

TOSHIBA InGaAlP LED

**TLRE30TP(F), TLSE30TP(F), TLOE30TP(F), TLYE30TP(F)**

Panel Circuit Indicator

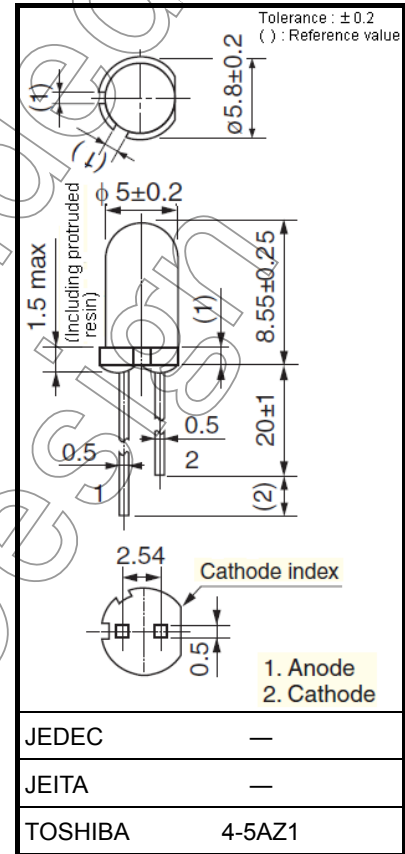
- $\phi$  5mm package
- InGaAlP technology
- Transparent lens
- Lineup: 3 colors (red, orange, yellow)
- High intensity light emission
- Excellent low current light output
- Applications: Various types of information panels, backlightings, etc.
- Stopper lead type is also available

TLRE30T(F), TLSE30T(F), TLOE30T(F), TLYE30T(F)

Lineup

Product Name	Color	Material
TLRE30TP(F)	Red	InGaAlP
TLSE30TP(F)	Red	
TLOE30TP(F)	Orange	
TLYE30TP(F)	Yellow	

Unit: mm



Weight: 0.29 g (typ.)

Not Recommended for New Design

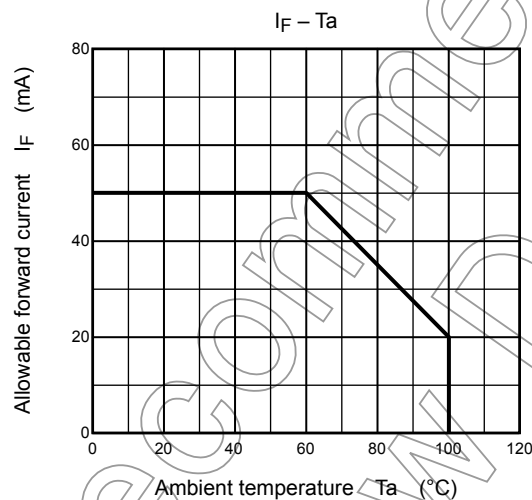
## Absolute Maximum Ratings (Ta = 25°C)

Product Name	Forward Current I <sub>F</sub> (mA) (Note 1)	Reverse Voltage V <sub>R</sub> (V)	Power Dissipation P <sub>D</sub> (mW)	Operating Temperature T <sub>opr</sub> (°C)	Storage Temperature T <sub>stg</sub> (°C)
TLRE30TP(F)	50	4	120	-40 to 100	-40 to 120
TLSE30TP(F)					
TLOE30TP(F)					
TLYE30TP(F)					

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).

