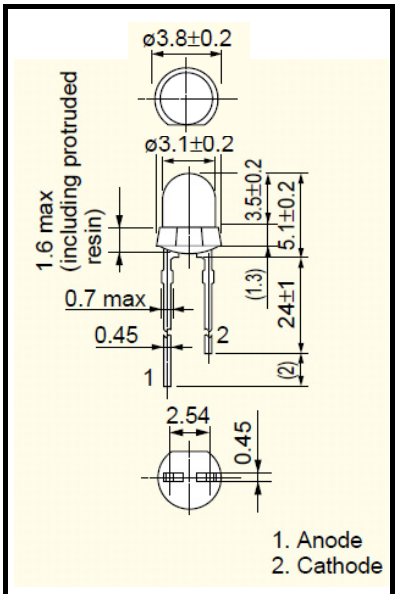
TOSHIBA InGaAℓP LED

# TLOU262(F),TLSU262(F),TLYU262(F)

Panel Circuit Indicator

- Lead(Pb)-free products (lead: Sn-Ag-Cu)
- 3mm package
- InGaAℓP LED
- All plastic mold type
- Colorless clear 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

Unit in mm




| | |
|---|---|
| JEDEC | — |
| JEITA | — |
| TOSHIBA | 4−3H1 |

Weight: 0.14 g(Typ.)

## Lineup

| Product | Color | Material |
|---|---|---|
| TLOU262(F) | Orange | InGaAℓP |
| TLSU262(F) | Red | InGaAℓP |
| TLYU262(F) | Yellow | InGaAℓP |

## Absolute Maximum Ratings (Ta = 25°C)

| Product | Forward Current $I_F$ (mA) | Reverse Voltage $V_R$ (V) | Power Dissipation $P_D$ (mW) | Operating Temperature $T_{opr}$ (°C) | Storage Temperature $T_{stg}$ (°C) |
|---|---|---|---|---|---|
| TLOU262(F) | 30 | 4 | 72 | −30~85 | −40~120 |
| TLSU262(F) | 30 | 4 | 72 | −30~85 | −40~120 |
| TLYU262(F) | 30 | 4 | 75 | −30~85 | −40~120 |

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.
Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook (“Handling Precautions”/“Derating Concept and Methods”) and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

## Electrical and Optical Characteristics (Ta = 25°C)

| Product | Typ.Emission Wavelength | | | Luminous Intensity $I_V$ | | | Forward Voltage $V_F$ | | | Reverse Current $I_R$ | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | $\lambda_P$ | $\Delta\lambda$ | $I_F$ | Min | Typ. | $I_F$ | Typ. | Max | $I_F$ | Max | $V_R$ |
| TLOU262(F) | (612) | 15 | 20 | 85 | 300 | 20 | 2.0 | 2.4 | 20 | 50 | 4 |
| TLSU262(F) | (636) | 17 | 20 | 47.6 | 170 | 20 | 2.0 | 2.4 | 20 | 50 | 4 |
| TLYU262(F) | (590) | 13 | 20 | 47.6 | 150 | 20 | 2.1 | 2.5 | 20 | 50 | 4 |
| Unit | nm | | mA | mcd | | mA | V | | mA | μA | V |

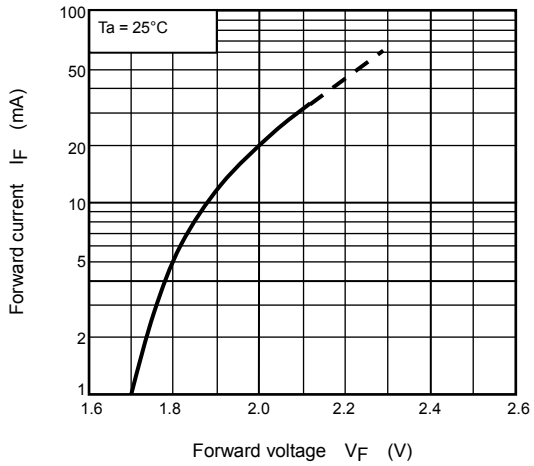
## Precaution

Please be careful of the followings

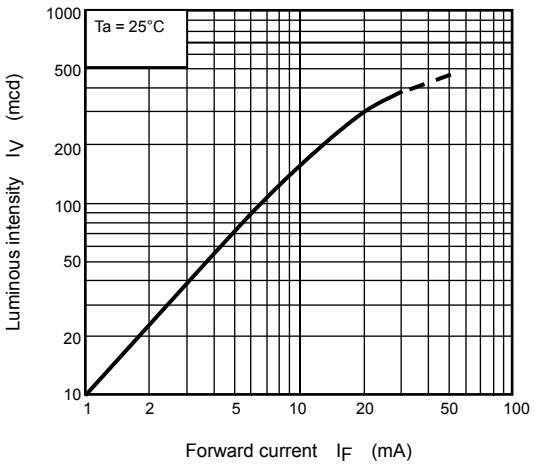
- Soldering temperature: 260°C max Soldering time: 3 s max
  (soldering portion of lead: Up to 1.6 mm from the body of the device)
- If the lead is formed, the lead should be formed up to 1.6 mm from the body of the device without forming stress to the resin. Soldering should be performed after lead 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.

