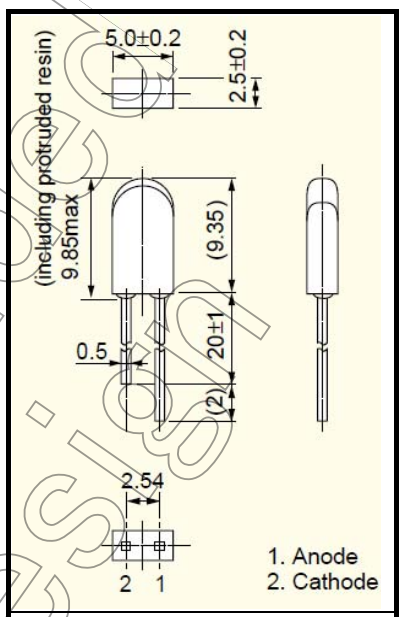
TOSHIBA InGaAℓP LED

TL(OE,YE,PYE,GE,FGE)33CP(F)

Unit: mm



JEDEC	—
JEITA	—
TOSHIBA	4-5AG2

Weight: 0.23 g(Typ.)

Panel Circuit Indicators

- 2.5 × 5 mm package
- InGaAℓP technology
- Colored Transparent lens
- Line-up: 6 colors (orange, yellow, pure yellow, green and pure green)
- Excellent low current light output
- High intensity light emission
- Excellent low current light output
- Applications: dashboard displays, various indicator
- Stopper lead type is also available

Lineup

Product Name	Color	Material
TLOE33CP(F)	orange	InGaAℓP
TLYE33CP(F)	yellow	
TLPYE33CP(F)	yellow	
TLGE33CP(F)	green	
TLFGE33CP(F)	green	

Absolute Maximum Ratings (Ta = 25°C)

Product Name	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)
TLOE33CP(F)	50	4	120	−40~100	−40~120
TLYE33CP(F)	50	4	120		
TLPYE33CP(F)	50	4	120		
TLGE33CP(F)	50	4	120		
TLFGE33CP(F)	50	4	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 Name	Typ. Emission Wavelength				Luminous Intensity I_V			Forward Voltage V_F			Reverse Current I_R	
	λ_d	λ_P	$\Delta\lambda$	I_F	Min	Typ.	I_F	Typ.	Max	I_F	Max	V_R
TLOE33CP(F)	605	(612)	20	20	1530	4000	20	2.0	2.4	20	50	4
TLYE33CP(F)	587	(590)	17	20	1530	3500	20	2.0	2.4	20	50	4
TLPYE33CP(F)	580	(583)	14	20	476	1400	20	2.0	2.4	20	50	4
TLGE33CP(F)	571	(574)	17	20	272	800	20	2.0	2.4	20	50	4
TLFGE33CP(F)	565	(568)	15	20	153	400	20	2.0	2.4	20	50	4
Unit	nm			mA	mcd		mA	V		mA	μA	V

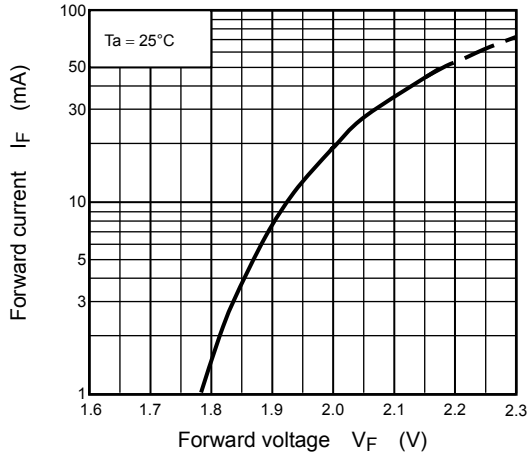
Precautions

Please be careful of the following:

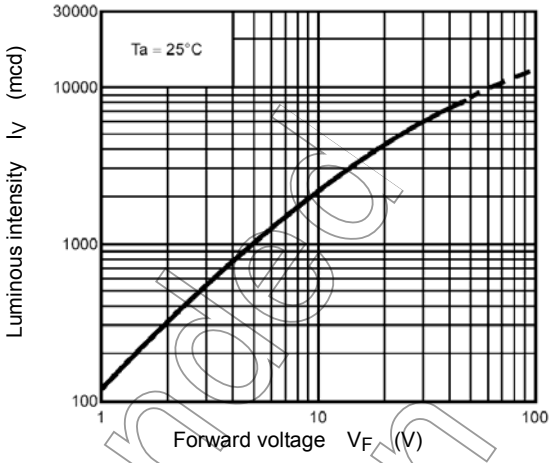
- Soldering temperature: 260°C max, soldering time: 3 s max
  (soldering portion of lead: up to 1.6 mm from the body of the device)
- If the lead is formed, the lead should be formed up to 1.6 mm from the body of the device without forming stress to the resin. Soldering should be performed after lead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

TLOE33CP(F)

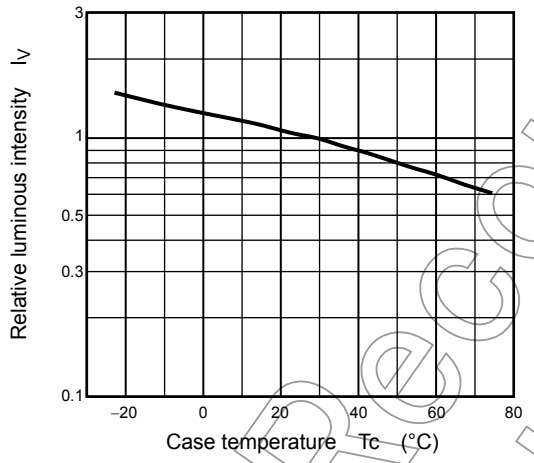
$I_F - V_F$



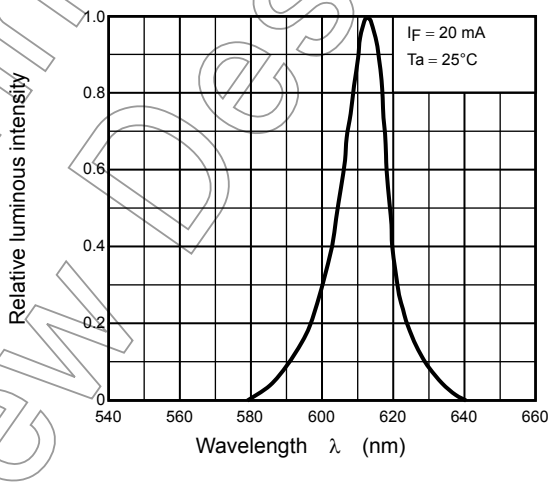
$I_V - I_F$



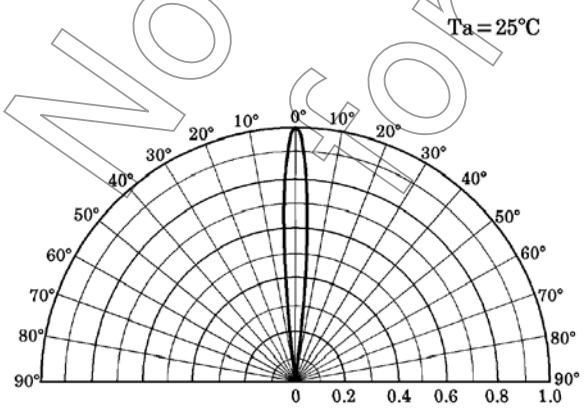
$I_V - Tc$



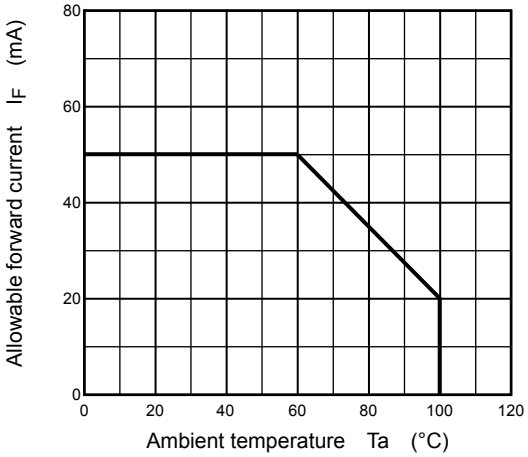
Relative luminous intensity – Wavelength



