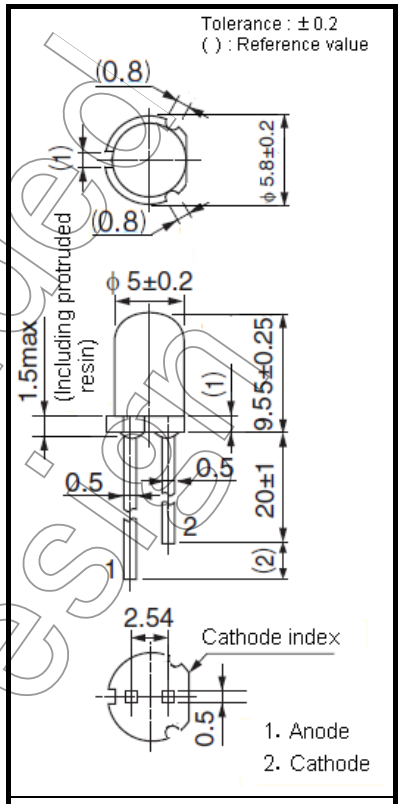
TOSHIBA InGaAℓP LED

TLFGE19CP(F)

○ Panel Circuit Indicator

Unit: mm

- ϕ 5mm package
- InGaAℓP technology
- Colored, transparent lens
- Color: Green
- Applications: Various types of information panels, indicators for amusement equipment and panel backlighting illumination sources.
- Stopper lead type is also available.
  TLFGE19C(F)



JEDEC	—
JEITA	—
TOSHIBA	4-5AM2

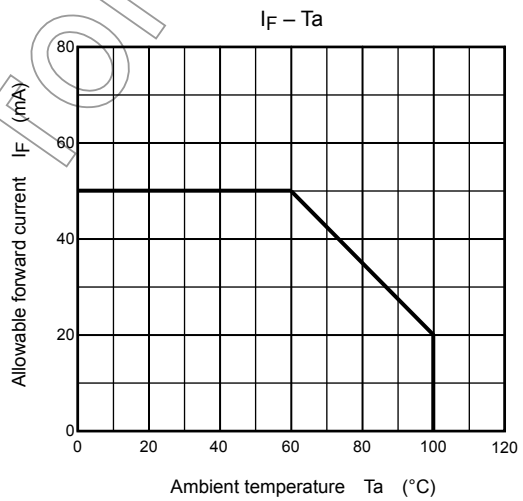
Weight: 0. 31g(typ.)

Absolute Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Forward Current (Note1)	I_F	50	mA
Reverse Voltage	V_R	4	V
Power Dissipation	P_D	120	mW
Operating Temperature	T_{opr}	−40 to 100	°C
Storage Temperature	T_{stg}	−40 to 120	°C

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)

Characteristics	Symbol	Test condition	Min	Typ.	Max	Unit
Forward Voltage	V_F	I_F = 20 mA	—	2.0	2.4	V
Reverse Current	I_R	V_R = 4 V	—	—	50	μA
Luminous Intensity	I_V	I_F = 20 mA (Note)	272	800	—	mcd
Peak Wavelength	λ_P	I_F = 20 mA	—	568	—	nm
Spectral Line Half Width	Δλ	I_F = 20 mA	—	15	—	nm
Dominant Wavelength	λ_d	I_F = 20 mA (Note)	559	565	570	nm

Note: Lamps are classified into the following ranks according to their luminous intensity.

