

TOSHIBA InGaAlP LED

## TLRE53T,TLRME53T,TLSE53T,TLOE53T,LYE53T, TLPYE53T,TLGE53T,TLFGE53T,TLPGE53T

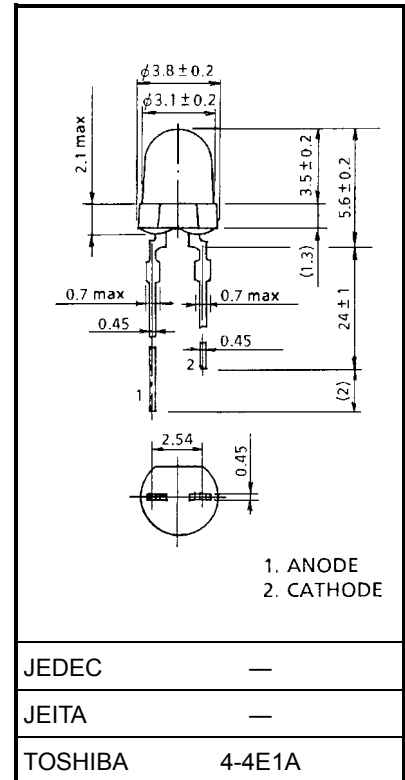
### Panel Circuit Indicators

- $\phi 3$  mm package
- InGaAlP technology
- All plastic mold
- Transparent lens
- Line-up: 6 colors (red, orange, yellow, pure yellow, green and pure green)
- High intensity light emission
- Excellent low current light output
- Applications: message boards, security devices and dashboard displays

### Line-up

| Product Name | Color       | Material |
|--------------|-------------|----------|
| TLRE53T      | Red         | InGaAlP  |
| TLRME53T     | Red         |          |
| TLSE53T      | Red         |          |
| TLOE53T      | Orange      |          |
| TYE53T       | Yellow      |          |
| TLPYE53T     | Pure Yellow |          |
| TLGE53T      | Green       |          |
| TLFGE53T     | Green       |          |
| TLPGE53T     | Pure Green  |          |

Unit: mm



Weight: 0.14 g

## Maximum Ratings (Ta = 25°C)

| Product Name | 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) |
|--------------|--|---------------------------------------|--|--|--|
| TLRE53T      | 50                                     | 4                                     | 120                                      | -40~100  | -40~120                                      |
| TLRME53T     | 50                                     | 4                                     | 120                                      |  |  |
| TLSE53T      | 50                                     | 4                                     | 120                                      |  |  |
| TLOE53T      | 50                                     | 4                                     | 120                                      |  |  |
| TLYE53T      | 50                                     | 4                                     | 120                                      |  |  |
| TLPYE53T     | 50                                     | 4                                     | 120                                      |  |  |
| TLGE53T      | 50                                     | 4                                     | 120                                      |  |  |
| TLFGE53T     | 50                                     | 4                                     | 120                                      |  |  |
| TLPGE53T     | 50                                     | 4                                     | 120                                      |  |  |

