

TENTATIVE

TOSHIBA InGaAlP LED

# TLOU123, TLSU123, TLYU123

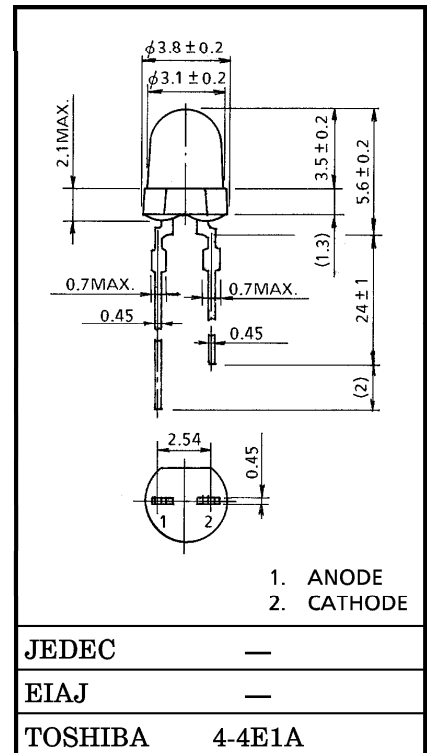
PANEL CIRCUIT INDICATOR

Unit in mm

- InGaAlP LED
- All Plastic Mold Type
- Colored Transparent Lens
- Lineup : 3 Colors (Red, Orange, Yellow)
- Suitable for High-Brightness and Less Electricity Consumption.
- All Plastic Molded Lens, Provides an Excellent ON-OFF Contrast Ratio.
- Applications : Backlight, Light for Decoration, Switches, Various Indicator, Personal Equipment

LINEUP

| PRODUCT | COLOR  | MATERIAL |
|---------|--------|----------|
| TLOU123 | ORANGE | InGaAlP  |
| TLSU123 | RED    | InGaAlP  |
| TLYU123 | YELLOW | InGaAlP  |



Weight : 0.14 g

MAXIMUM RATINGS (Ta = 25°C)

| PRODUCT | FORWARD CURRENT<br>I <sub>F</sub> (mA) | REVERSE VOLTAGE<br>V <sub>R</sub> (V) | POWER DISSIPATION<br>P <sub>D</sub> (mW) | OPERATING TEMPERATURE<br>T <sub>opr</sub> (°C) | STORAGE TEMPERATURE<br>T <sub>stg</sub> (°C) |
|---------|--|---------------------------------------|--|--|--|
| TLOU123 | 30                                     | 4                                     | 72                                       | -20~75   | -30~100                                      |
| TLSU123 | 30                                     | 4                                     | 72                                       | -20~75   | -30~100                                      |
| TLYU123 | 30                                     | 4                                     | 75                                       | -20~75   | -30~100                                      |



For part availability and ordering information please call Toll Free: 800.984.5337  
Website: [www.marktechopto.com](http://www.marktechopto.com) | Email: [info@marktechopto.com](mailto:info@marktechopto.com)

ELECTRICAL AND OPTICAL CHARACTERISTICS (Ta = 25°C)

| PRODUCT | TYP. EMISSION WAVELENGTH |    |                | LUMINOUS INTENSITY<br>I <sub>V</sub> |      |                | FORWARD VOLTAGE<br>V <sub>F</sub> |     |                | REVERSE CURRENT<br>I <sub>R</sub> |                |
|---------|--------------------------|----|----------------|--------------------------------------|------|----------------|-----------------------------------|-----|----------------|-----------------------------------|----------------|
|         | λ <sub>p</sub>           | Δλ | I <sub>F</sub> | MIN                                  | TYP. | I <sub>F</sub> | TYP.                              | MAX | I <sub>F</sub> | MAX                               | V <sub>R</sub> |
| TLOU123 | 612                      | 15 | 20             | 85                                   | 400  | 20             | 2.0                               | 2.4 | 20             | 50                                | 4              |
| TLSU123 | 636                      | 17 | 20             | 85                                   | 270  | 20             | 2.0                               | 2.4 | 20             | 50                                | 4              |
| TLYU123 | 590                      | 13 | 20             | 85                                   | 220  | 20             | 2.1                               | 2.5 | 20             | 50                                | 4              |
| UNIT    | nm                       |    | mA             | mcd                                  |      | mA             | V                                 |     | mA             | μA                                | V              |