Note 1: Forward current derating



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

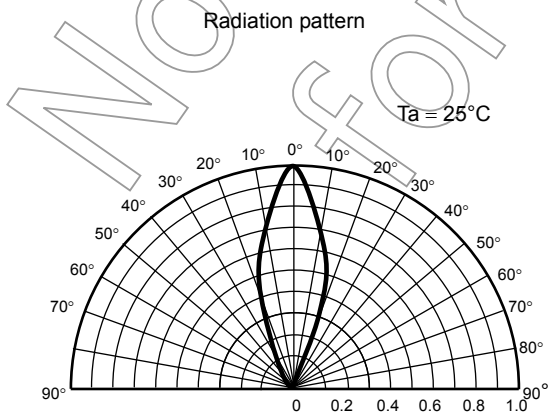
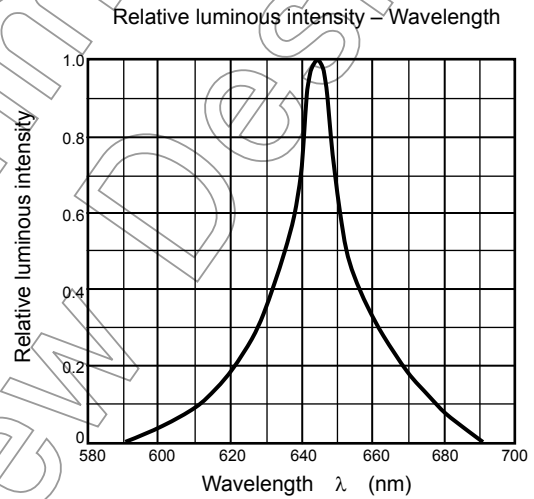
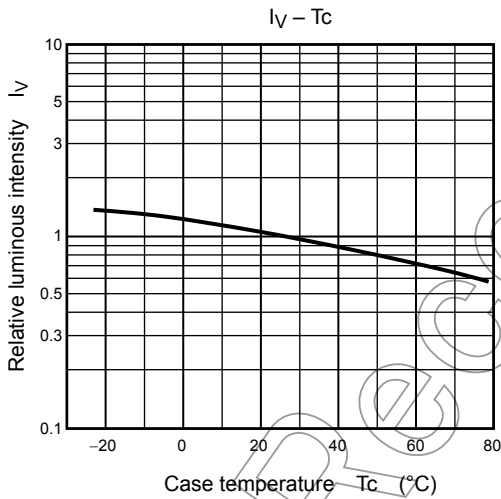
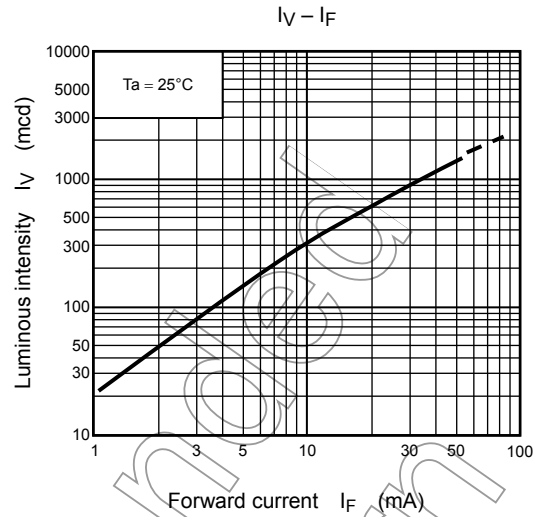
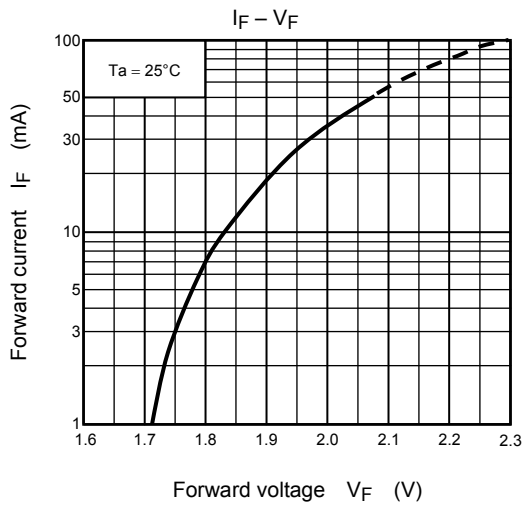
Product Name	Typ. Emission Wavelength			Luminous Intensity I <sub>V</sub>			Forward Voltage V <sub>F</sub>			Reverse Current I <sub>R</sub>		
	λ <sub>d</sub>	λ <sub>p</sub>	Δλ	I <sub>F</sub>	Min	Typ.	I <sub>F</sub>	Typ.	Max	I <sub>F</sub>	Max	V <sub>R</sub>
TLRE30TP(F)	630	644	20	20	153	600	20	1.9	2.4	20	50	4
TLSE30TP(F)	613	623	20	20	272	1000	20	1.9	2.4	20	50	4
TLOE30TP(F)	605	612	20	20	476	1400	20	2.0	2.4	20	50	4
TLYE30TP(F)	587	590	17	20	476	1300	20	2.0	2.4	20	50	4
Unit	nm			mA	mcd		mA	V		mA	μA	V