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

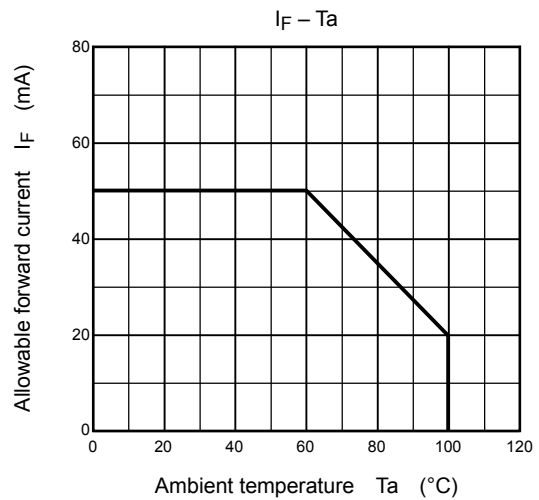
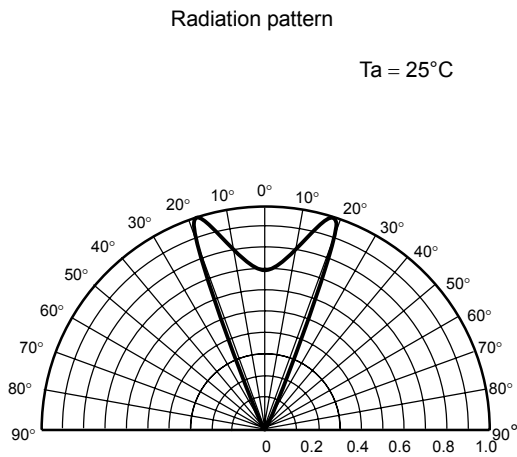
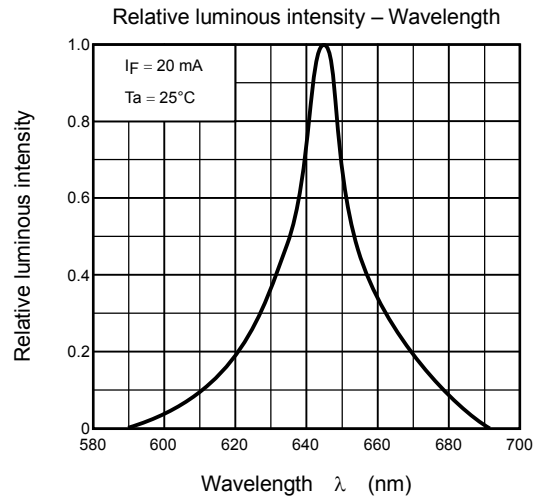
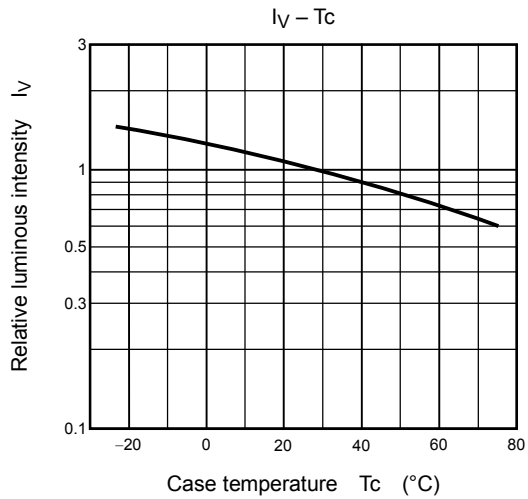
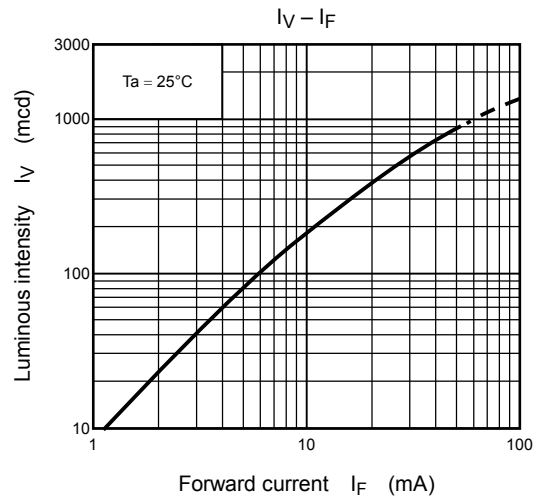
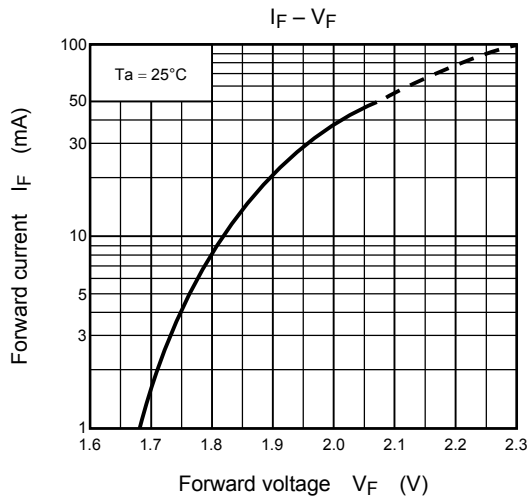
| Product Name | Typ. Emission Wavelength |                |    |                | Luminous Intensity<br>I <sub>V</sub> |      |                | Forward Voltage<br>V <sub>F</sub> |     |                | Reverse Current<br>I <sub>R</sub> |                |
|--------------|--------------------------|----------------|----|----------------|--------------------------------------|------|----------------|-----------------------------------|-----|----------------|-----------------------------------|----------------|
|              | λ <sub>d</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> |
| TLRE53T      | 630                      | (644)          | 20 | 20             | 153                                  | 400  | 20             | 1.9                               | 2.4 | 20             | 50                                | 4              |
| TLRME53T     | 626                      | (636)          | 23 | 20             | 272                                  | 600  | 20             | 1.9                               | 2.4 | 20             | 50                                | 4              |
| TLSE53T      | 613                      | (623)          | 20 | 20             | 272                                  | 800  | 20             | 1.9                               | 2.4 | 20             | 50                                | 4              |
| TLOE53T      | 605                      | (612)          | 20 | 20             | 272                                  | 1000 | 20             | 2.0                               | 2.4 | 20             | 50                                | 4              |
| TLYE53T      | 587                      | (590)          | 17 | 20             | 272                                  | 800  | 20             | 2.0                               | 2.4 | 20             | 50                                | 4              |
| TLPYE53T     | 580                      | (583)          | 14 | 20             | 153                                  | 450  | 20             | 2.0                               | 2.4 | 20             | 50                                | 4              |
| TLGE53T      | 571                      | (574)          | 17 | 20             | 153                                  | 400  | 20             | 2.0                               | 2.4 | 20             | 50                                | 4              |
| TLFGE53T     | 565                      | (568)          | 15 | 20             | 85                                   | 200  | 20             | 2.0                               | 2.4 | 20             | 50                                | 4              |
| TLPGE53T     | 558                      | (562)          | 14 | 20             | 47.6                                 | 130  | 20             | 2.1                               | 2.4 | 20             | 50                                | 4              |
| Unit         | nm                       |                |    | mA             | mcd                                  |      | mA             | V                                 |     | mA             | μA                                | V              |

## Precautions

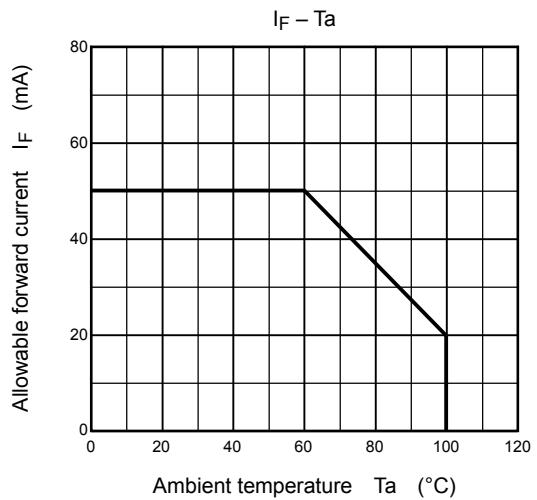
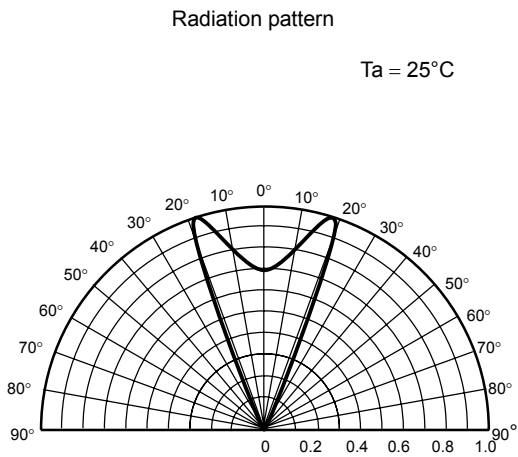
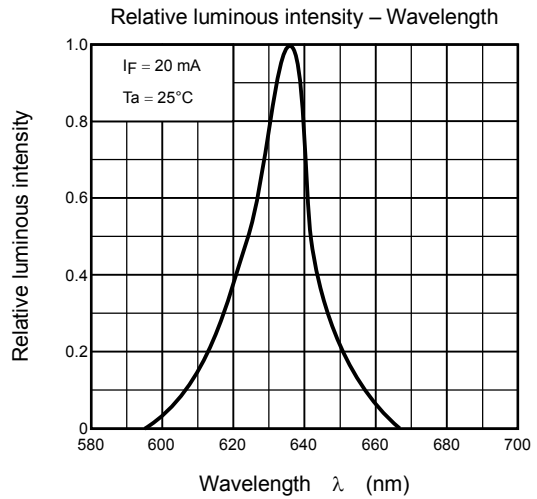
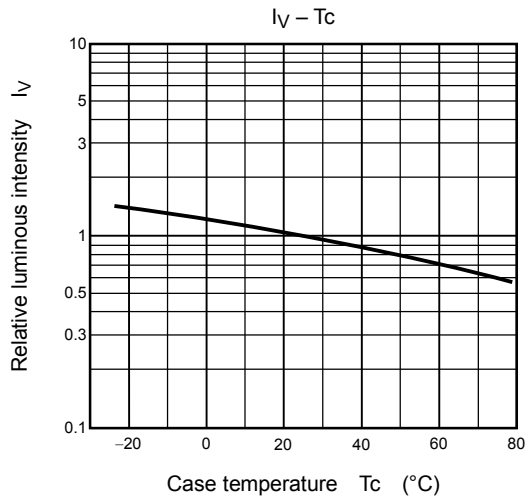
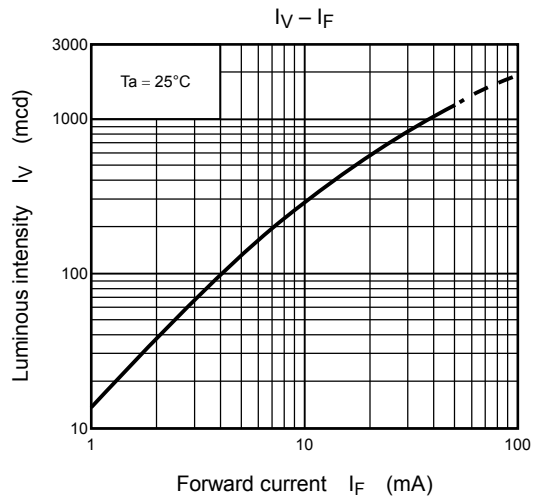
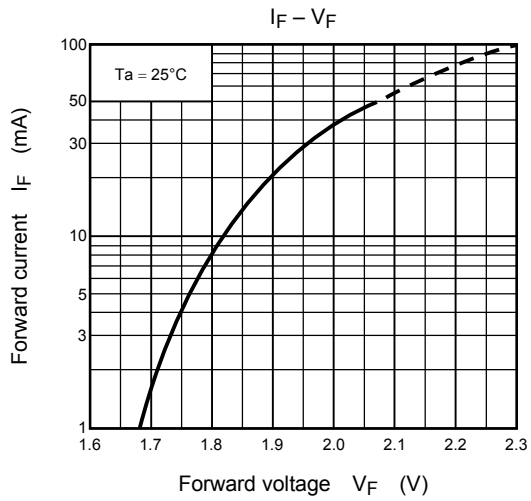
Please be careful of the following:

