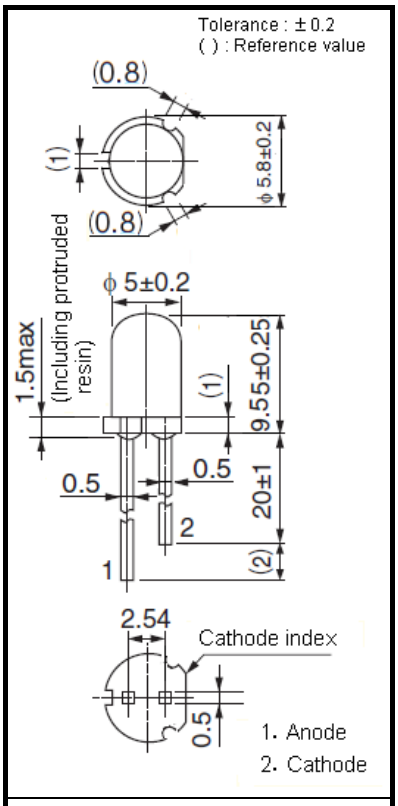
TOSHIBA InGaAℓP LED

TLPGE19TP(F),TLFGE19TP(F),TLGE19TP(F),TLPYE19TP(F)

Panel Circuit Indicator

Unit: mm



JEDEC	—
JEITA	—
TOSHIBA	4-5AM2

Weight: 0.31 g (typ.)

- φ 5mm package
- InGaAℓP technology
- Transparent lens
- Lineup: 3 colors (pure green, green, pure yellow)
- High intensity light emission
- Excellent low current light output
- Applications: Various types of information panels, backlightings, etc.
- Stopper lead type is also available
  TLPGE19T(F), TLFGE19T(F), TLGE19T(F), TLPYE19T(F)

Lineup

Product Name	Color	Material
TLPGE19TP(F)	Pure Green	InGaAℓP
TLFGE19TP(F)	Green	
TLGE19TP(F)	Green	
TLPYE19TP(F)	Pure Yellow	

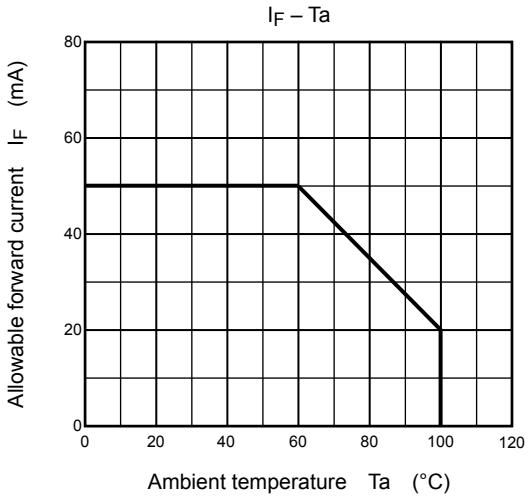
Marktech Optoelectronics
For part availability and ordering information please call Toll Free: 800.984.5337
Website: www.marktechopto.com | Email: info@marktechopto.com

Absolute Maximum Ratings (Ta = 25°C)

Product Name	Forward Current I_F (mA)(Note1)	Reverse Voltage V_R (V)	Power Dissipation P_D (mW)	Operating Temperature T_{opr} (°C)	Storage Temperature T_{stg} (°C)
TLPGE19TP(F)	50	4	120	−40 to 100	−40 to 120
TLFGE19TP(F)	50	4	120		
TLGE19TP(F)	50	4	120		
TLPYE19TP(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).