## Precautions

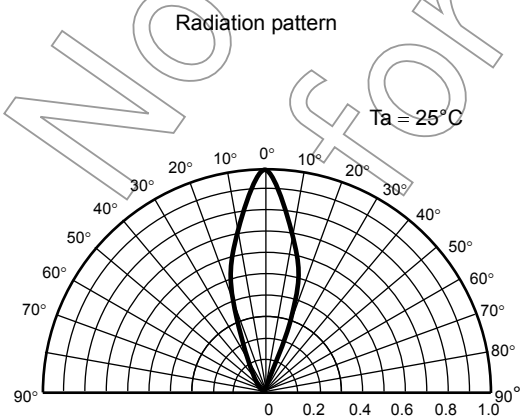
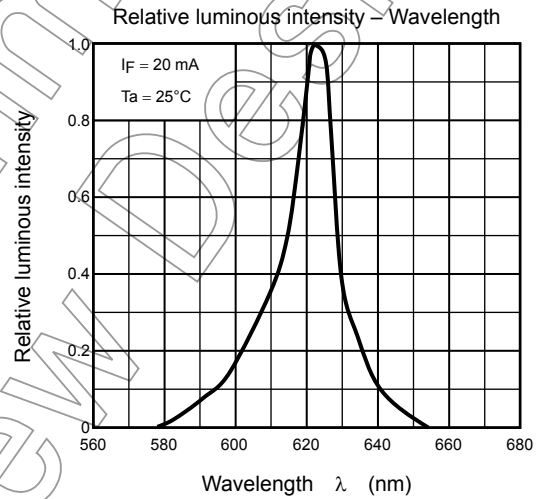
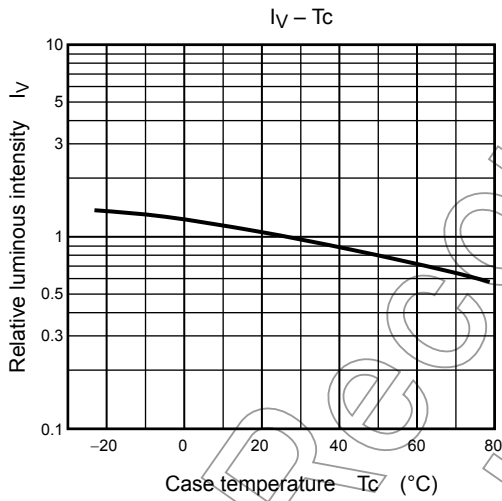
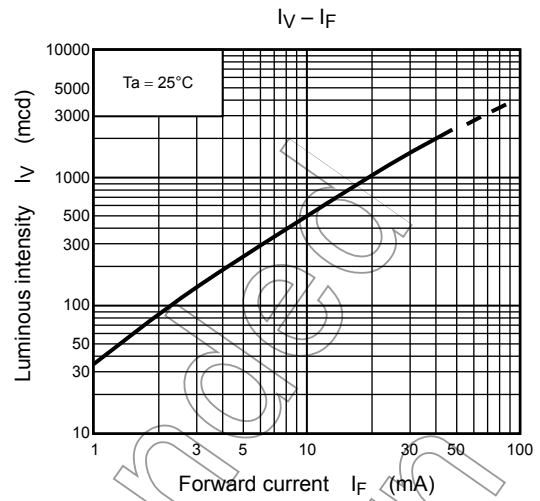
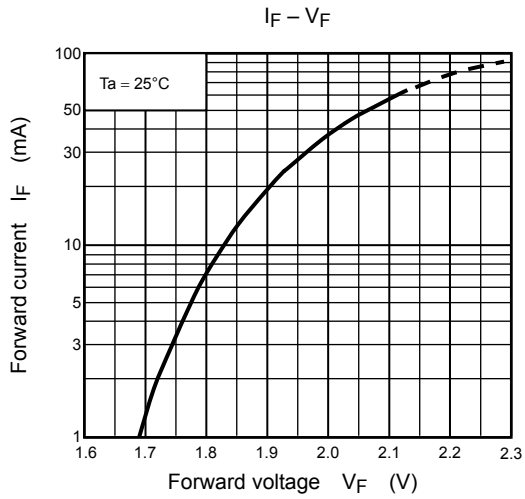
Please be careful of the following:

- Soldering temperature: 260°C max, soldering time: 3 s max  
(Soldering portion of lead: up to 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.