- 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.

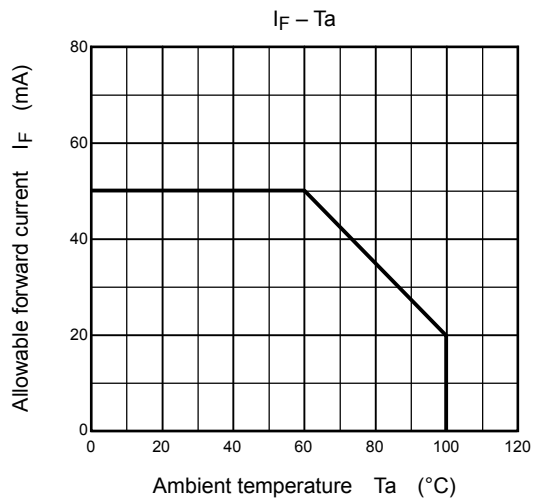
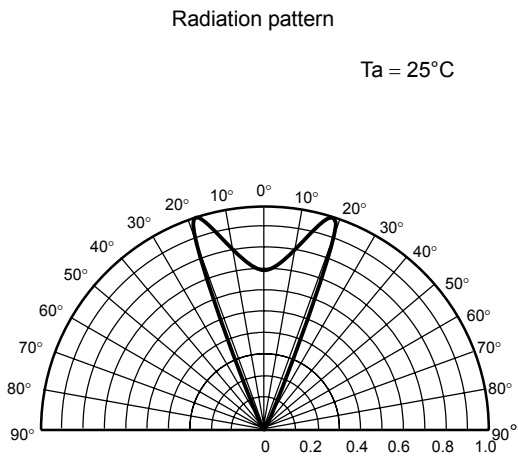
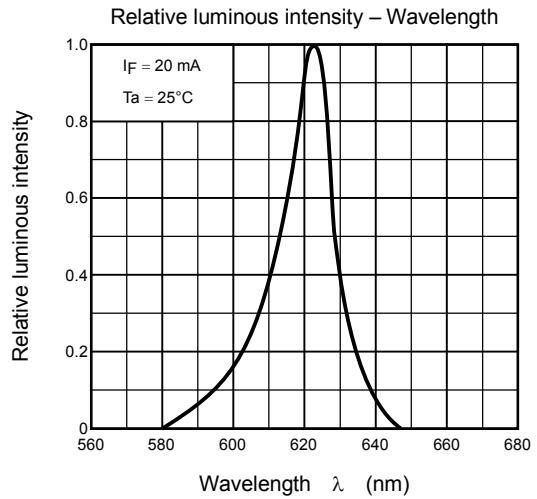
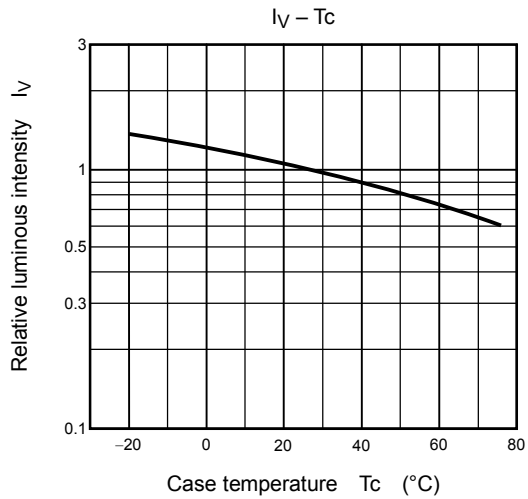
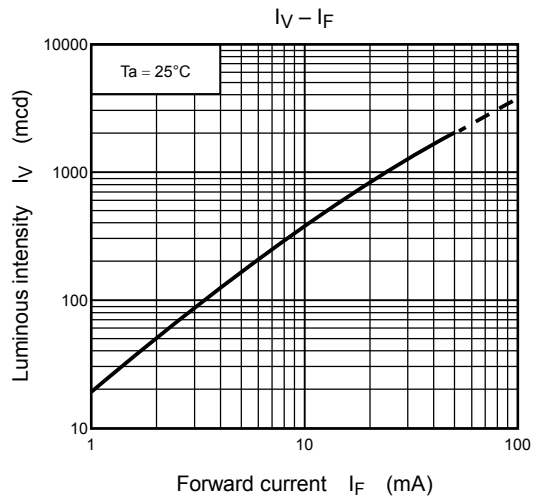
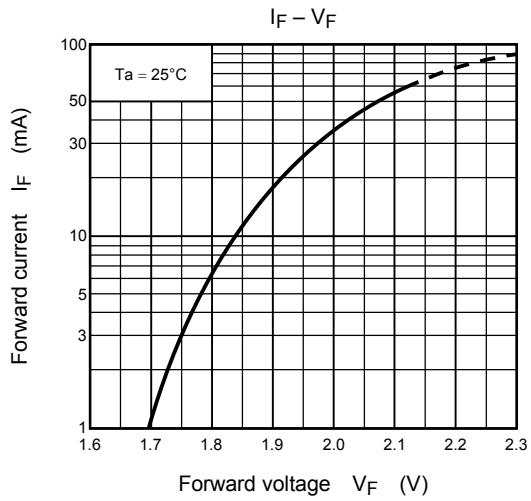
## TLRE53T



