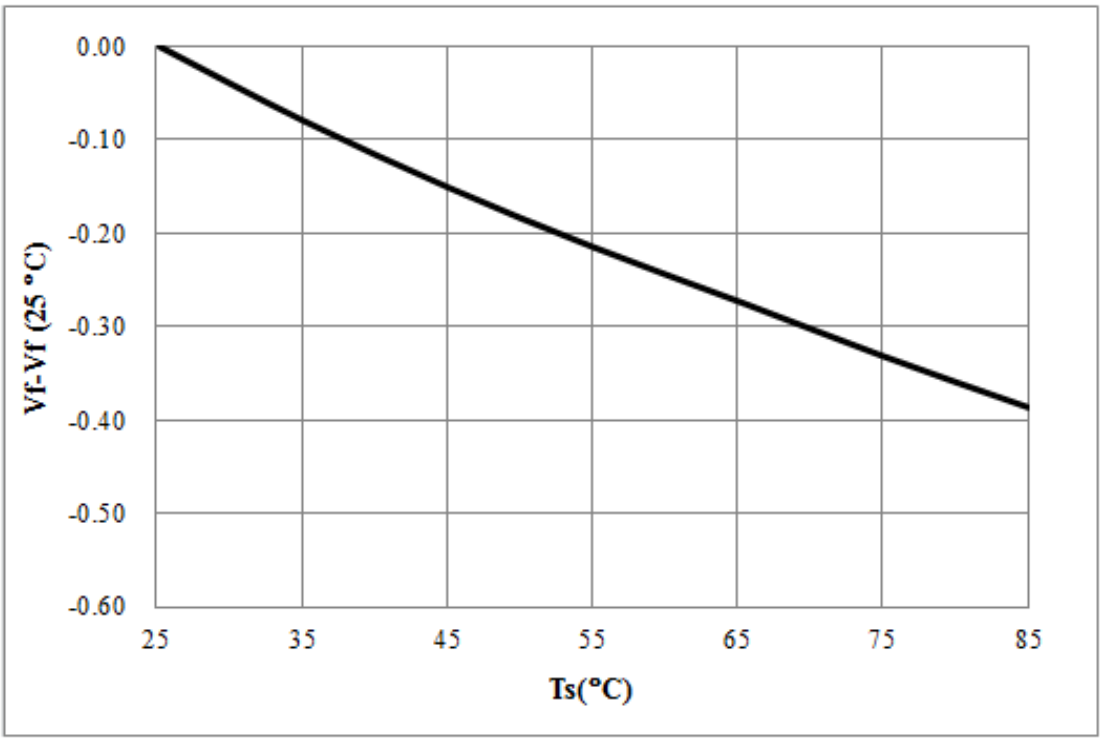
## CHROMATICITY COORDINATE SHIFT (TS = 25 °C)



