

TOSHIBA InGaAlP LED

**TLRH30TP(F), TLRMH30TP(F), TLSH30TP(F)  
TLOH30TP(F), TLYH30TP(F)**

Panel Circuit Indicators

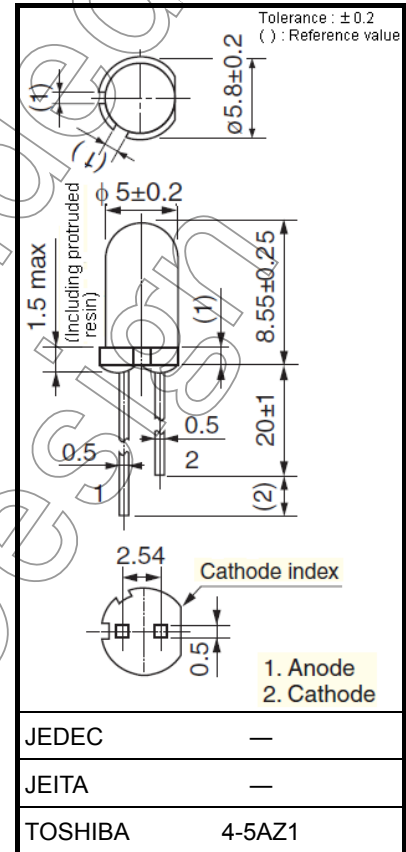
- $\phi$  5mm package
- InGaAlP technology
- Transparent lens
- Lineup: three colors (red, orange, yellow)
- High intensity light emission
- Excellent low current light output
- Applications: Various types of information panels, backlightings, etc.
- Stopper lead type is also available.

TLRH30T(F), TLRMH30T(F), TLSH30T(F), TLOH30T(F),  
TLYH30T(F)

Lineup

Product Name	Color	Material
TLRH30TP(F)	Red	InGaAlP
TLRMH30TP(F)	Red	
TLSH30TP(F)	Red	
TLOH30TP(F)	Orange	
TLYH30TP(F)	Yellow	

Unit: mm



Weight: 0.29 g (Typ.)

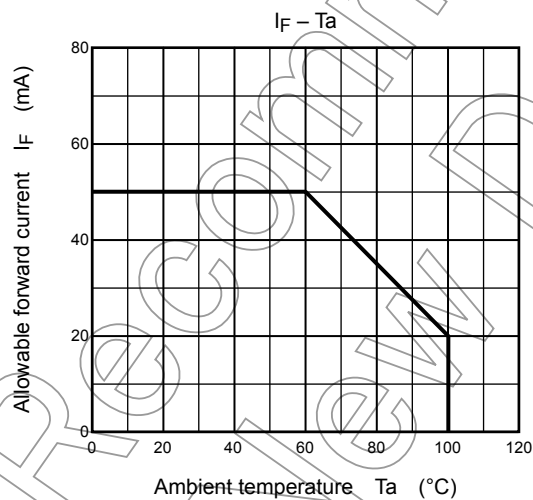
## Absolute Maximum Ratings (Ta = 25°C)

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)
TLRH30TP(F)	50	4	120	-40 to 100	-40 to 120
TLRMH30TP(F)					
TLSH30TP(F)					
TLOH30TP(F)					
TLYH30TP(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	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		Min	Typ.	I <sub>F</sub>	Typ.	Max	I <sub>F</sub>	Max	V <sub>R</sub>	
	Min	Typ.	Max	Typ.	Typ.	I <sub>F</sub>									
TLRH30TP(F)	—	630	—	644	13	20	272	680	20	1.9	2.4	20	50	4	
TLRMH30TP(F)	—	626	—	636	13	20	476	950	20	1.9	2.4	20	50	4	
TLSH30TP(F)	—	613	—	623	13	20	476	1300	20	2.0	2.4	20	50	4	
TLOH30TP(F)	—	605	—	612	13	20	476	1600	20	2.0	2.4	20	50	4	
TLYH30P(F)	581	587	595	590	13	20	476	1350	20	2.0	2.4	20	50	4	
Unit	nm						mA			mcd			mA		
										V			μA		
													V		