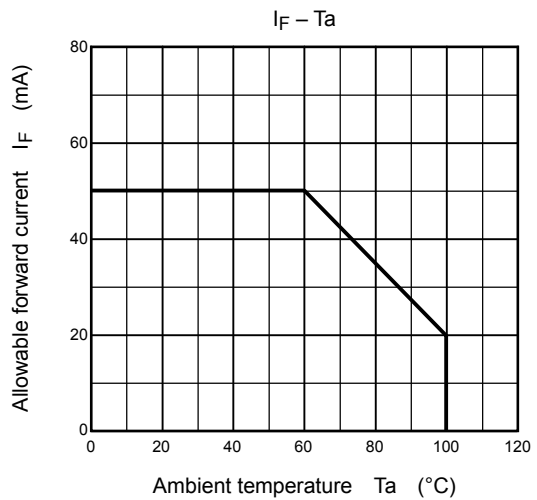
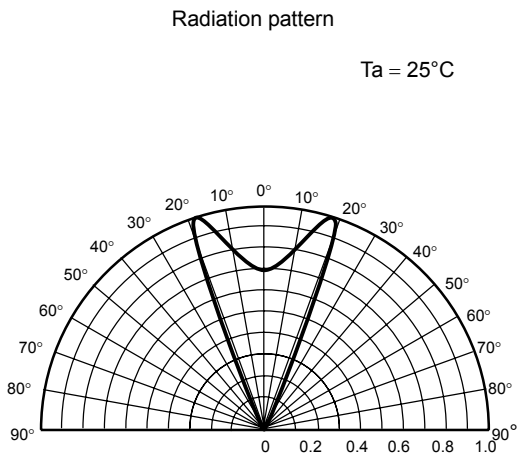
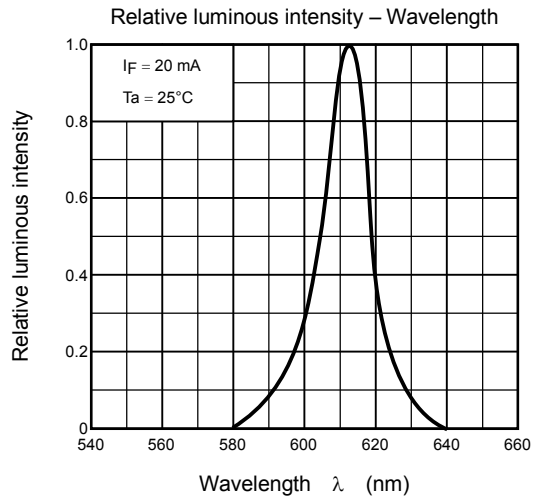
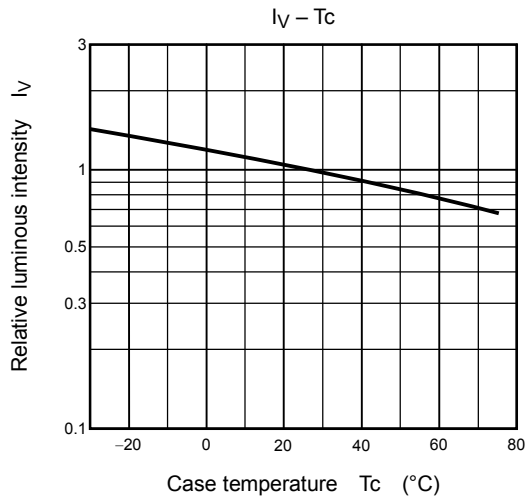
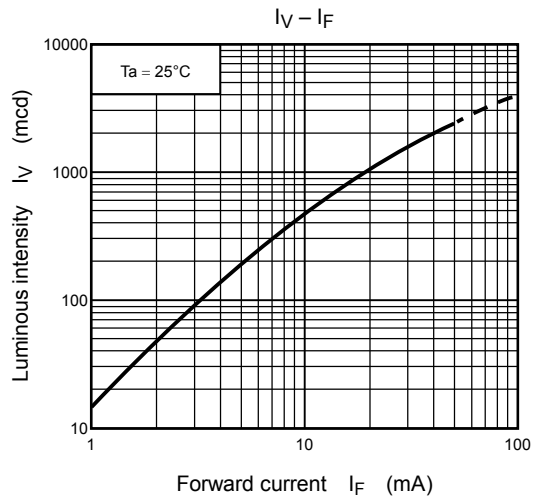
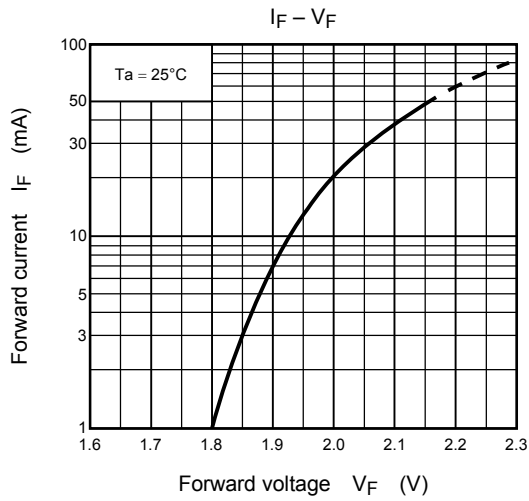
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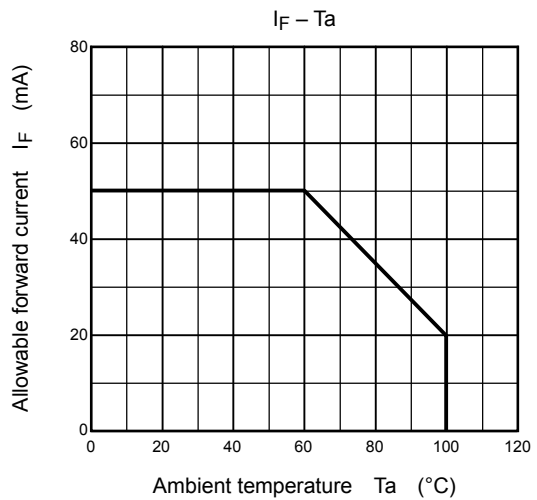
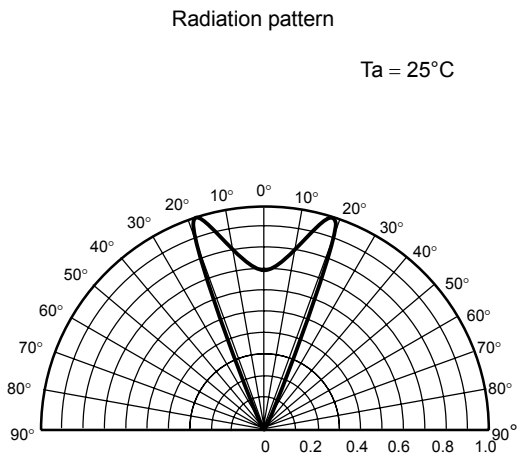
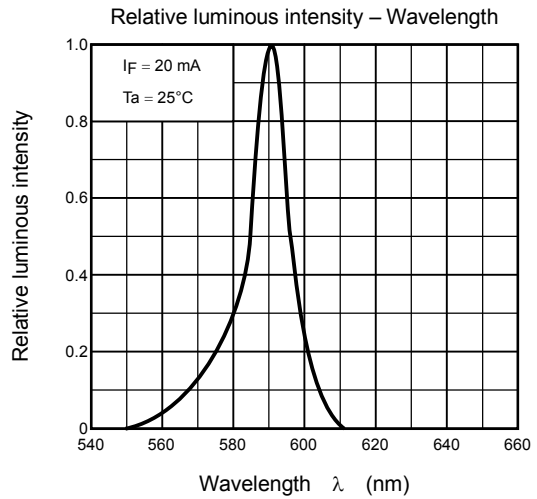
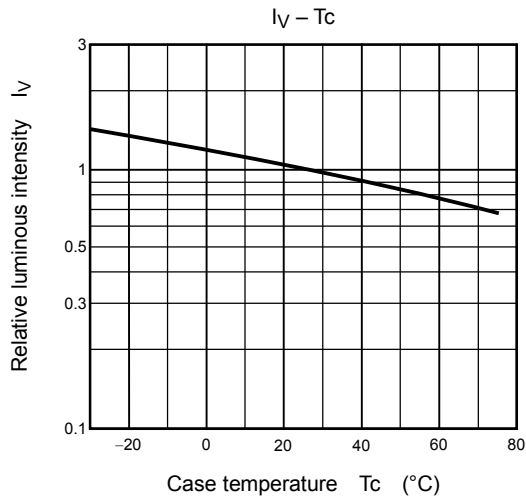
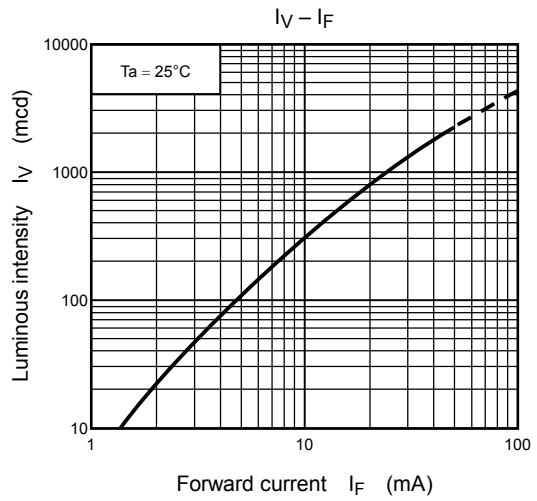
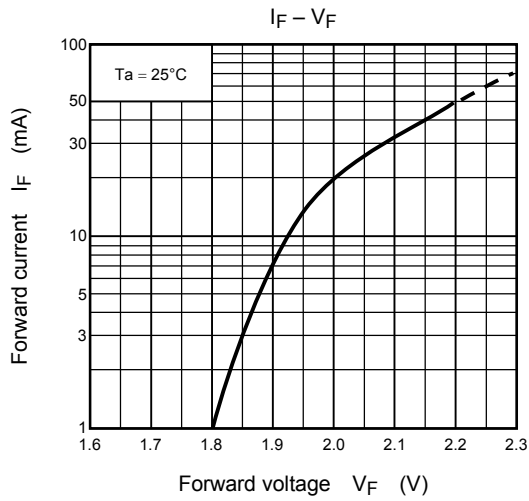
**TLSE53T**