## TLOU262(F)

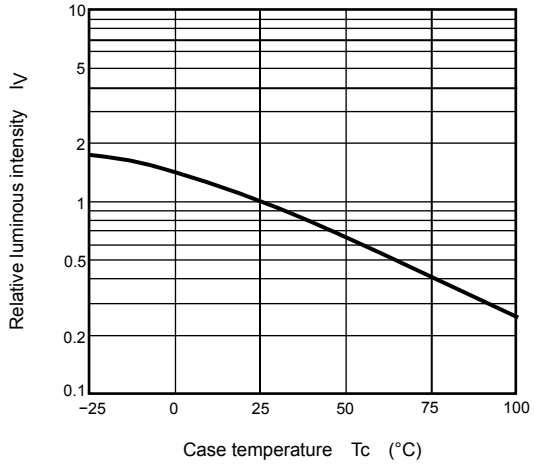
$I_F - V_F$



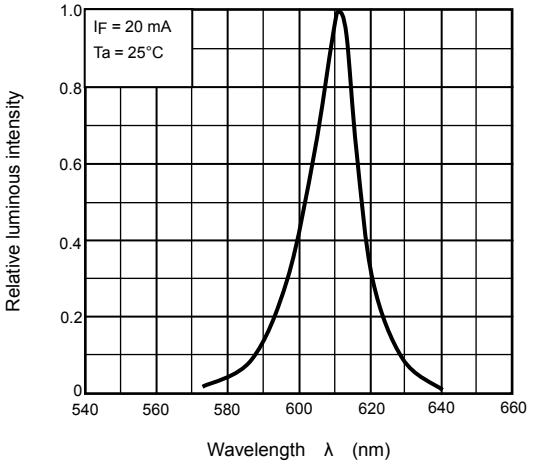

$I_V - I_F$



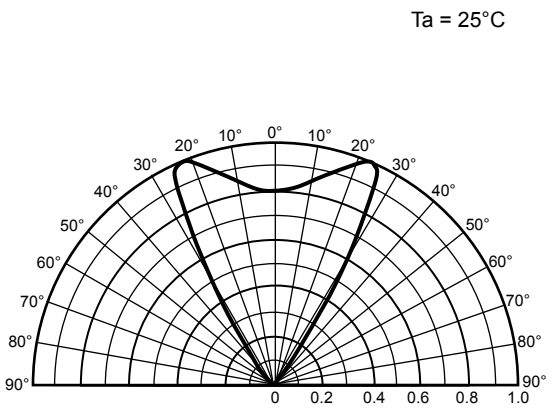

$I_V - Tc$



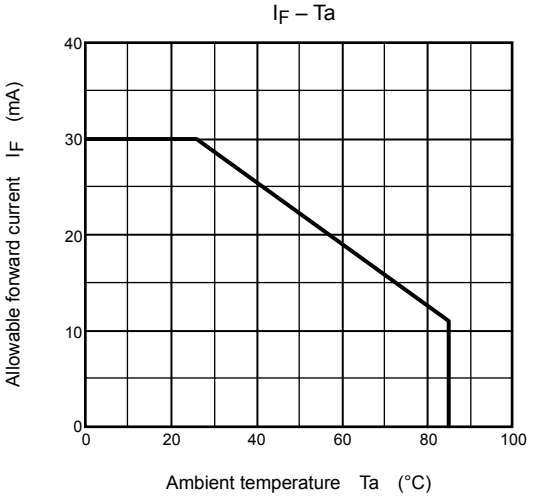

Relative Luminous Intensity - Wavelength




Radiation Pattern

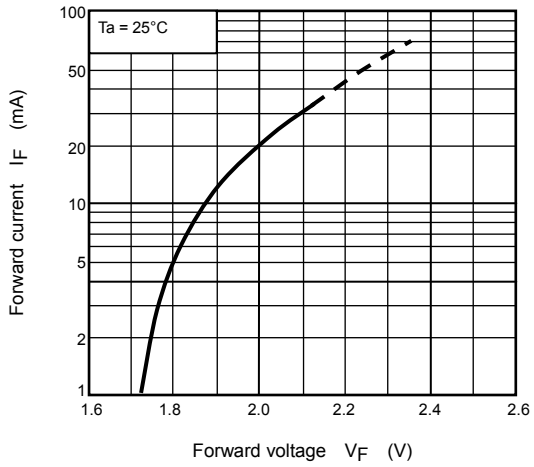



$I_F - Ta$

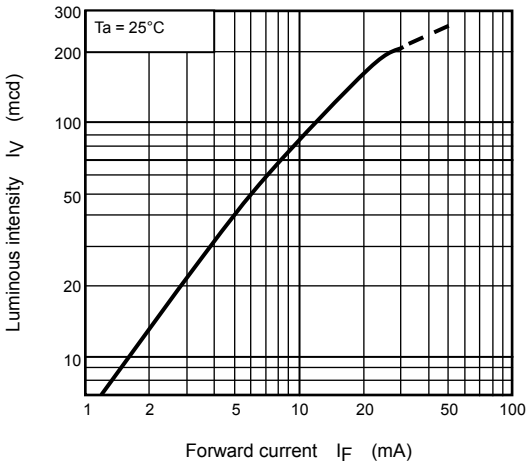