Note1: Forward current derating



Electrical and Optical Characteristics (Ta = 25°C)

Product Name	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	Min	Typ.	I_F	Max	I_F
	Min	Typ.	Max	Typ.	Typ.									
TLPGE19TP(F)	—	558	564	562	14	20	153	500	20	2.1	2.4	20	50	4
TLFGE19TP(F)	559	565	570	568	15	20	272	800	20	2.0	2.4	20	50	4
TLGE19TP(F)	565	571	576	574	17	20	476	1300	20	2.0	2.4	20	50	4
TLPYE19TP(F)	574	580	586	583	14	20	476	2000	20	2.0	2.4	20	50	4
Unit	nm					mA	mcd			V		mA	μA	V

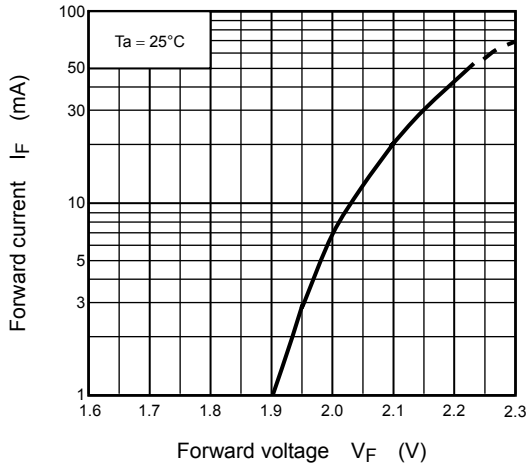
Precautions

Please be careful of the following:

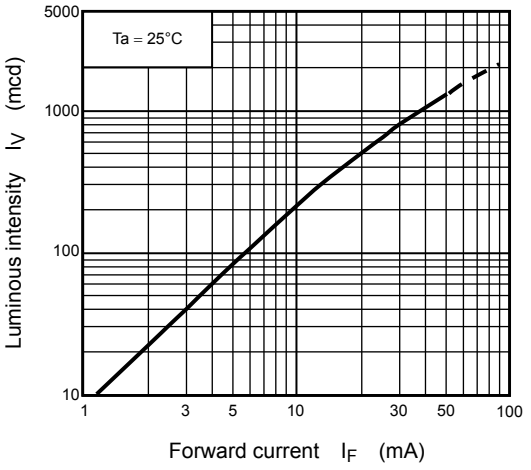
- Soldering temperature: 260°C max, soldering time: 3 s max
  (soldering portion of lead: up to 1.6 mm from the body of the device)
- If the lead is formed, the lead should be formed up to 1.6 mm from the body of the device without forming stress to the resin. Soldering should be performed after lead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

TLPGE19TP(F)