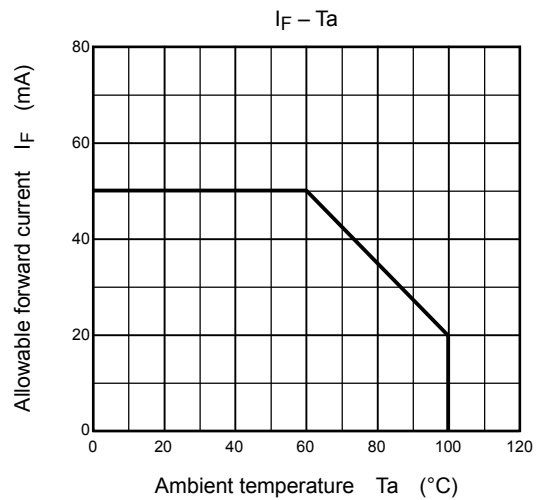
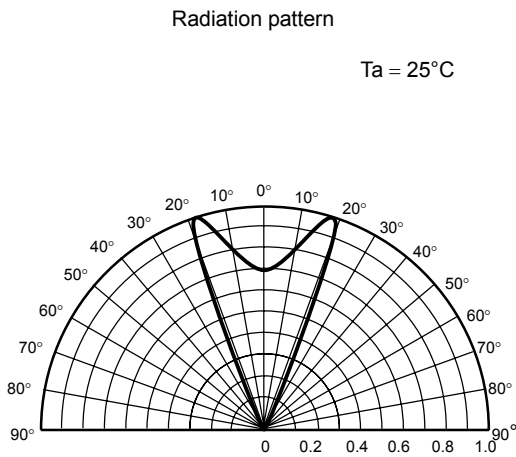
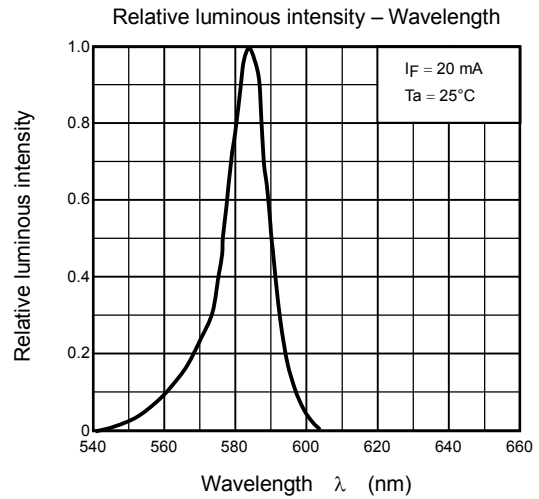
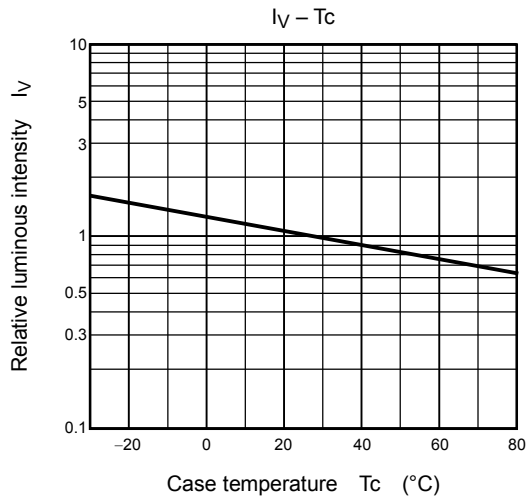
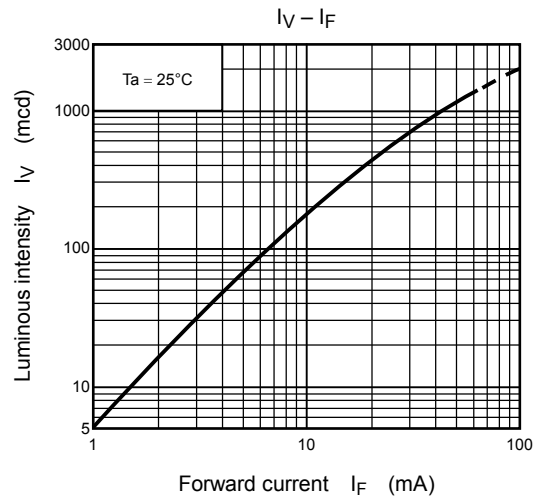
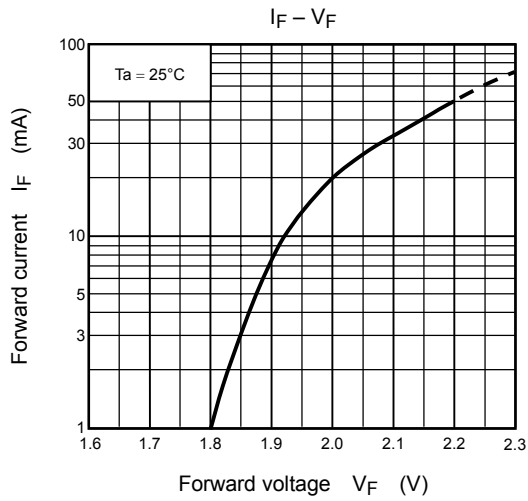
## TLOE53T



