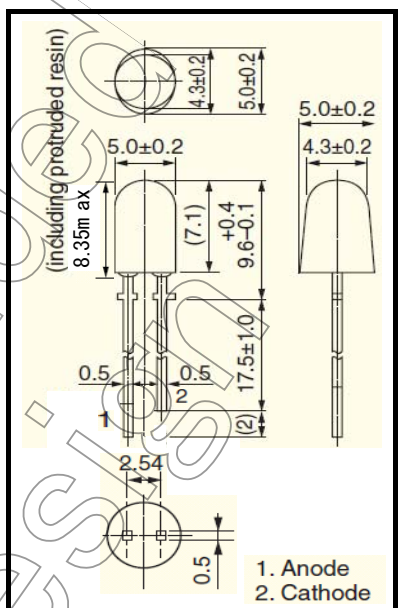
TOSHIBA InGaAℓP LED

TLYH28C(F),TLGH28C(F)

Unit: mm

○ Panel Circuit Indicator

- 4.3 mm × 5 mm package
- InGaAℓP technology
- Colored transparent lens
- Emitted colors: yellow, green
- High optical output power at low currents
- High luminous intensity
- Applications: message boards, etc.



JEDEC	—
JEITA	—
TOSHIBA	4-5AQ1

Weight: 0.25 g (typ.)

Color and Material

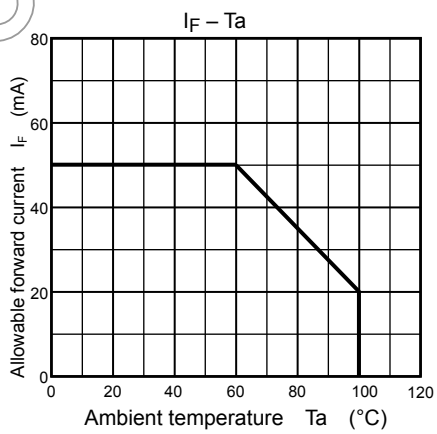
Part Number	Color	Material
TLYH28C(F)	Yellow	InGaAℓP
TLGH28C(F)	Green	

Absolute Maximum Ratings (Ta = 25°C)

Part Number	Forward Current I_F (mA) (Note 1)	Reverse Voltage V_R (V)	Power Dissipation P_D (mW)	Operating Temperature T_{opr} (°C)	Storage Temperature T_{stg} (°C)
TLYH28C(F)	50	4	120	−40 to 100	−40 to 120
TLGH28C(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)

Part Number	Typ. Emission Wavelength (Note 2)				Luminous Intensity I_V (Note 2)			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
TLYH28C(F)	587	590	17	20	272	750	20	2.0	2.4	20	50	4
TLGH28C(F)	571	574	13	20	47.6	170	20	2.05	2.4	20	50	4
Unit	nm			mA	mcd		mA	V		mA	μA	V

Note 2: LED lamps are classified into the following ranks according to Iv and λd, and packed in boxes by each rank.

TLYH28C(F):

I_V rank Q: 272 − 736 mcd, R: 476 − 1290 mcd, S: 850 mcd −

λ_d rank 1: 581 − 588 nm, 2: 585 − 592 nm, 3: 589 − 595 nm

TLGH28C(F):