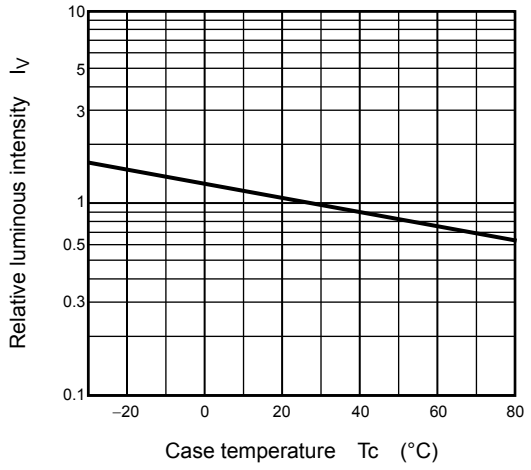
$I_F - V_F$



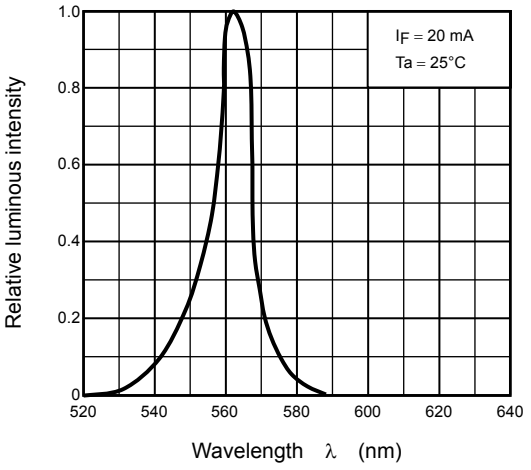
$I_V - I_F$



$I_V - Tc$

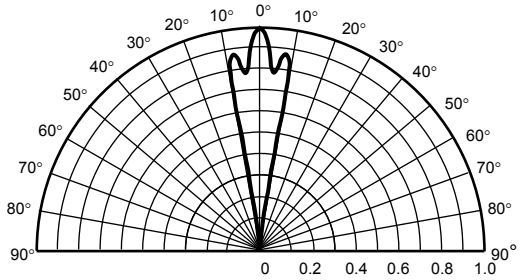


Relative luminous intensity – Wavelength



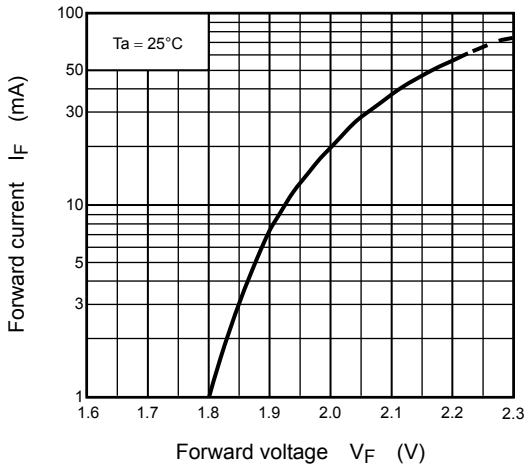
Radiation pattern

Ta = 25°C

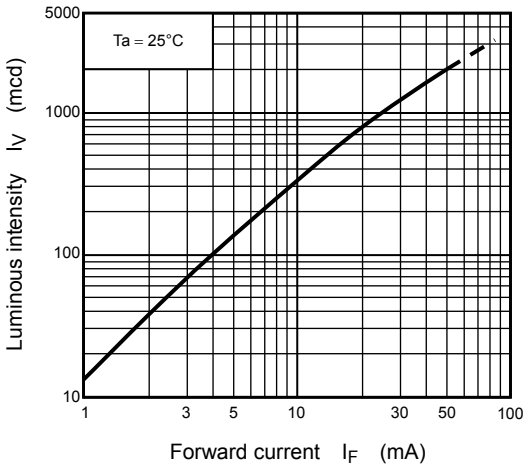


TLFGE19TP(F)