## TLYE53T

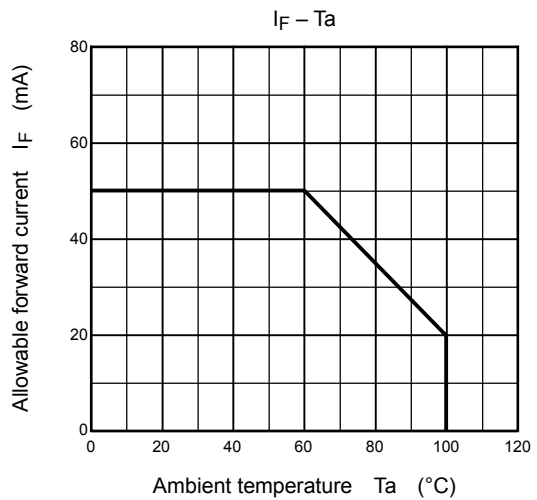
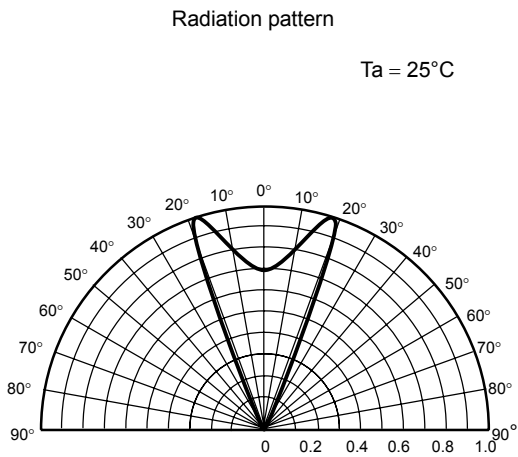
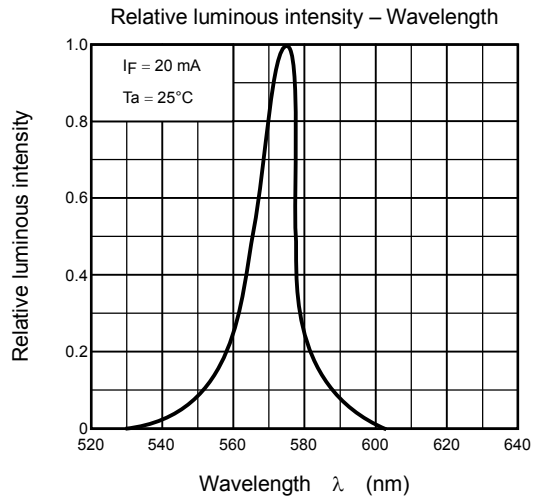
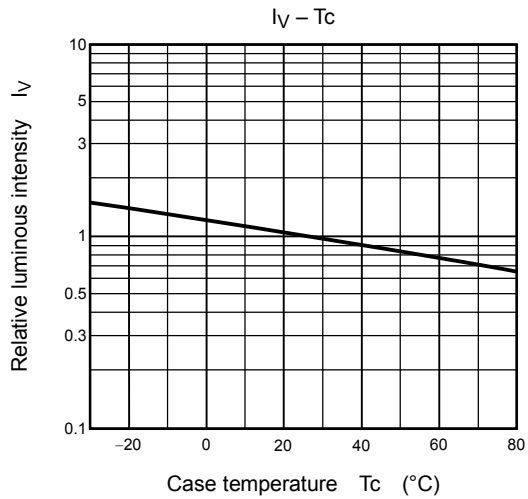
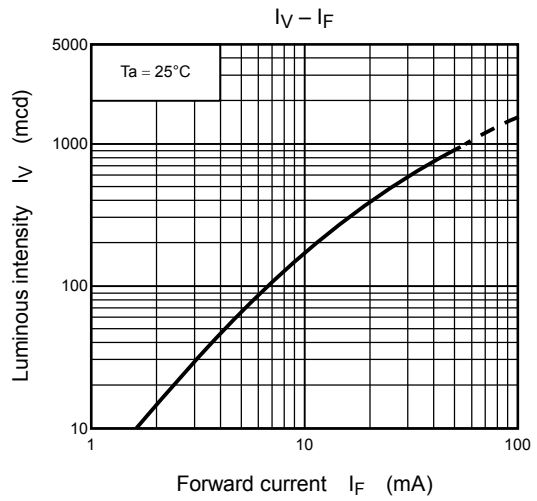
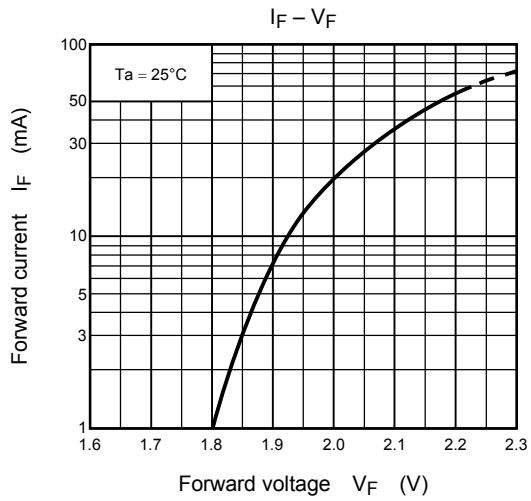