Radiation pattern

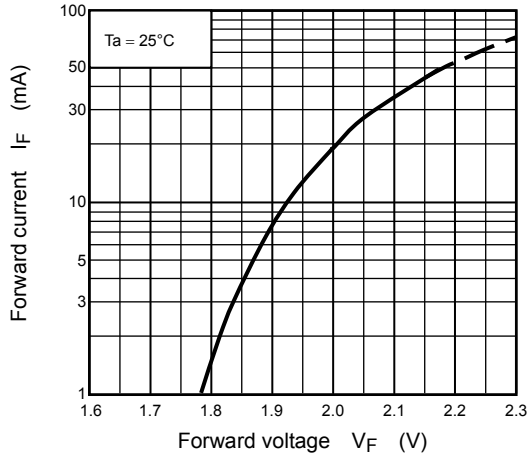


$I_F - Ta$

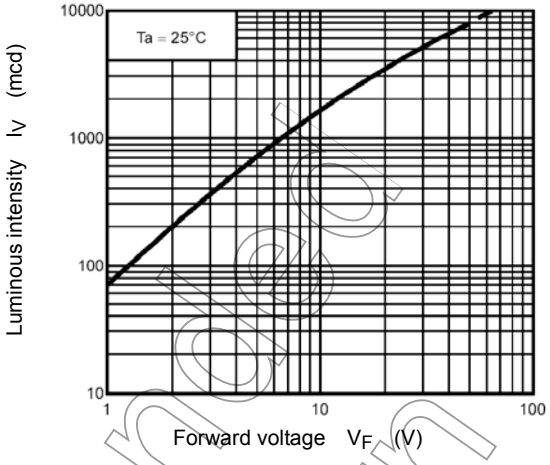


TLYE33CP(F)