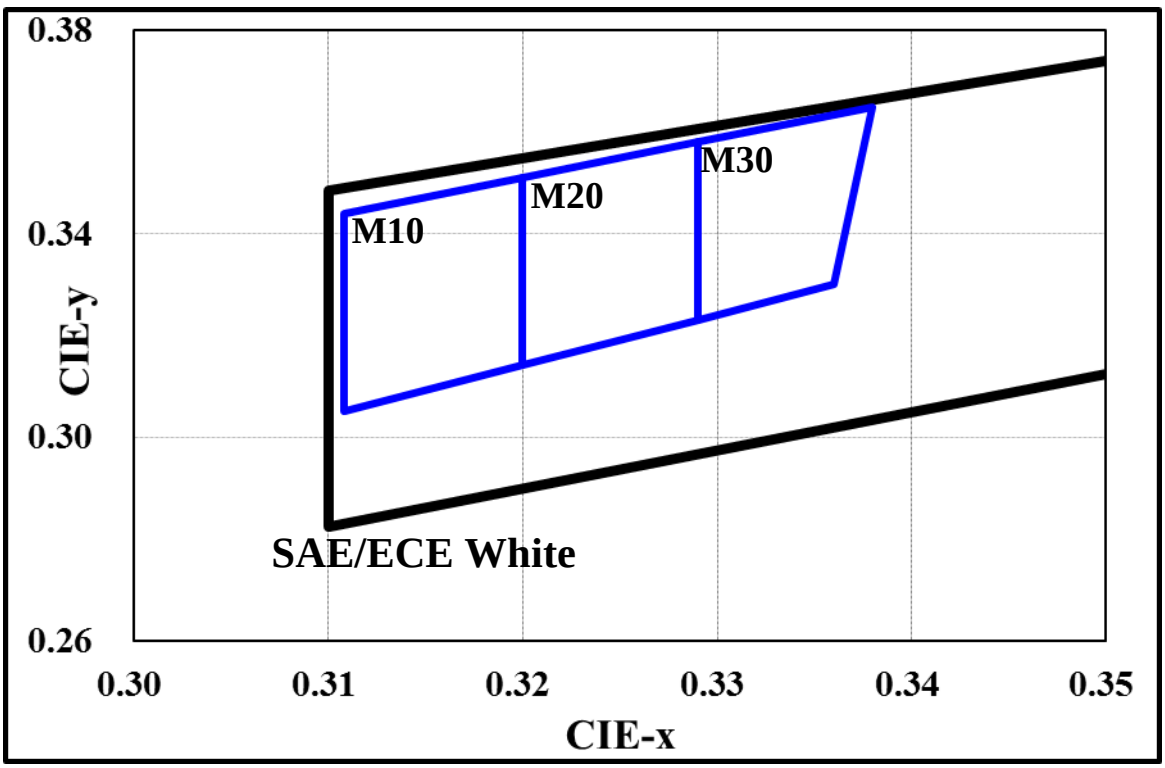

## CHROMATICITY COORDINATE SHIFT (IF = 1200 mA)



## RELATIVE FORWARD VOLTAGE (IF = 1200 mA)



## YesLED'S STANDARD WHITE CHROMATICITY REGINS PLOTTED ON THE 1931 CIE CURVE




## PERFORMANCE GROUPS – CHROMATICITY

| Bin Code | x | y |
|---|---|---|
| M10 | 0.32 | 0.3511 |
| | 0.3108 | 0.344 |
| | 0.3108 | 0.305 |
| | 0.32 | 0.3141 |

| Bin Code | x | y |
|---|---|---|
| M20 | 0.32 | 0.3511 |
| | 0.329 | 0.3581 |
| | 0.329 | 0.3231 |
| | 0.32 | 0.3141 |

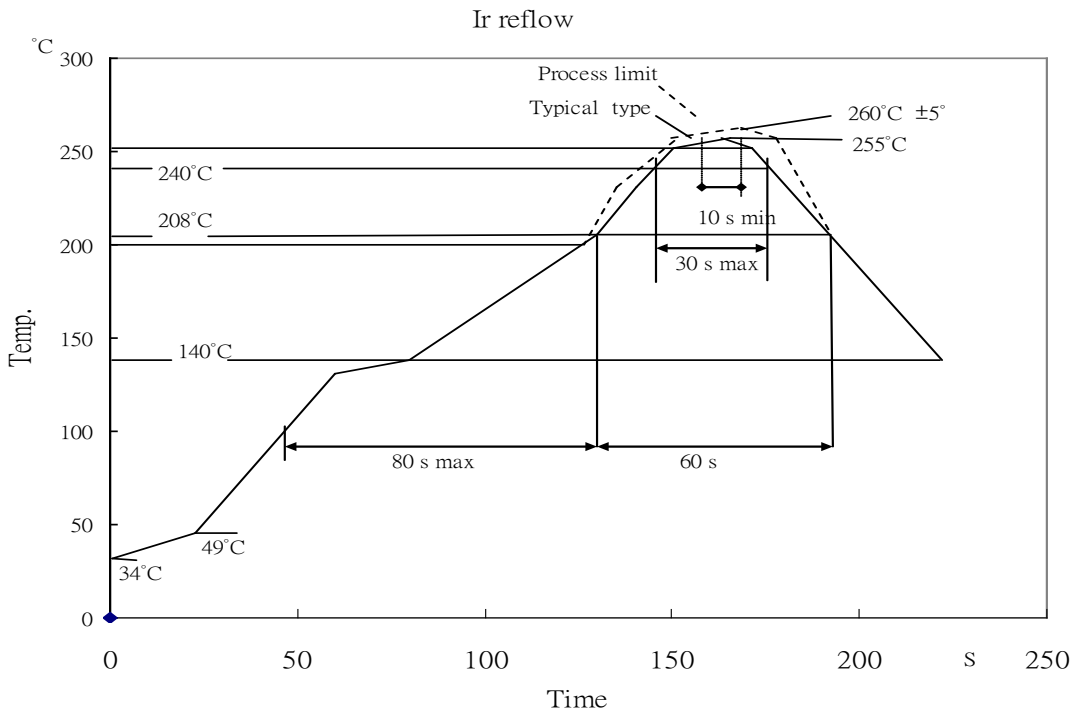
| Bin Code | x | y |
|---|---|---|
| M30 | 0.329 | 0.3581 |
| | 0.338 | 0.365 |
| | 0.336 | 0.33 |
| | 0.329 | 0.3231 |