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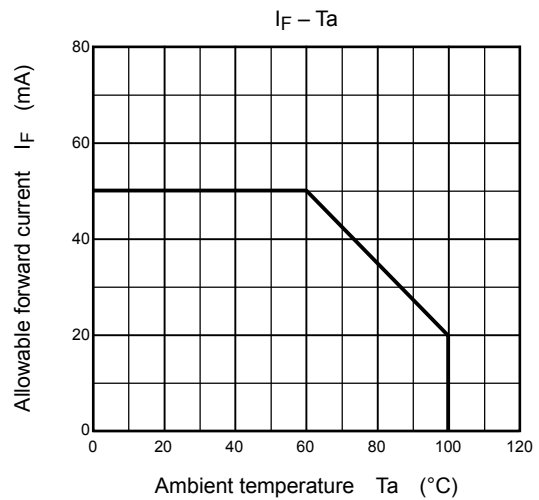
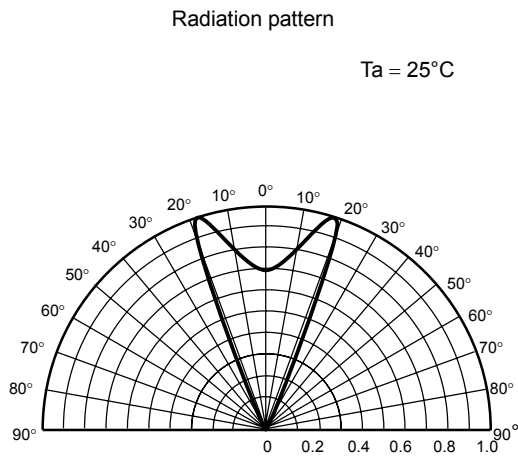
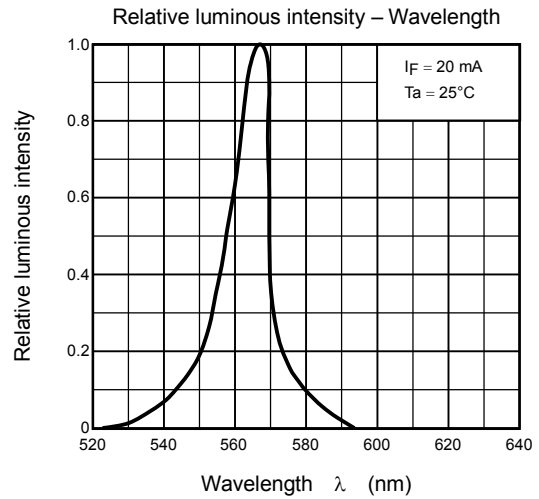
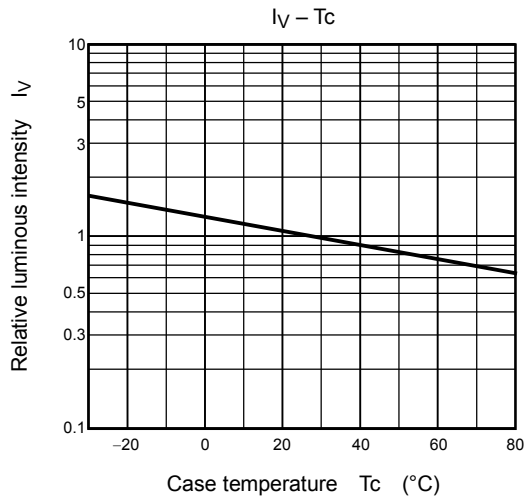
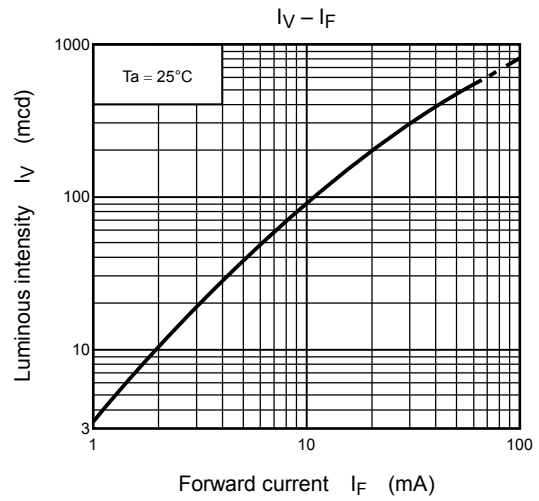
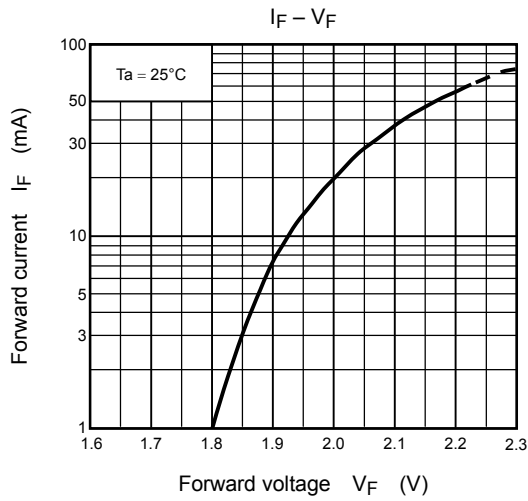