## TLSU262(F)

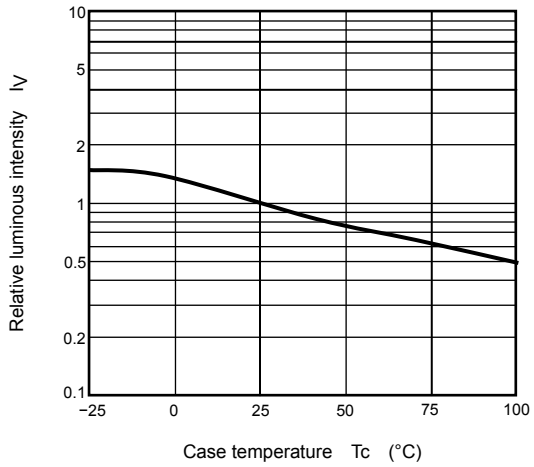
$I_F - V_F$



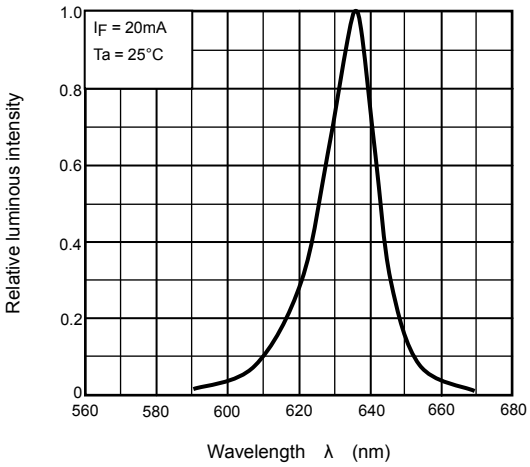

$I_V - I_F$



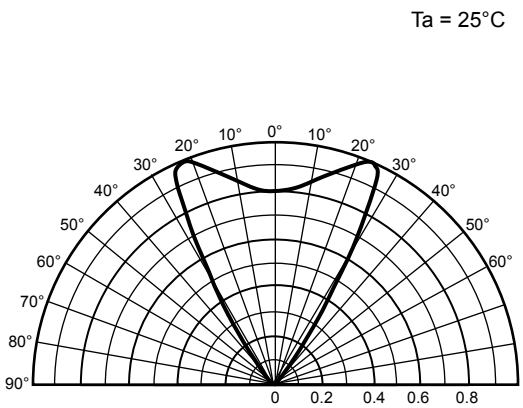

$I_V - Tc$



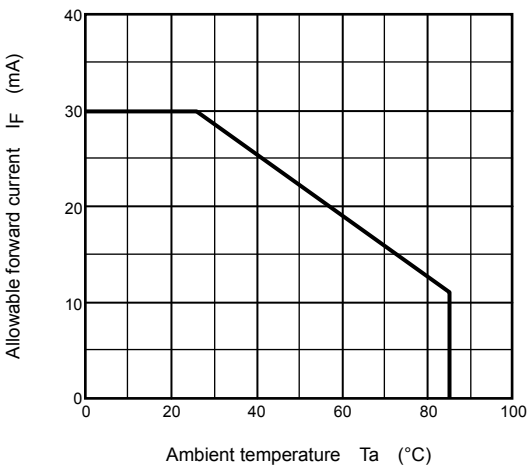

Relative Luminous Intensity - Wavelength




Radiation Pattern

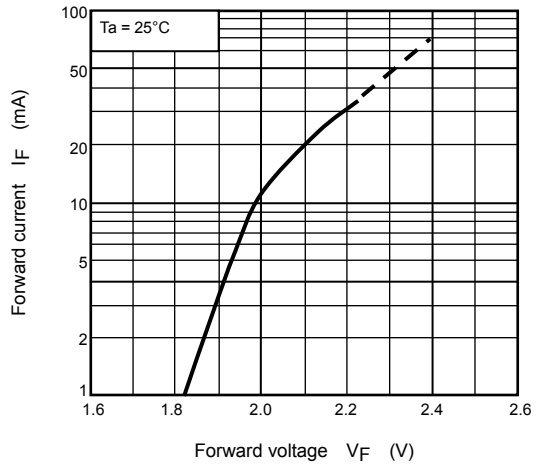



$I_F - Ta$

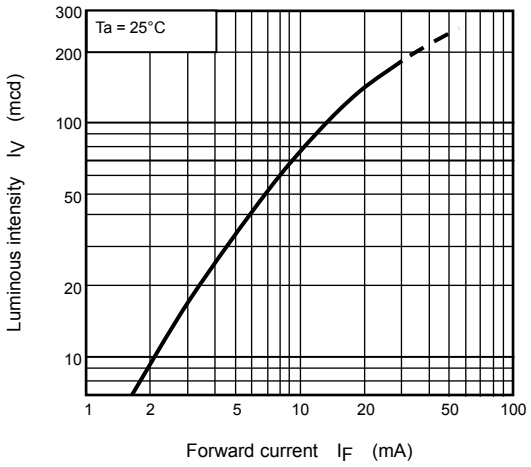