## RELIABILITY

| Test Item | Test Conditions | Test Period | Ac/Re |
|---|---|---|---|
| **High Temperature Forward Bias（HTFB）** | TA=85°C ; IF=1200mA DC | 1000 hours | 0/1 |
| **High Temperature High Humidity Bias（HTHHB）** | TA=85°C；85% humidity<br>IF=1200mA DC | 1000 hours | 0/1 |
| **Temperature Cycle（TC）** | -40°C / 125°C<br>15min dwell, 5min transfer | 1000 cycles | 0/1 |
| **Power and Temperature Cycle (PTC)** | -40°C / 125°C<br>10min dwell, 30min transfer<br>ton/off = 2 min IF=1200mA DC | 500 hours | 0/1 |

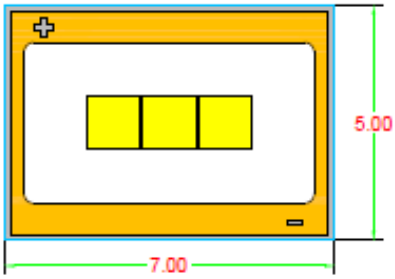
Notes:
- No catastrophic (LED Fail)
- Lumen maintenance > 85%
- Change in Vf < 10%
- Change in white color point ∆x ∆y ± 0.01
- No corrosion
- Moisture Sensitivity Level 1 (IPC/JEDEC J-STD-020)

## Reflow Soldering Characteristics



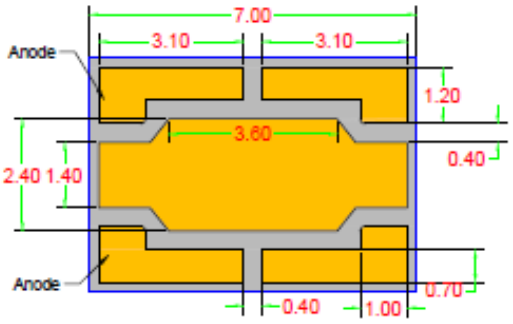
## MECHANICAL DIMENSIONS

All measurements are ±.10 mm unless otherwise indicated.