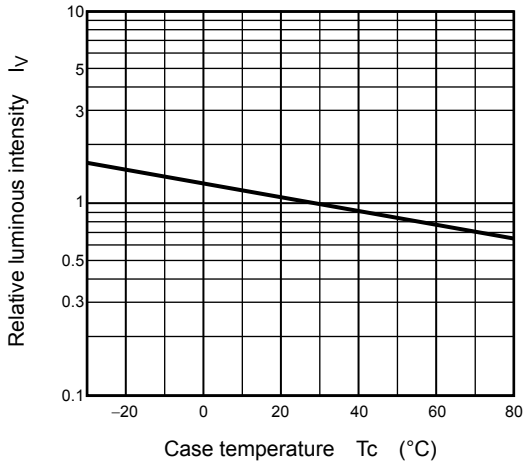
$I_F - V_F$



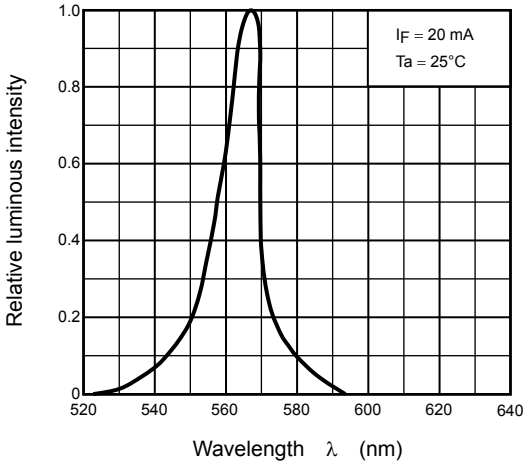
$I_V - I_F$



$I_V - Tc$

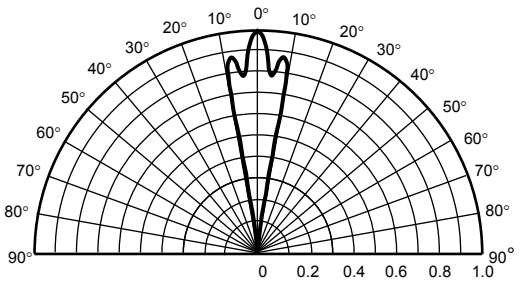


Relative luminous intensity – Wavelength



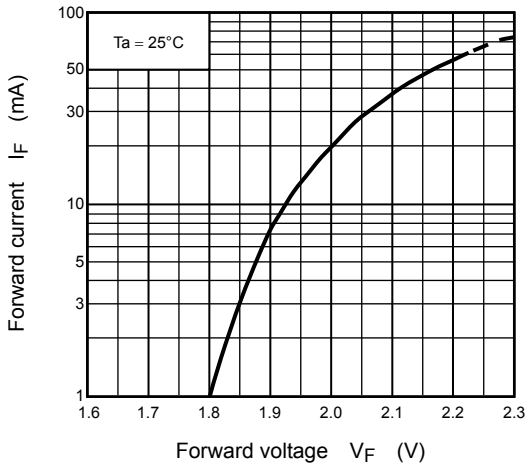
Radiation pattern

Ta = 25°C

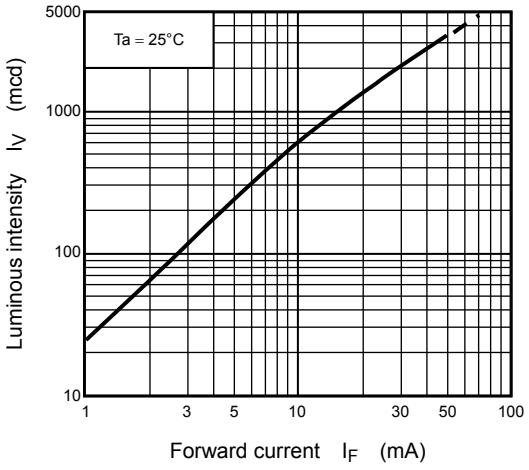


TLGE19TP(F)