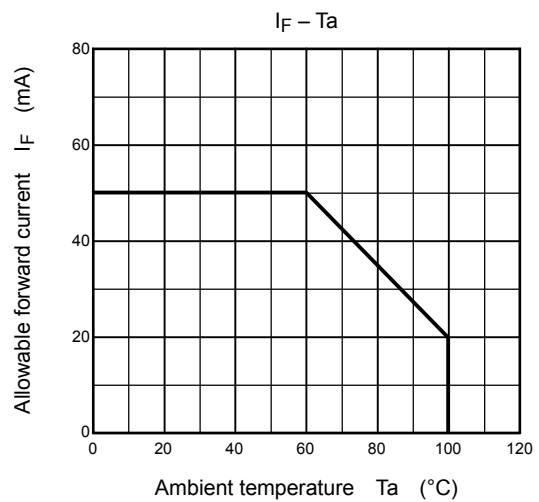
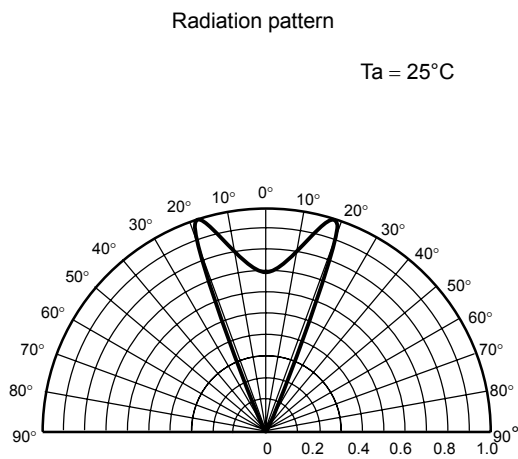
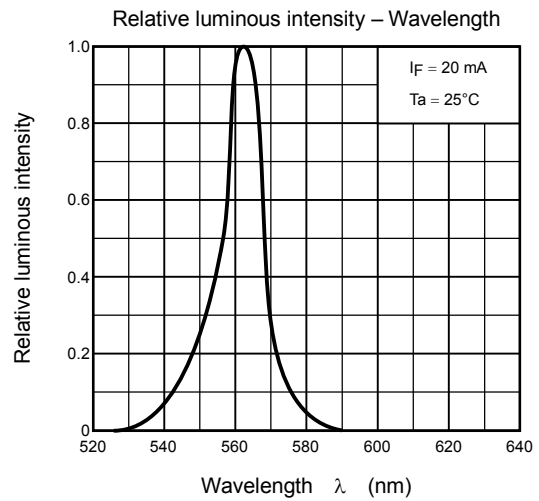
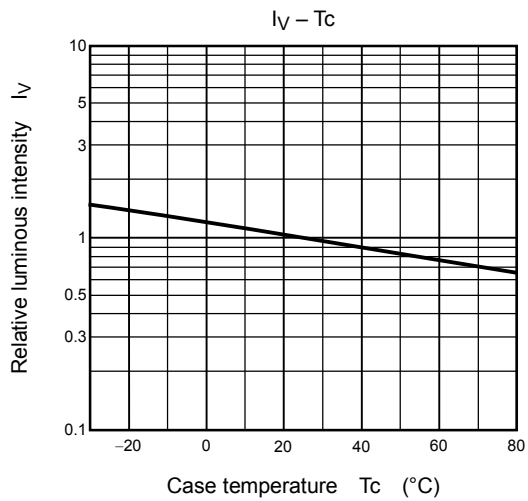
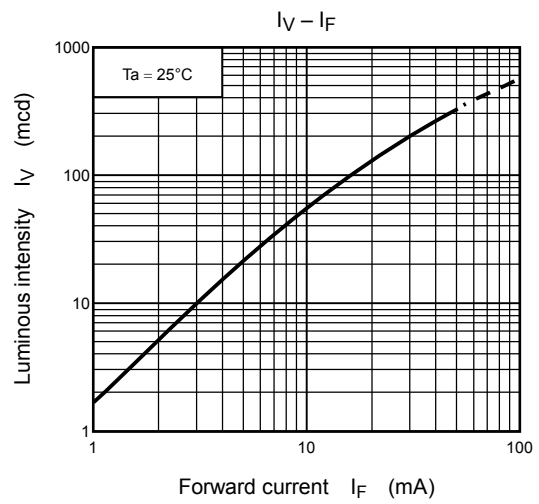
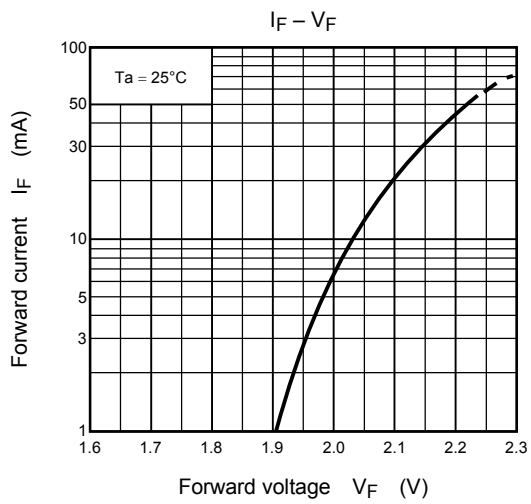
**TLGE53T**



**TLFGE53T**



## TLPGE53T



**RESTRICTIONS ON PRODUCT USE**

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