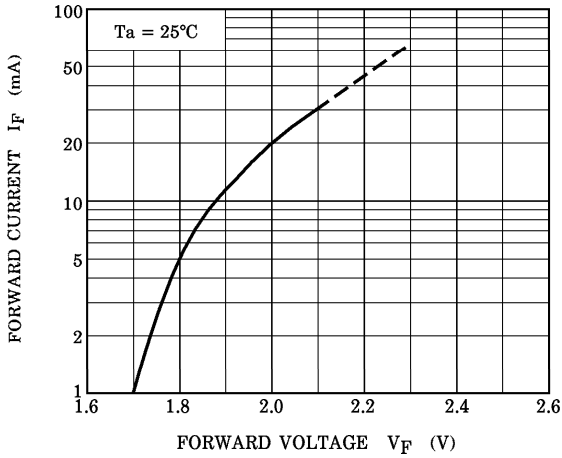
PRECAUTION

Please be careful of the followings

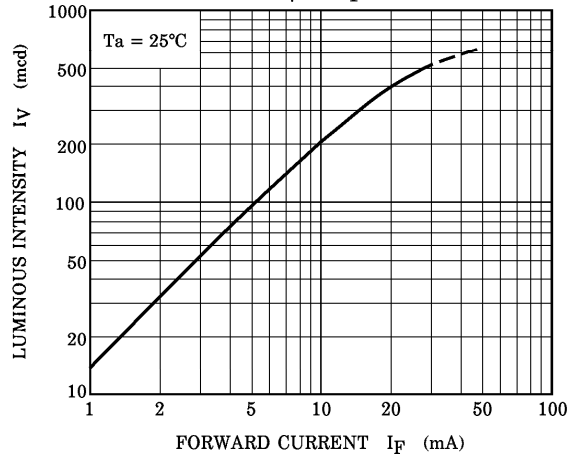
- Soldering temperature : 260°C max      Soldering time : 3 s max  
(Soldering portion of lead : up to 2 mm from the body of the device)
- If the lead is formed, the lead should be formed up to 5 mm from the body of the device without forming stress to the resin. Soldering should be performed after lead forming.
- This visible LED lamp also emits some IR light. If a photodetector is located near the LED lamp, please ensure that it will not be affected by this IR light.