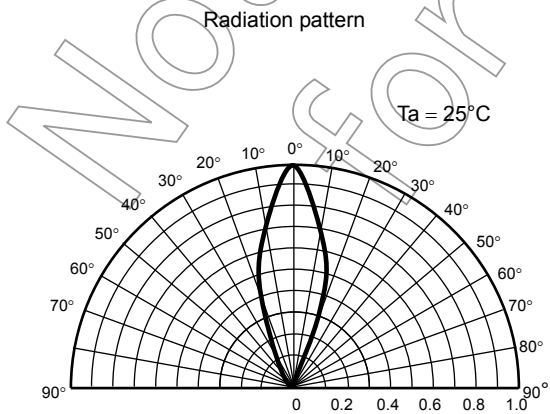
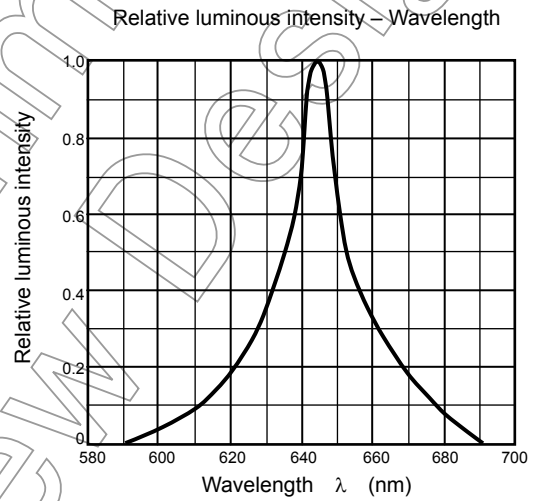
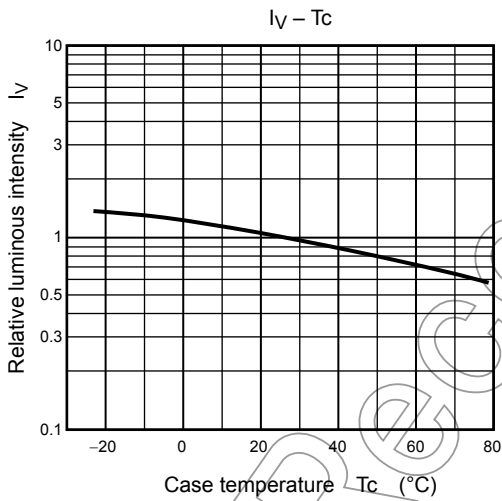
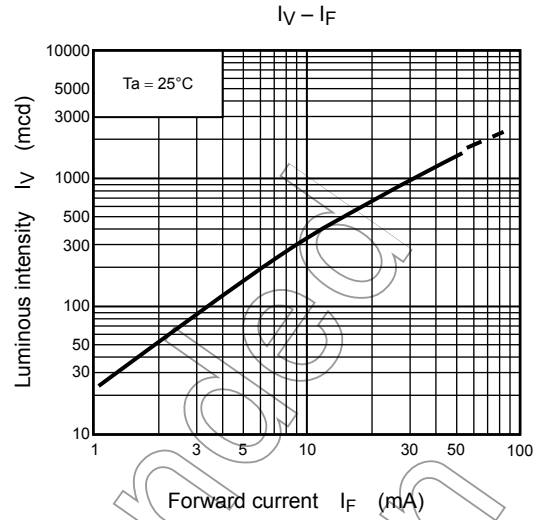
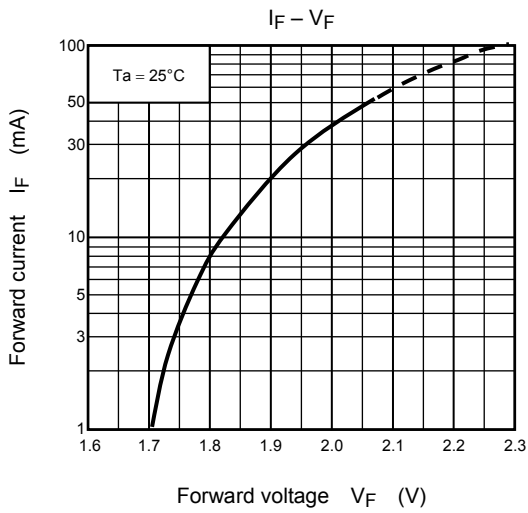
### Precautions

Please be careful of the following:

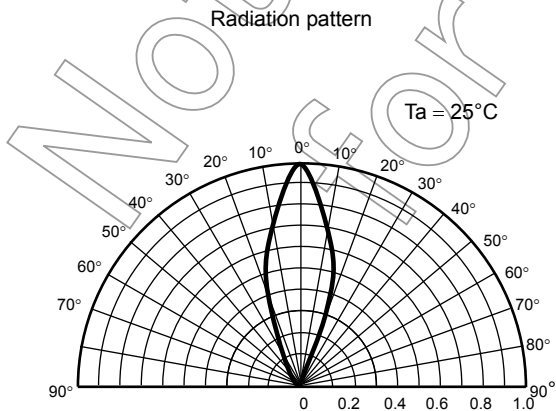
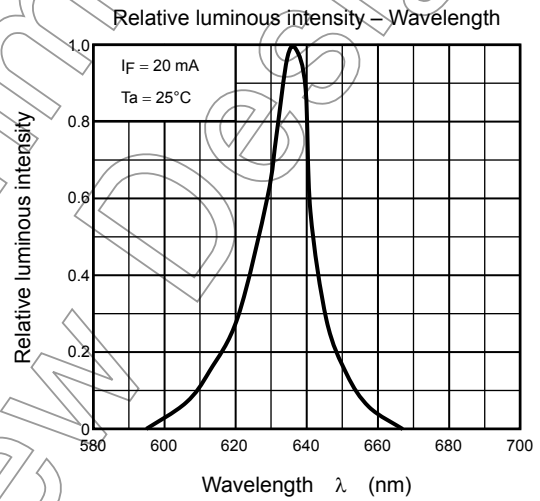
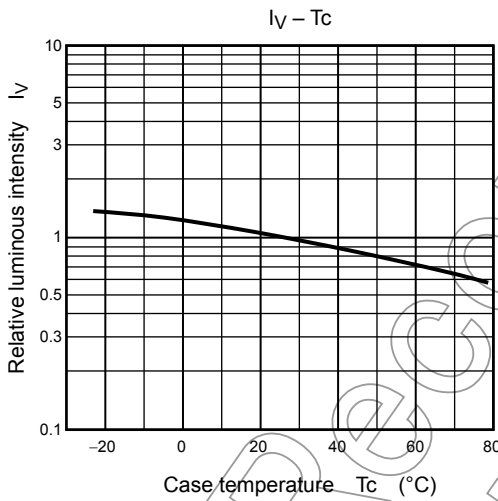
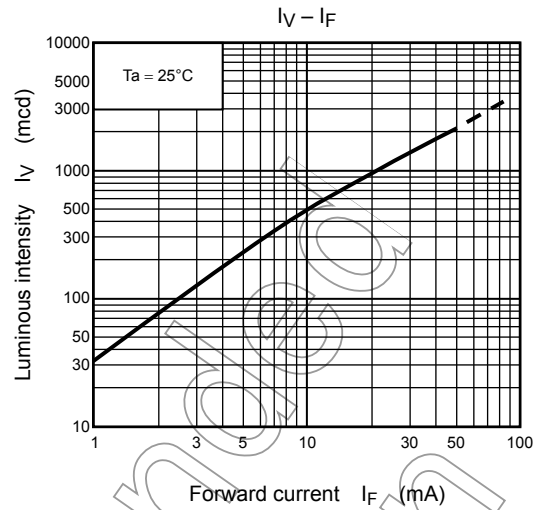
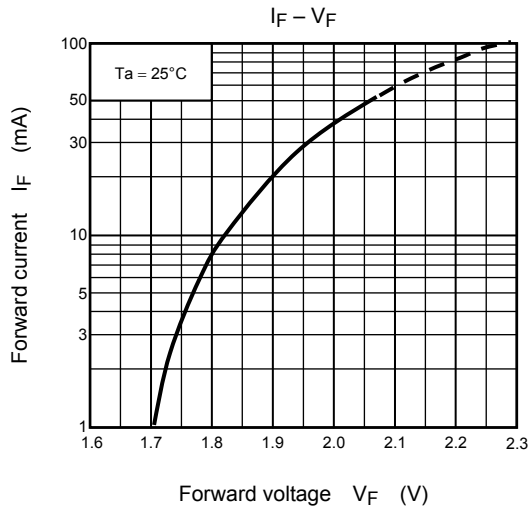
- Soldering temperature: 260°C max, soldering time: 3 s max  
(Soldering portion of lead: up to 1.6 mm from the body of the device)
- If the lead is formed, the lead should be formed up to 1.6 mm from the body of the device without forming stress to the resin. Soldering should be performed after lead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