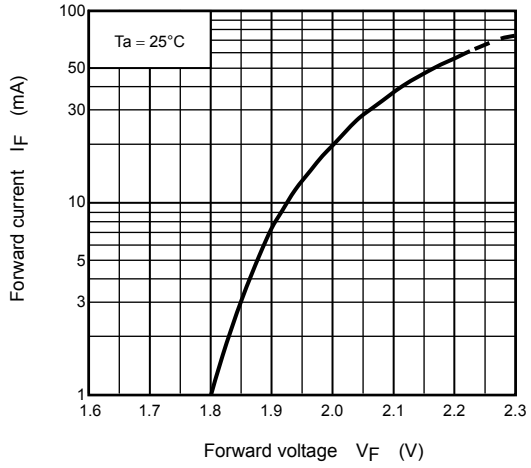
Each packing box includes single Luminous Intensity class.
I_V Q: 272 - 736 mcd, R: 476 - 1290 mcd, S:850 mcd -
λ_d 1: 559 - 567 nm, 2: 563 - 570 nm

Precautions

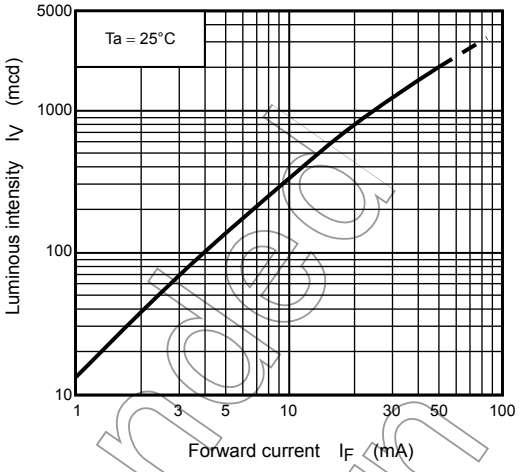
Please be careful of the following:

- 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 photo detector is located near the LED lamp, please ensure that it will not be affected by this IR light.

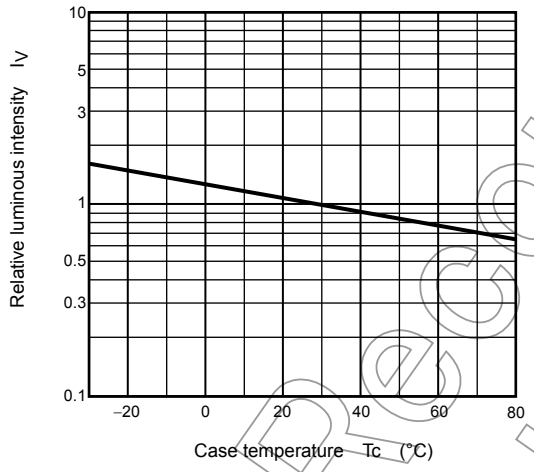
$I_F - V_F$



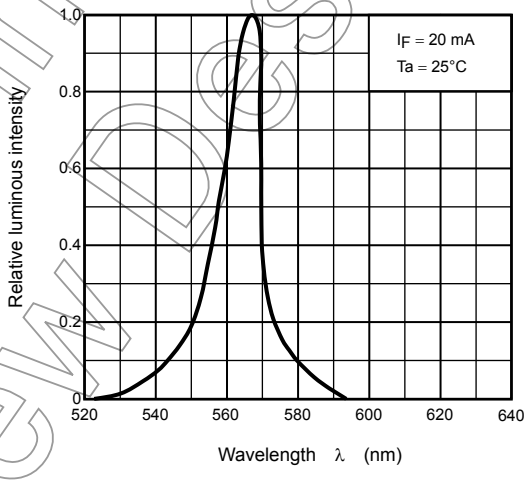
$I_V - I_F$



$I_V - Tc$

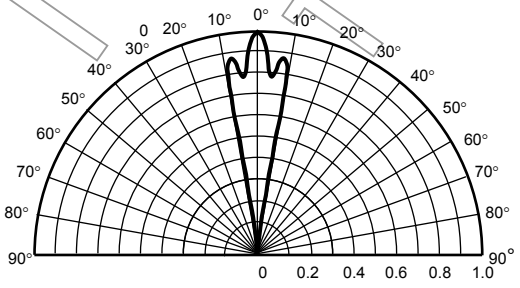


Relative luminous intensity – Wavelength



Radiation pattern

Ta = 25°C



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