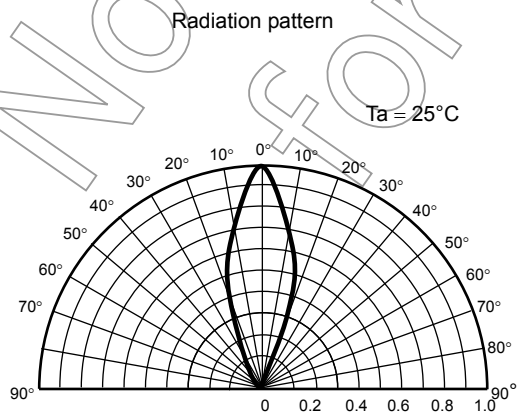
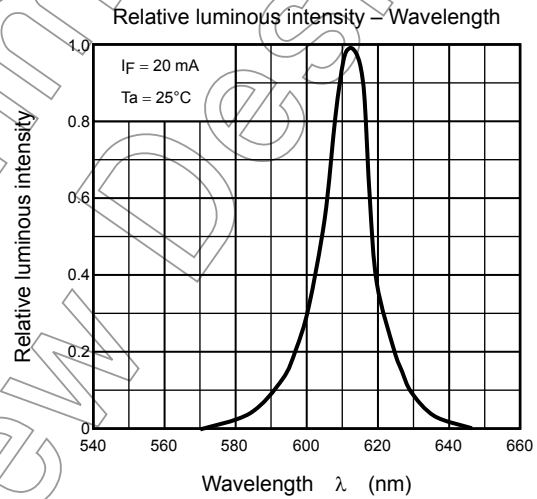
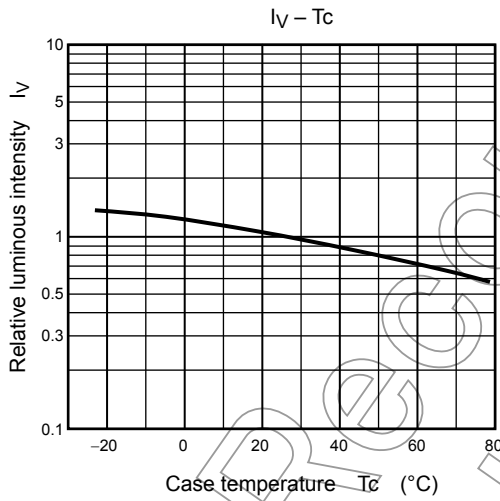
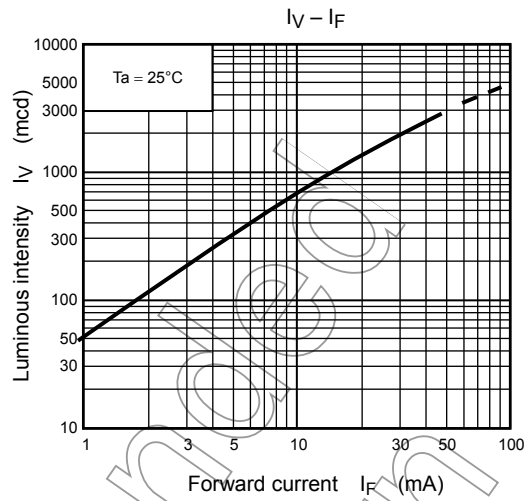
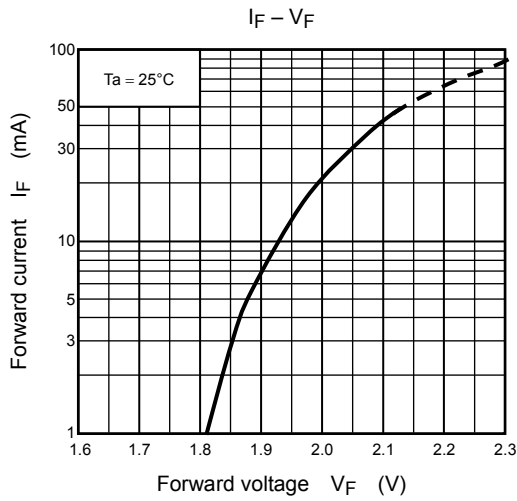
**TLRE30TP(F)**