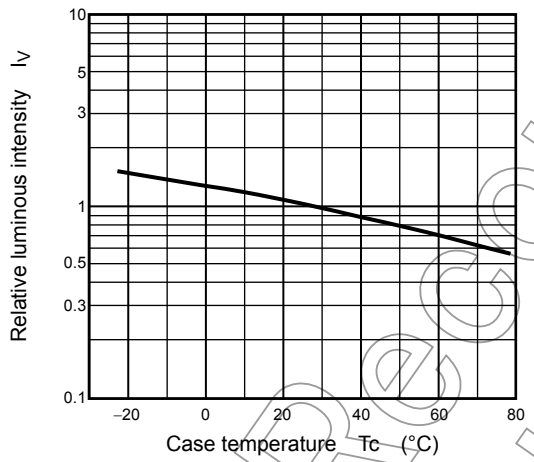
$I_F - V_F$



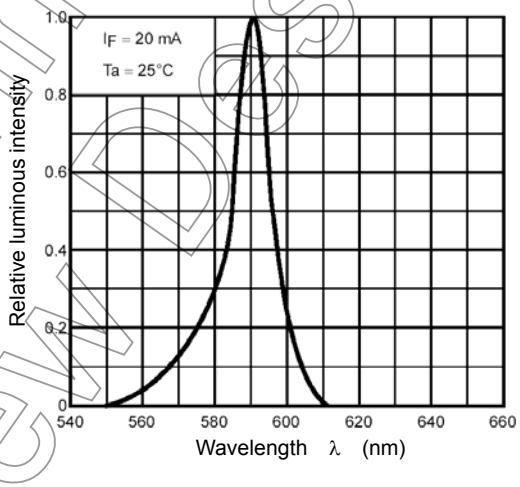
$I_V - I_F$



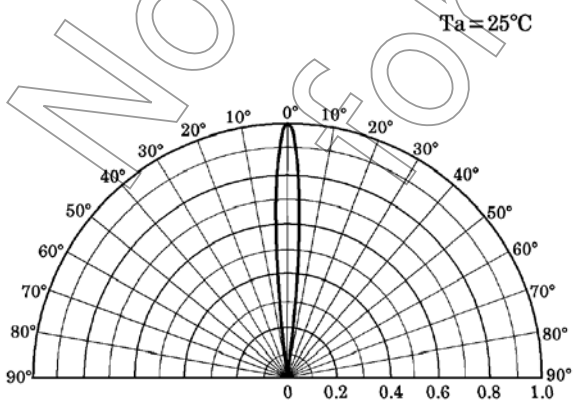
$I_V - Tc$



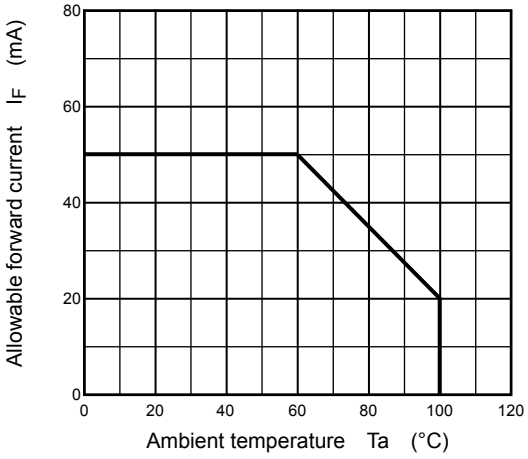
Relative luminous intensity – Wavelength



Radiation pattern

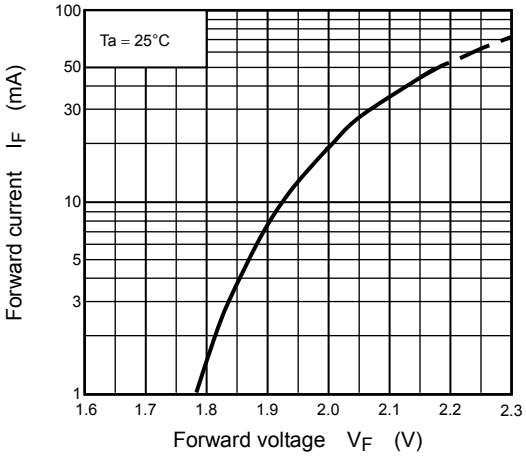


$I_F - Ta$

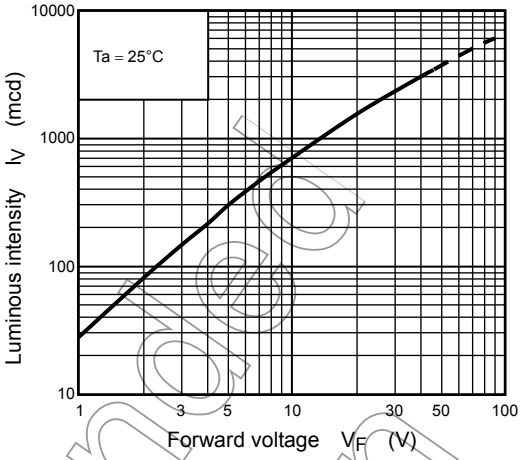


TLPYE33CP(F)