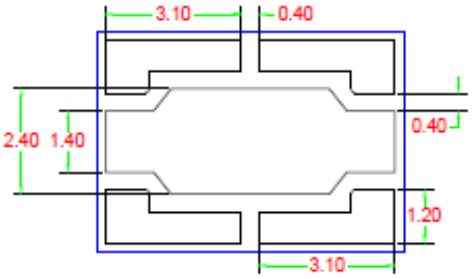



TOP

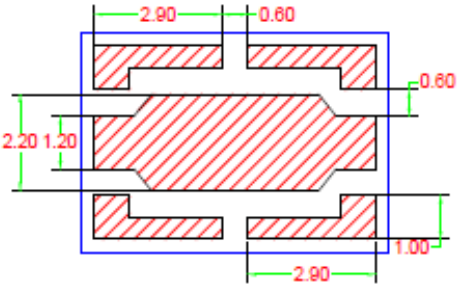

SIDE



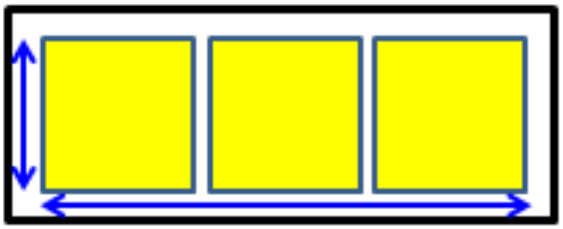

BOTTOM




Recommended Soldering Pad Pattern

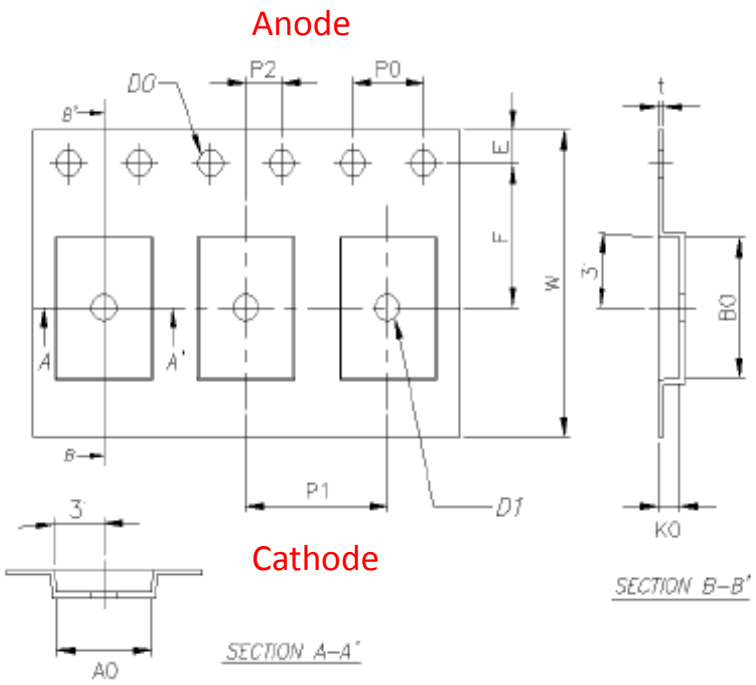



Recommended Metal Solder Stencil Aperture

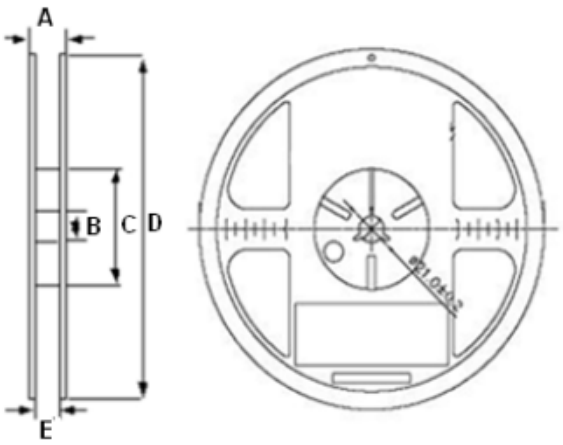


***Emitting Area:***
***3.52mm*1.15 mm***

## TAPE AND REEL



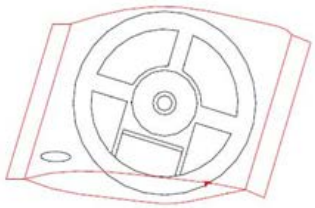

| Item | Specification | Tol. (+/-) |
|---|---|---|
| t | 0.30 | ± 0.05 |
| A0 | 5.30 | ± 0.10 |
| B0 | 7.30 | ± 0.10 |
| K0 | 1.20 | ± 0.10 |