## TLYU262(F)

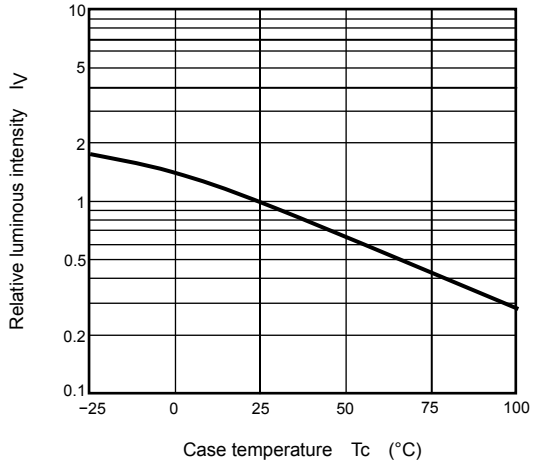
$I_F - V_F$



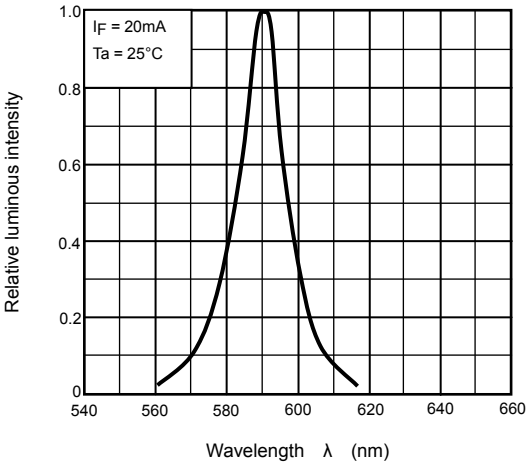

$I_V - I_F$



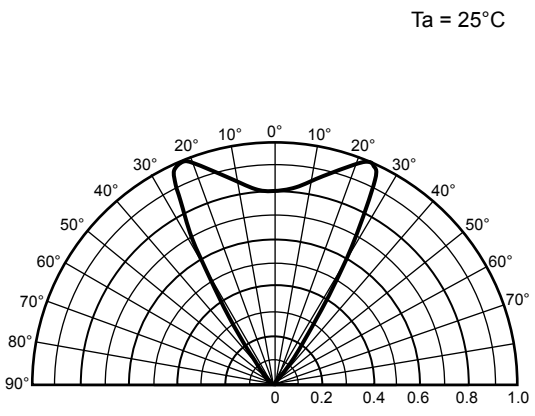

$I_V - Tc$



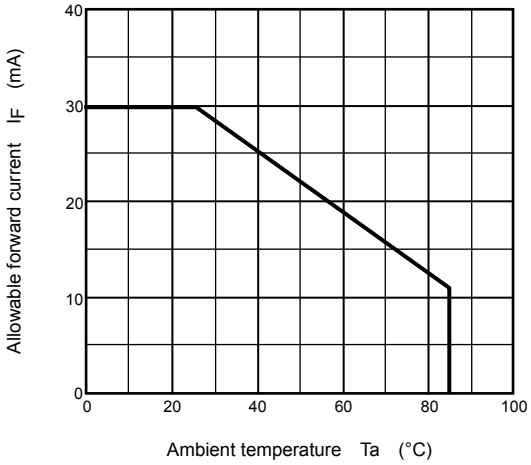

Relative Luminous Intensity - Wavelength




Radiation Pattern




$I_F - Ta$



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