TLOU123

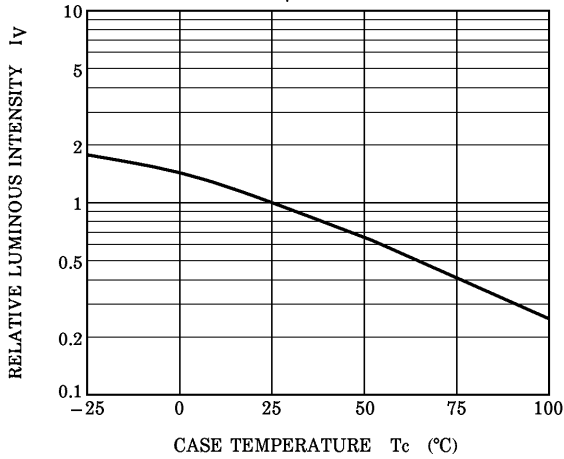
$I_F - V_F$



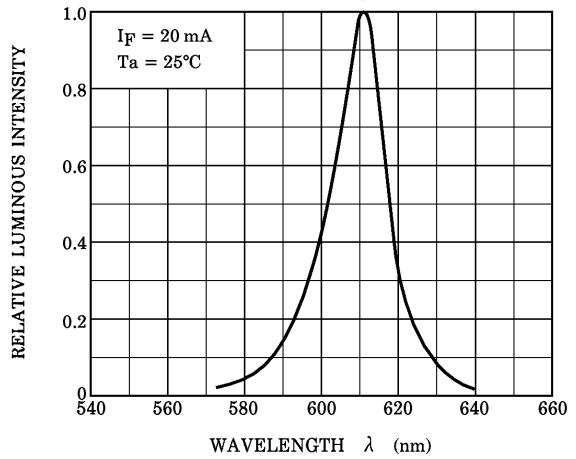
$I_V - I_F$



$I_V - T_c$

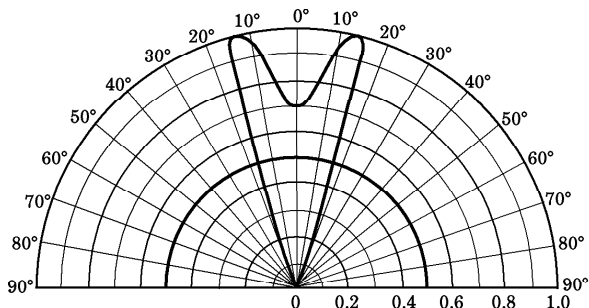


RELATIVE LUMINOUS INTENSITY - WAVELENGTH

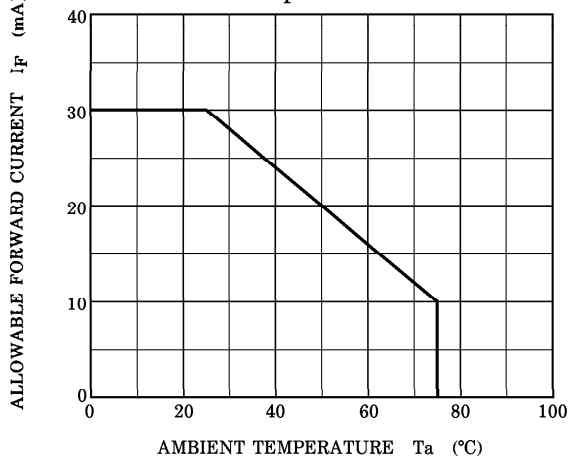


RADIATION PATTERN

$T_a = 25^\circ\text{C}$

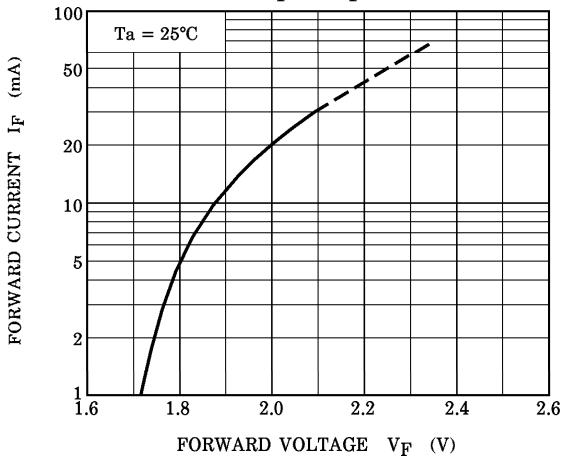


$I_F - T_a$