Not Recommended for New Design

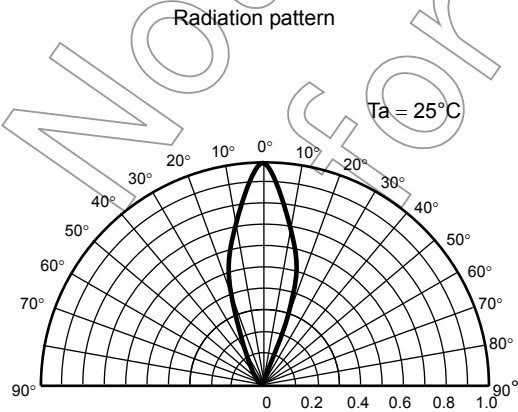
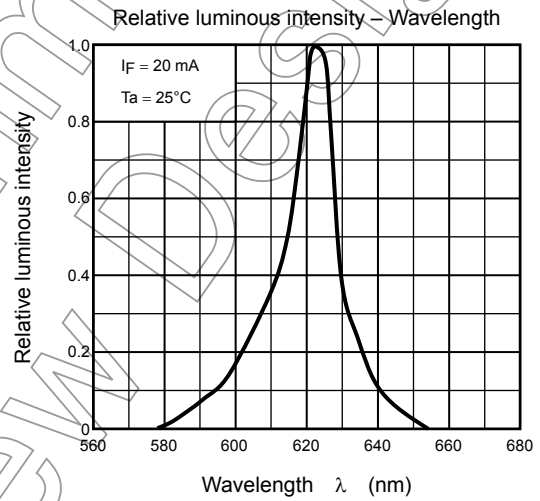
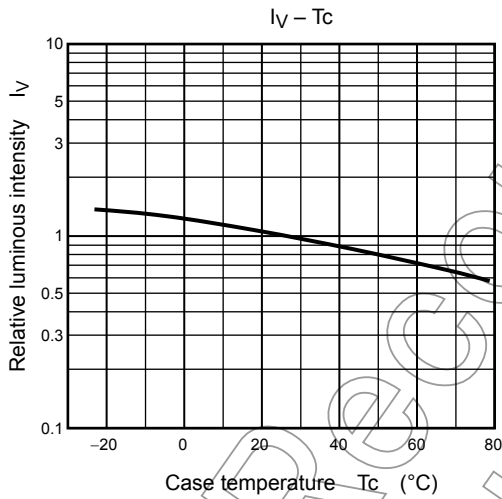
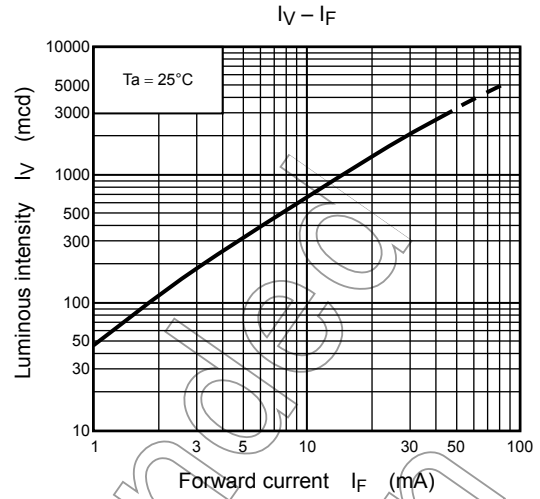
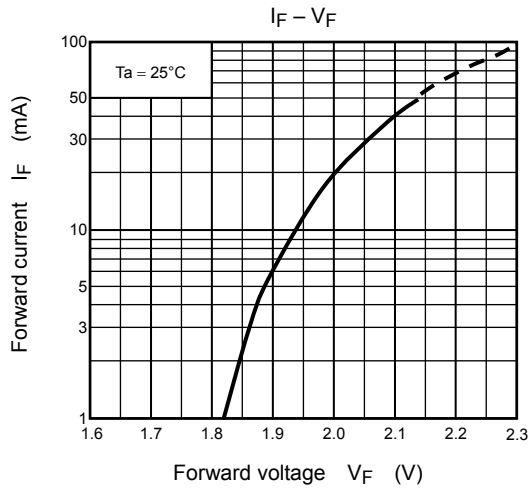
## TLRH30TP(F)