I_V rank M: 47.6 − 129 mcd, N: 85 − 230 mcd, P: 153 mcd −

λ_d rank 1: 565 − 573 nm, 2: 569 − 576 nm

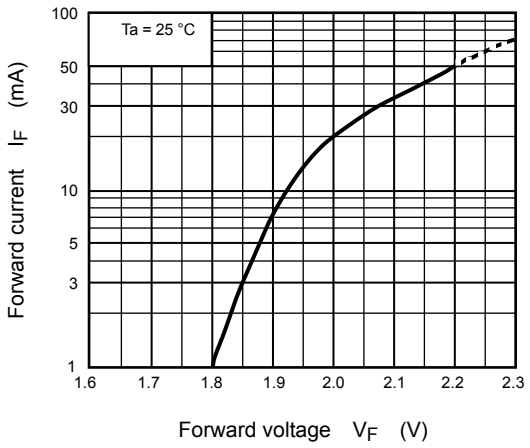
Precautions

Please be careful of the following

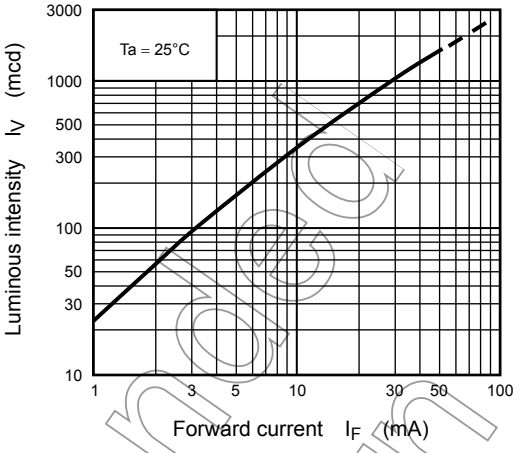
- Soldering temperature: 260°C max, soldering time: 3 seconds max
  (soldering portion of lead: below the lead stopper of the device)
- If the lead is formed, the lead should be formed up to below the lead stopper of the device without forming stress to the resin. Soldering should be performed after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

TLYH28C(F)