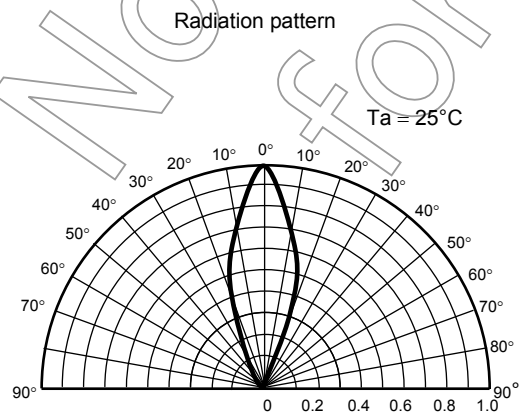
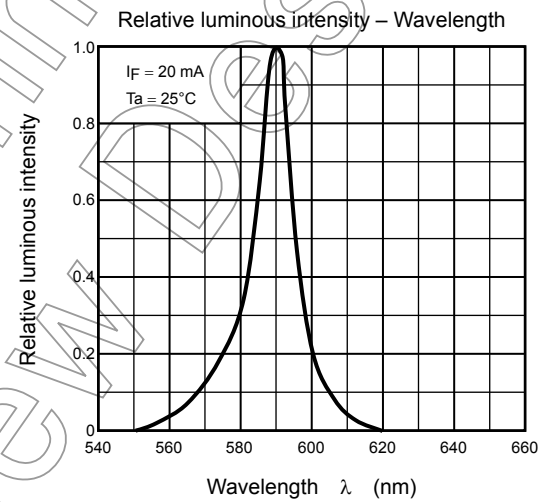
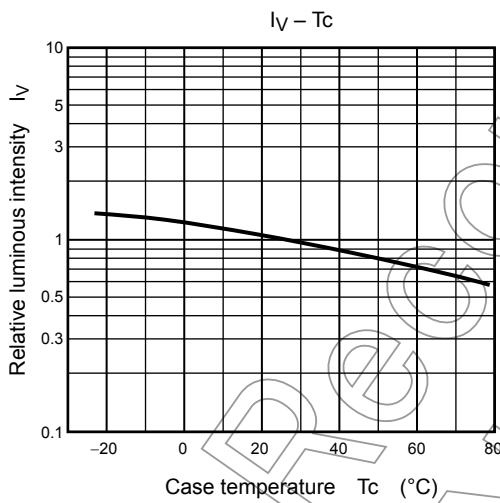
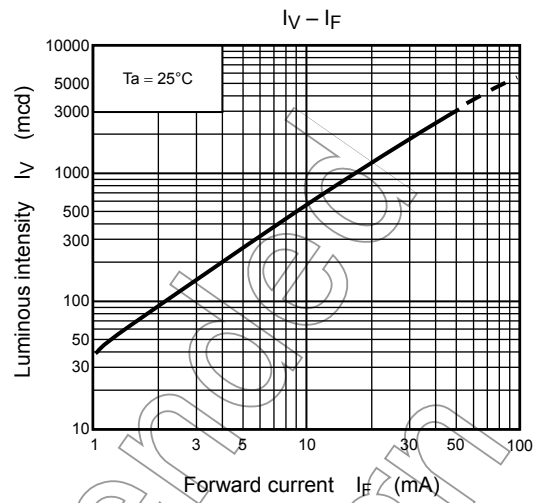
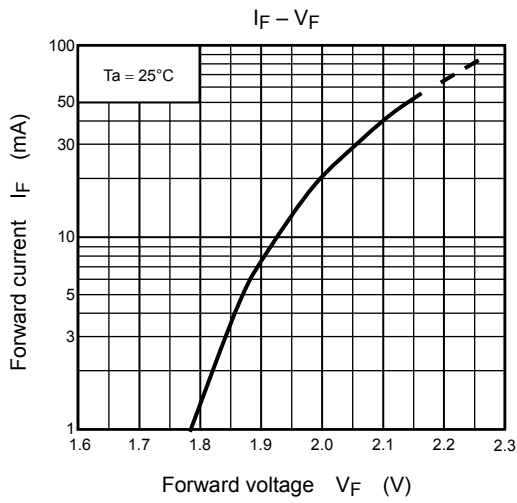
**TLSE30TP(F)**



**TLOE30TP(F)**



**TLYE30TP(F)**



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