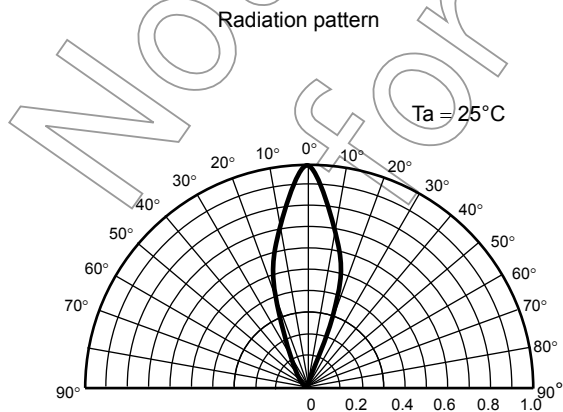
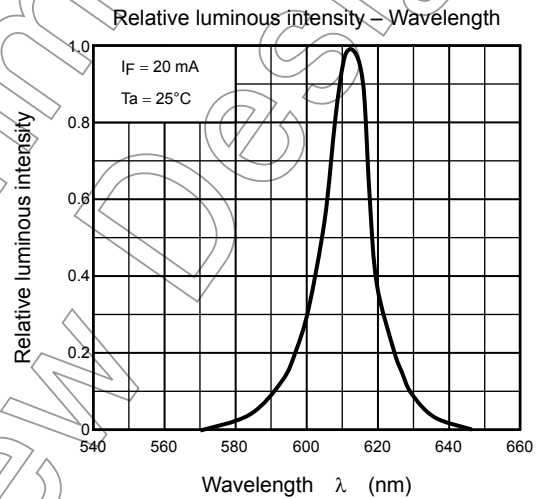
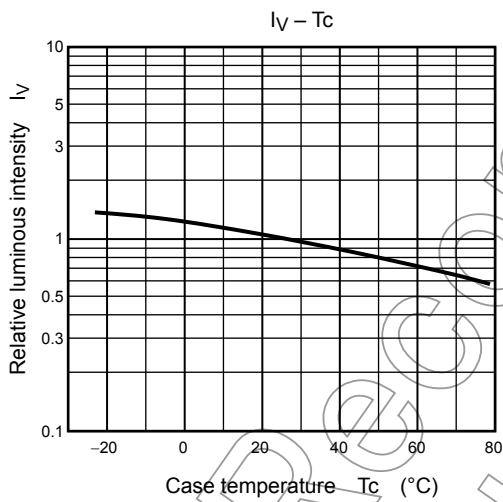
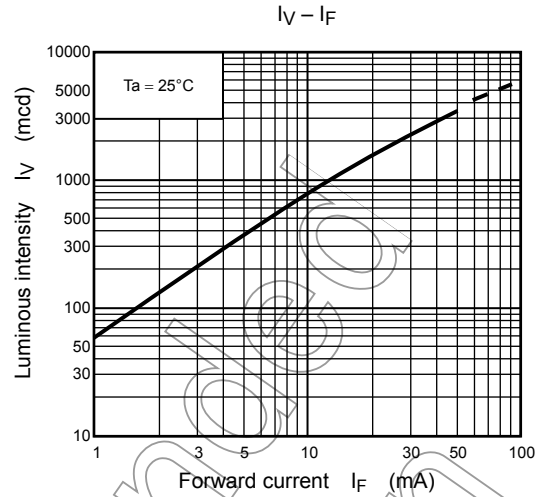
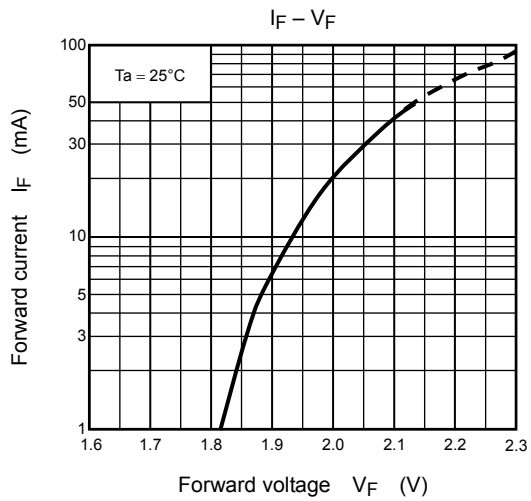
## TLRMH30TP(F)