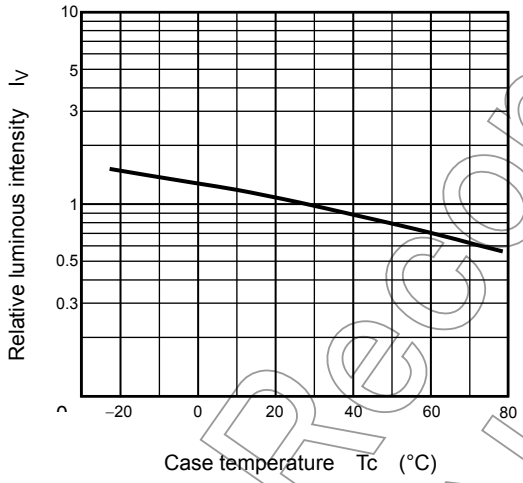
$I_F - V_F$



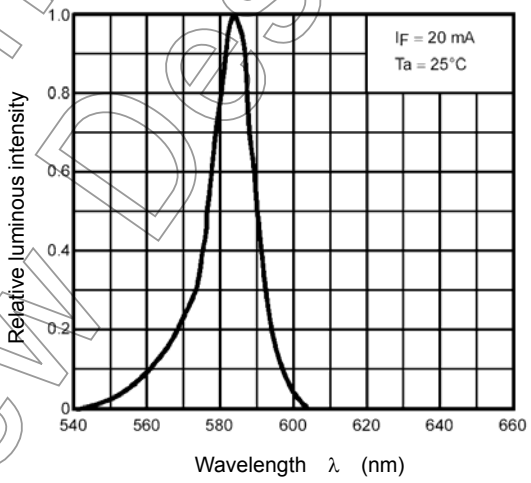
$I_V - I_F$



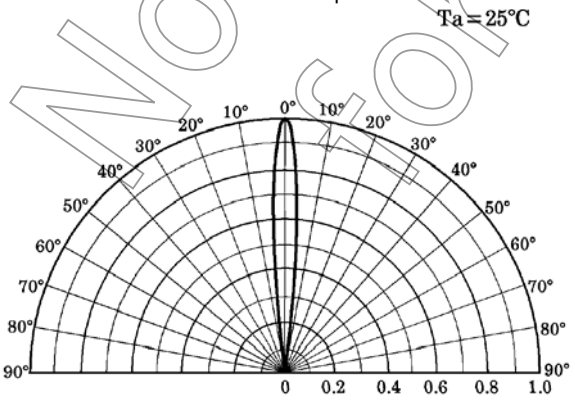
$I_V - Tc$



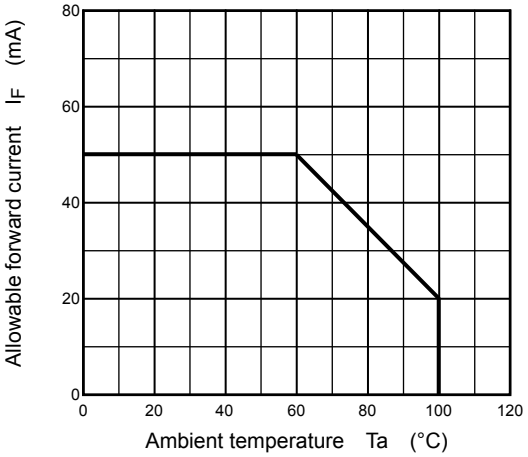
Relative luminous intensity – Wavelength



Radiation pattern

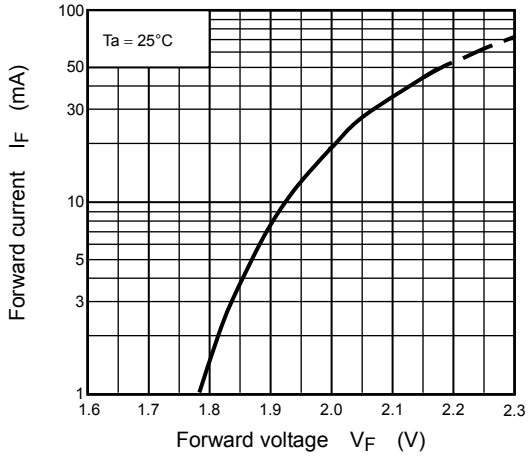


$I_F - Ta$

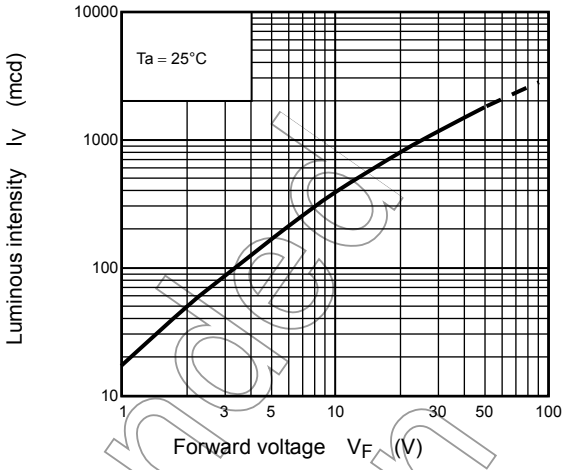


TLGE33CP(F)