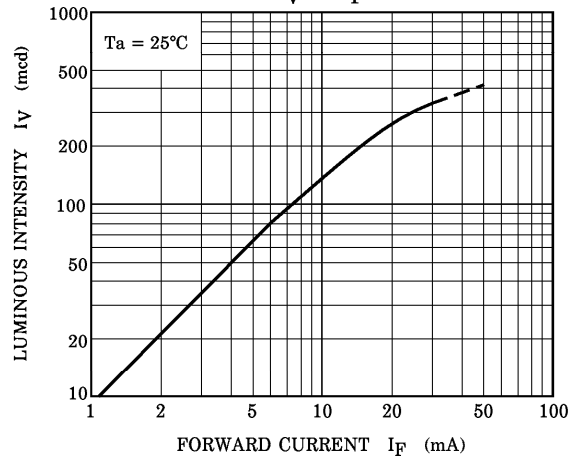


TLSU123

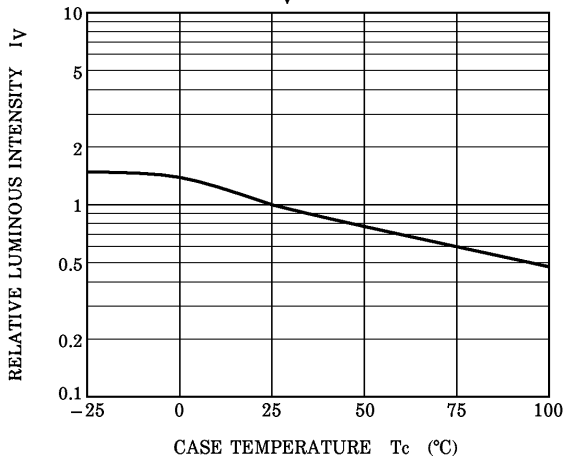
$I_F - V_F$



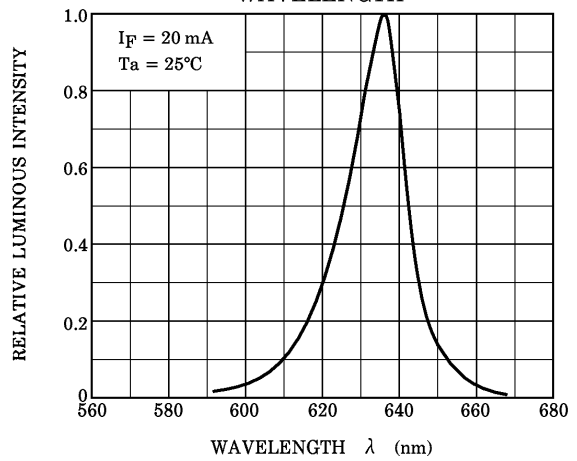
$I_V - I_F$



$I_V - T_c$

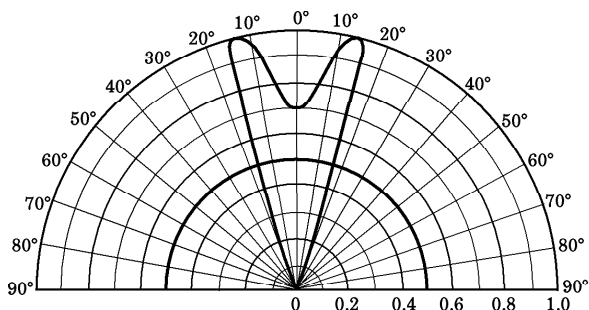


RELATIVE LUMINOUS INTENSITY - WAVELENGTH

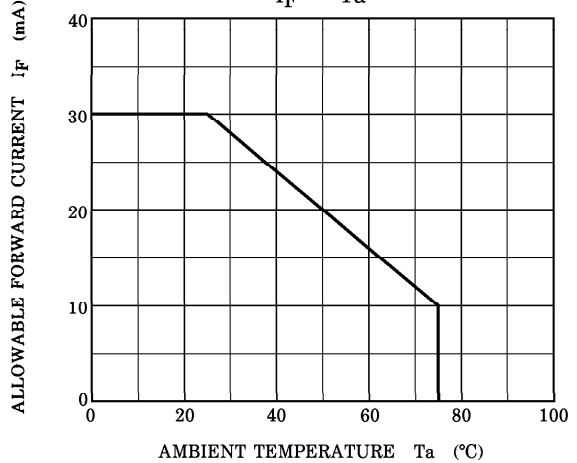


RADIATION PATTERN

$T_a = 25^\circ\text{C}$