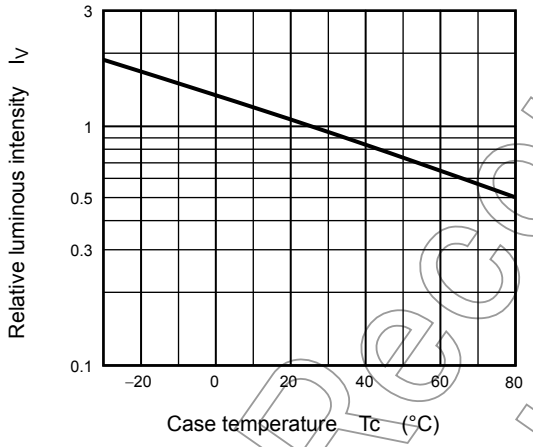
$I_F - V_F$



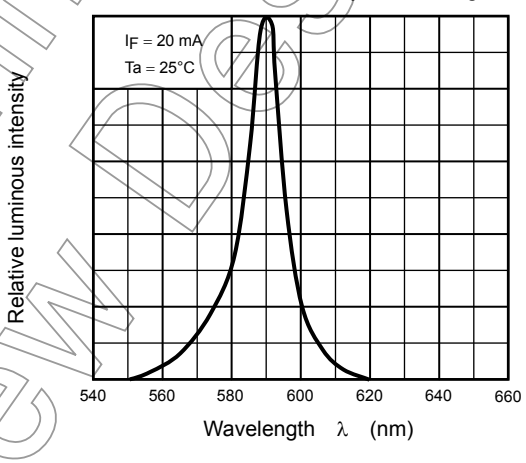
$I_V - I_F$



$I_V - Tc$

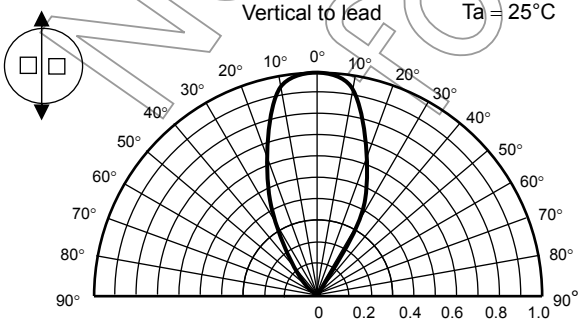


Relative luminous intensity – Wavelength

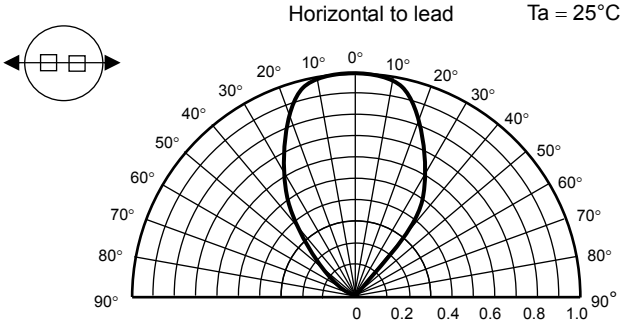


Radiation pattern

Vertical to lead Ta = 25°C

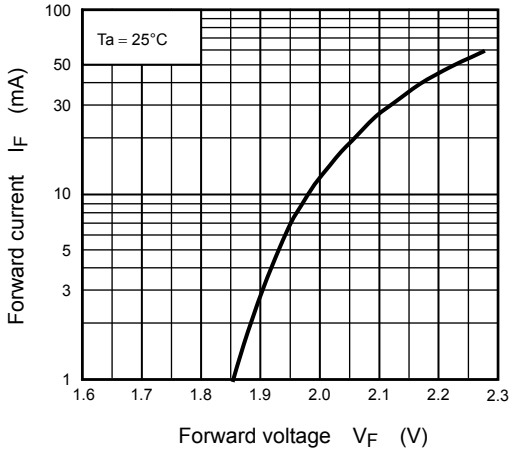


Horizontal to lead Ta = 25°C

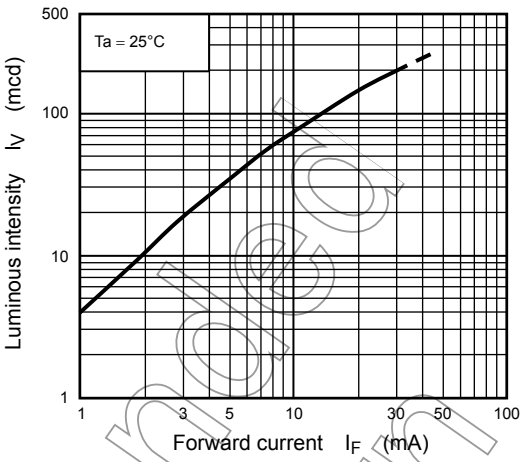


TLGH28C(F)

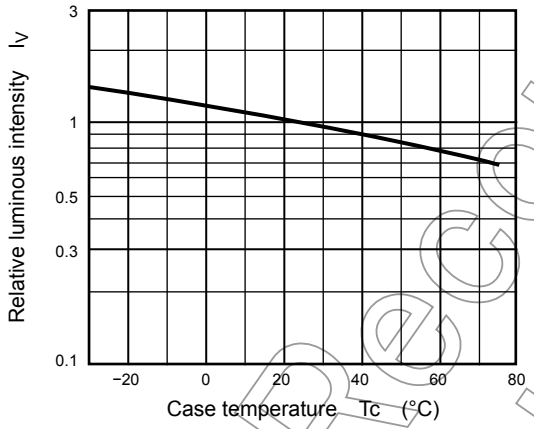
$I_F - V_F$



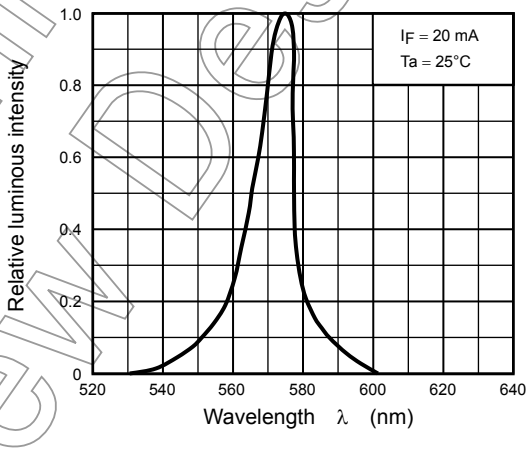
$I_V - I_F$



$I_V - Tc$

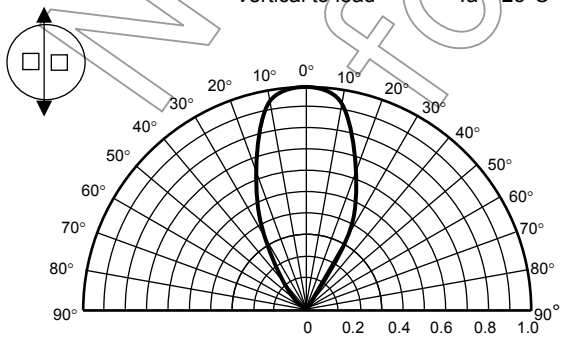


Relative luminous intensity – Wavelength

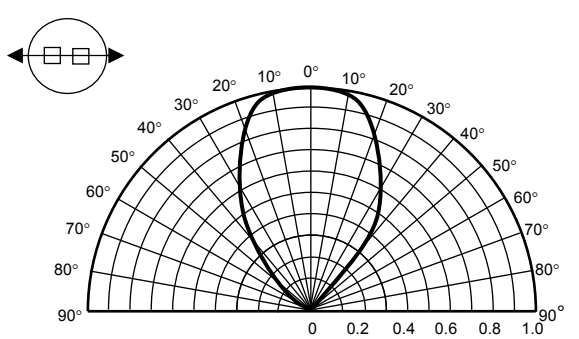


Radiation pattern

Vertical to lead Ta = 25°C



Horizontal to lead Ta = 25°C



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