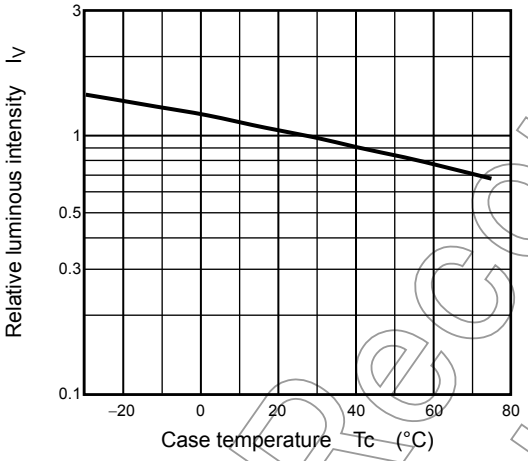
$I_F - V_F$



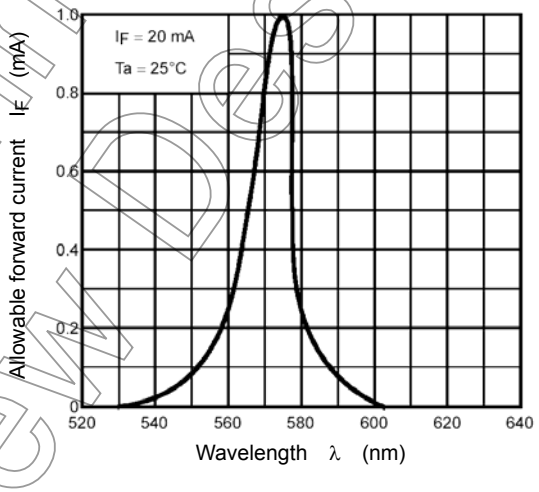
$I_V - I_F$



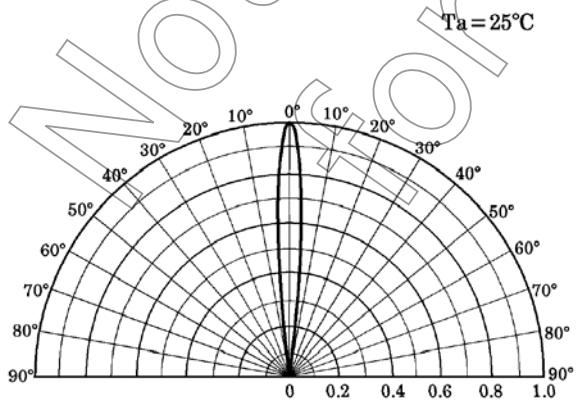
$I_V - Tc$



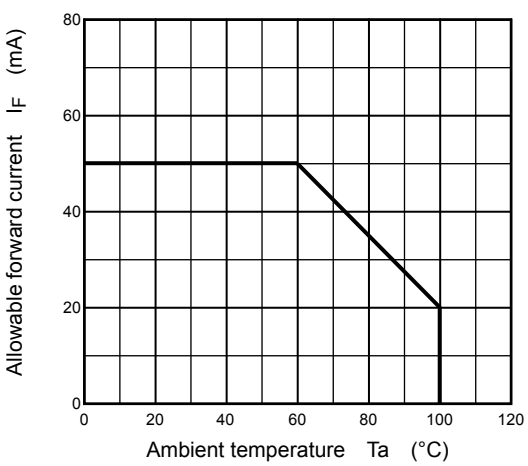
Relative luminous intensity – Wavelength



Radiation pattern

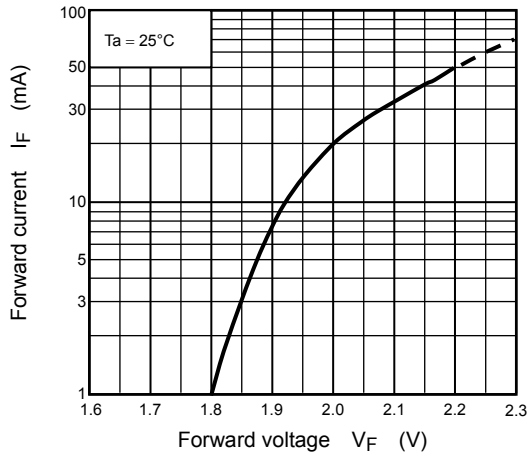


$I_F - Ta$

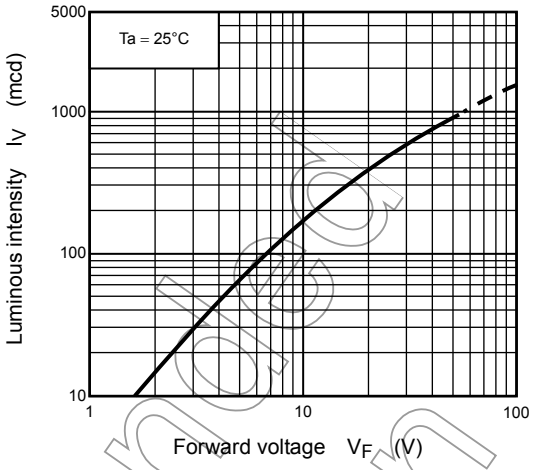


TLFGE33CP(F)