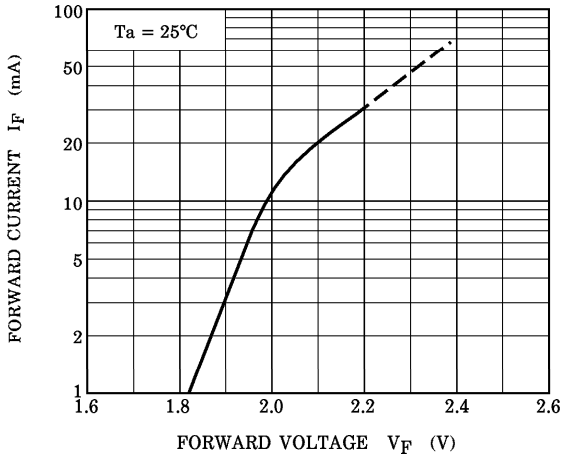


$I_F - T_a$

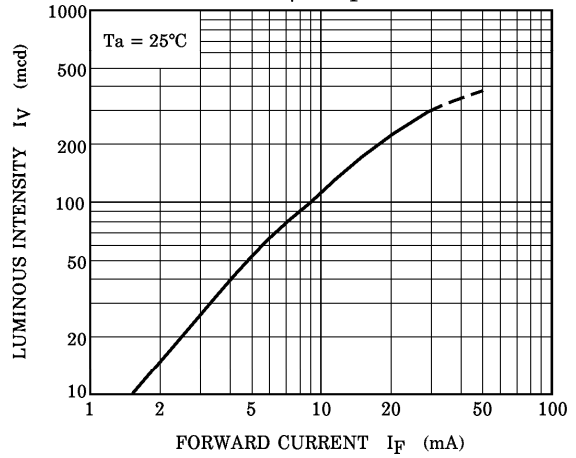


TLYU123

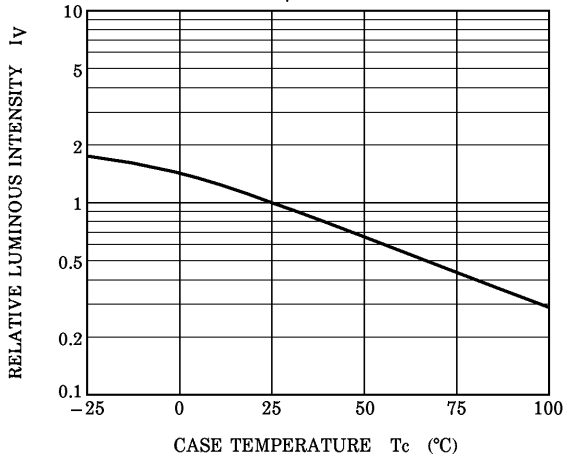
$I_F - V_F$



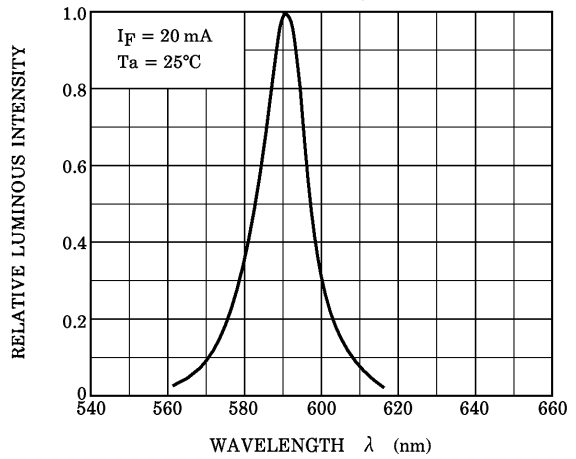
$I_V - I_F$



$I_V - T_c$

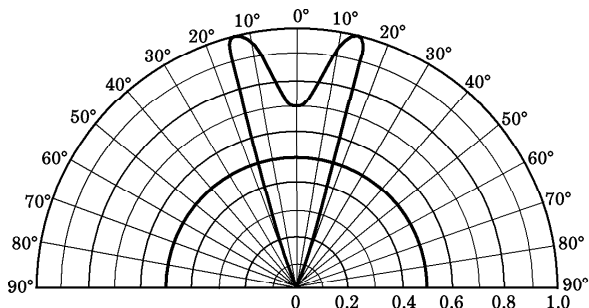


RELATIVE LUMINOUS INTENSITY - WAVELENGTH



RADIATION PATTERN

$T_a = 25^\circ\text{C}$



$I_F - T_a$