(Unit : mm)

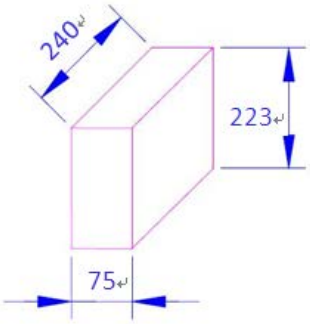
| Symbol | A | B | C | D | E |
|---|---|---|---|---|---|
| Spec. | Ø330.0 ±1.0 | 80.0 ±1.0 | 13.0 ±0.5 | 13.0 ±0.3 | 17.5 ±1.0 |

## PACKING

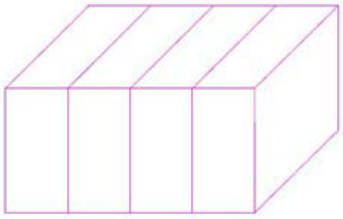


1 Anti-Static Reel in 1 Moistureproof Foil Bag.

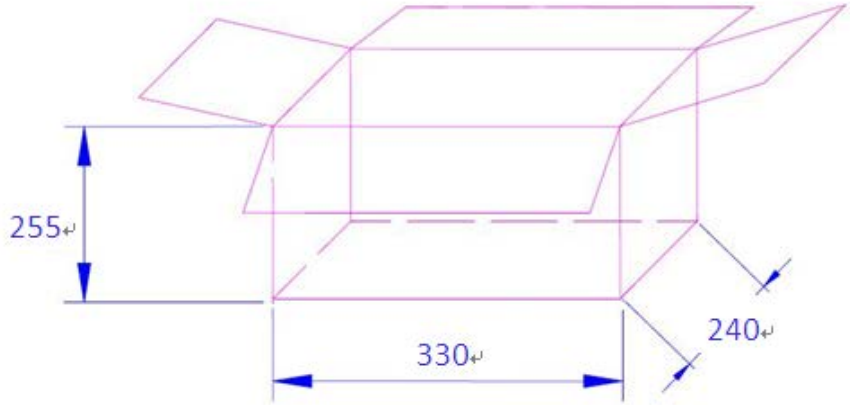
( Within Moisture Absorbent Material )




4 Moistureproof Foil Bag in 1 Inner Box.



4 Inner Box in 1 Carton.



## CAUTIONS

1. Moisture Sensitivity

   In testing, YesLED has found 7050 LEDs to have 1 year floor life in condition <=30C/ 85% relative humidity (RH). Moisture testing included a 168-hr soak at 85C/60% RH followed by 3 times reflow cycles, with visual and electrical inspections at each stage.

   YesLED recommends keeping 7050 LEDs in their sealed moisture-barrier packaging until immediately prior to use. YesLED also recommends returning any unusual LEDs to the re-sealable moisture-barrier bag and closing the bag immediately after use.

2. Handling Precautions

   Do not handle LEDs with bare hands, it may contaminate the LED surface and affect optical characteristics. In the worst case, catastrophic failure from excess pressure through wire-bond breaks and package damage may result.

   Do not stack assembled PCBs together. Failure to comply can cause the resin portion of the product to be cut, chipped, delaminated and/or deformed. It may cause wire to break, leading to catastrophic failures.

3. Eye safety

   Warning: do not look at exposed lamp in operation. Eye injury can result.

4. Static Electricity

   Wristbands and anti-electrostatic gloves are strongly recommended and all devices, equipment and machinery must be properly grounded when handling the LEDs, which are sensitive against static electricity and surge.
   Precautions are to be taken against surge voltage to the equipment that mounts the LEDs. Unusual characteristics such as significant increase of current leakage, decrease of turn-on voltage or non-operation at a low current can occur when the LED is damaged.