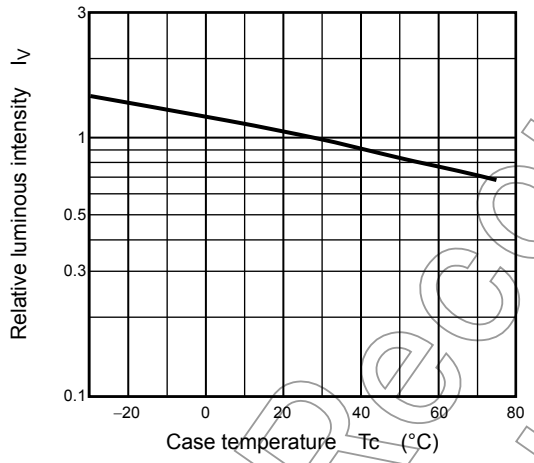
$I_F - V_F$



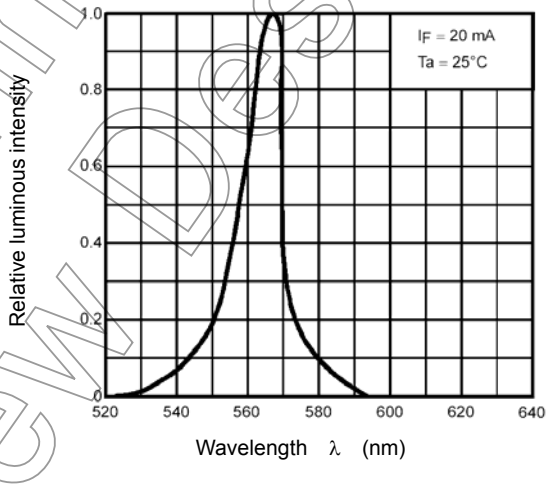
$I_V - I_F$



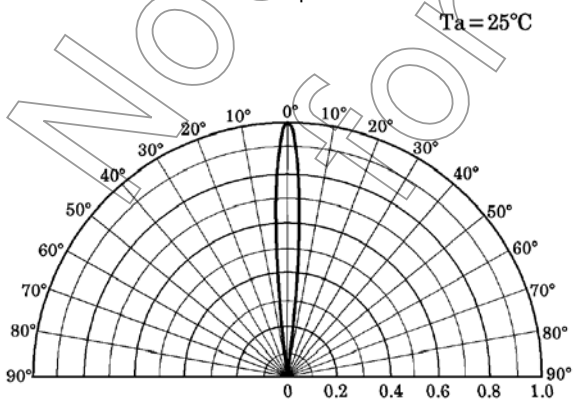
$I_V - Tc$



Relative luminous intensity – Wavelength



Radiation pattern



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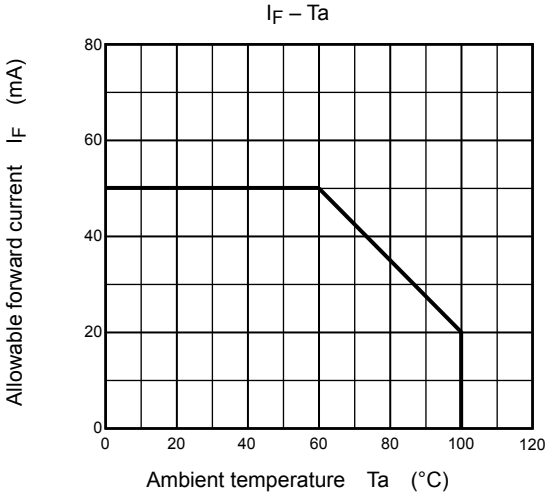

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