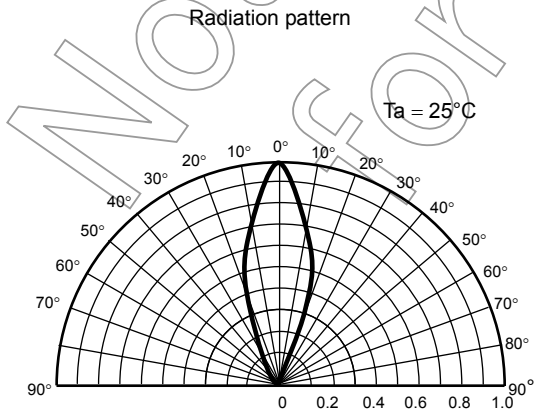
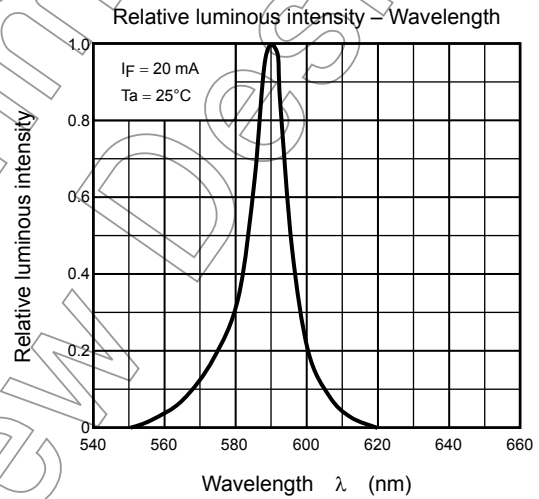
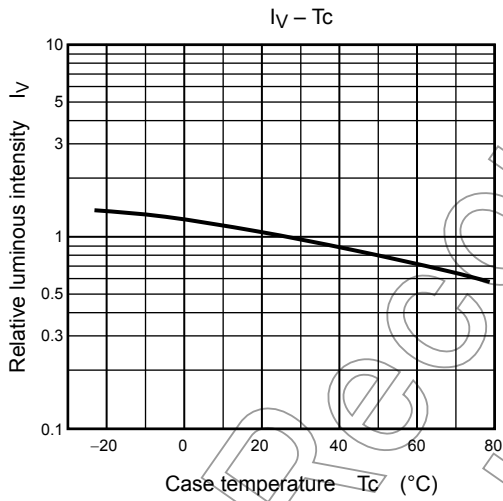
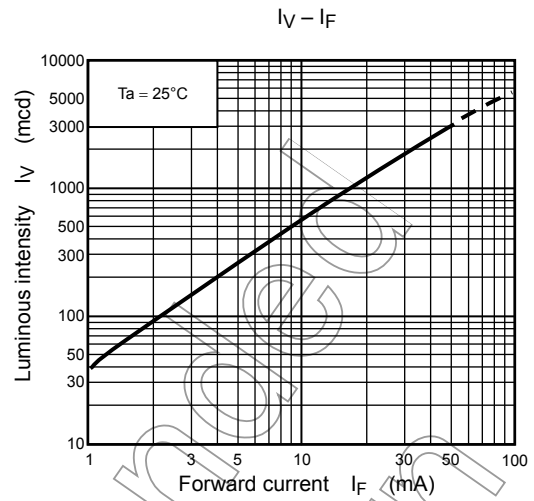
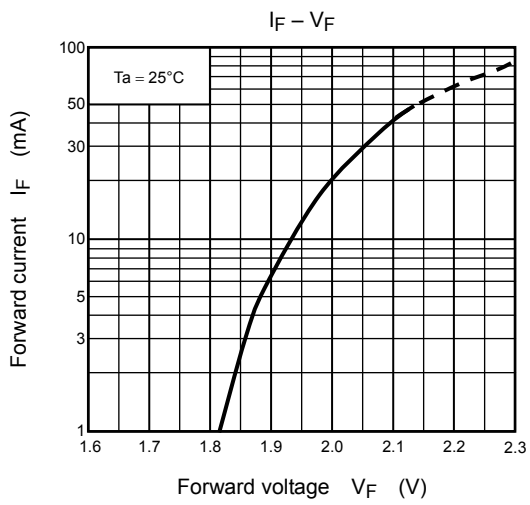
## TL30TP(F)



## TLOH30TP(F)



## TLYH30TP(F)





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