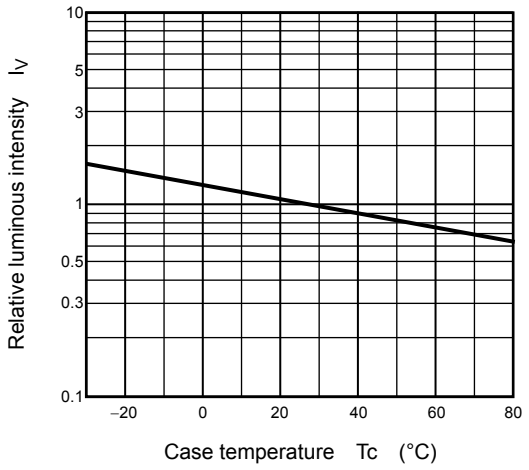
$I_F - V_F$



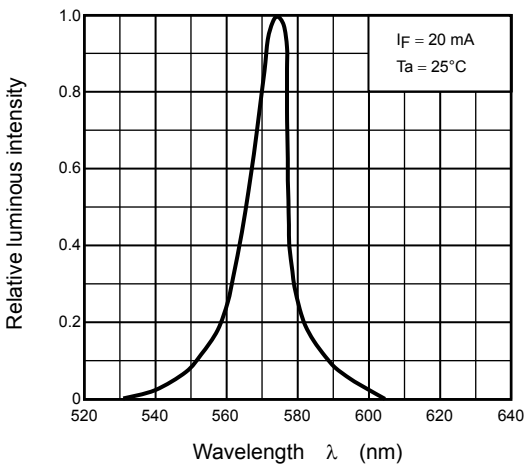
$I_V - I_F$



$I_V - Tc$

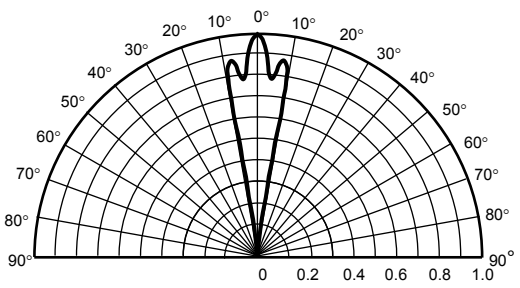


Relative luminous intensity – Wavelength



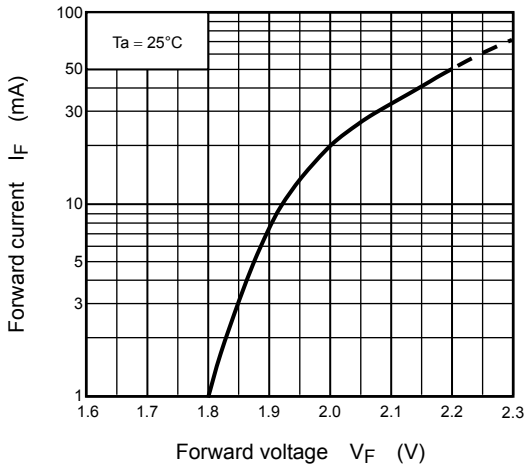
Radiation pattern

Ta = 25°C

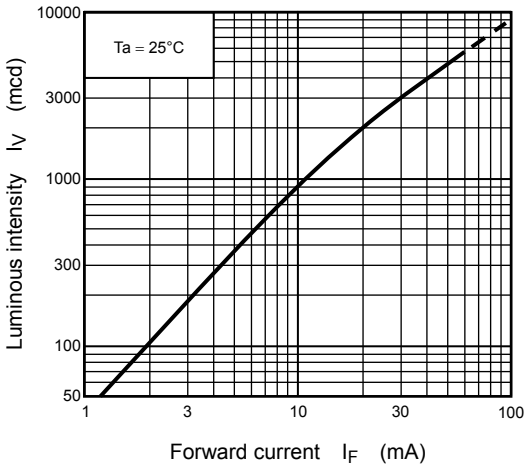


TLPYE19TP(F)

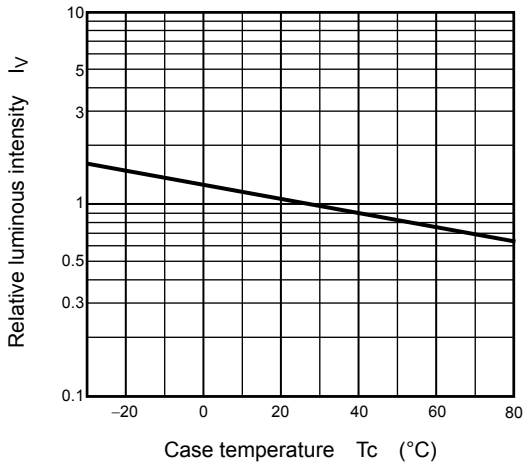
$I_F - V_F$



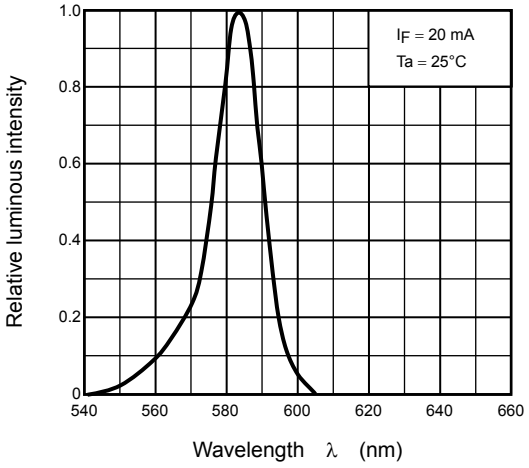
$I_V - I_F$



$I_V - Tc$

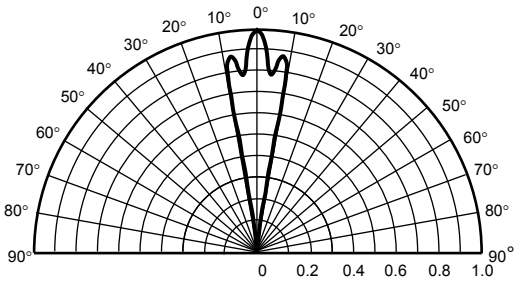


Relative luminous intensity – Wavelength



Radiation pattern

Ta = 25°C



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