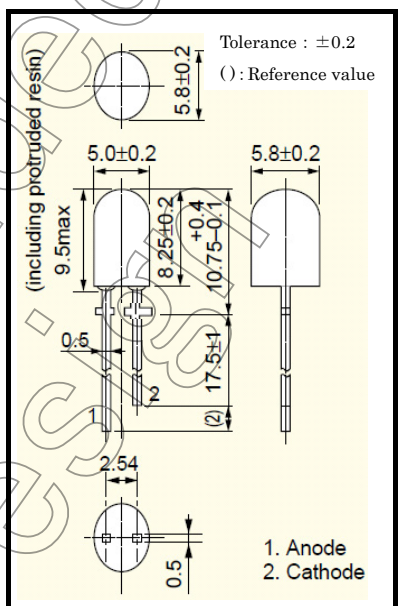
TOSHIBA LED Lamp InGaAℓP Green Light Emission

TLGU27C(F)

Panel Circuit Indicator

- Elliptical lens: Colored transparent lens
- InGaAℓP technology
- Wide radiation
- Low drive current, high intensity green light emission
- Plastic molded colorless clear lens provides for high contrast of on−off ratio.
- Fast response time, capable of pulse operation.
- Applications: Outdoor message signbords, full color panel, backlight

Unit in mm



JEDEC	—
JEITA	—
TOSHIBA	4-5AP1

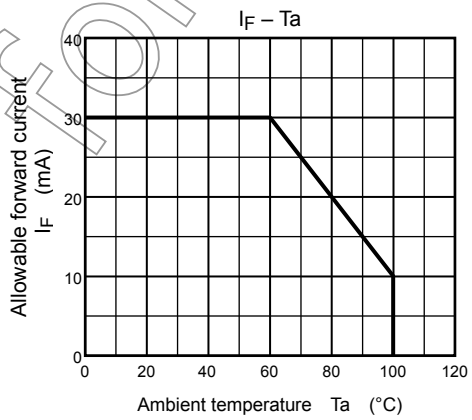
Weight: 0.3g(Typ.)

Absolute Maximum Ratings (Ta = 25°C)

Characteristic	Symbol	Rating	Unit
Forward current	I_F	30	mA
Reverse voltage	V_R	4	V
Power dissipation	P_D	72	mW
Operating temperature range	T_{opr}	−40 to 100	°C
Storage temperature range	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)

Characteristic	Symbol	Test Condition	Min	Typ.	Max	Unit
Forward voltage	V_F	I_F = 20mA	1.8	2.1	2.4	V
Reverse current	I_R	V_R = 4V	—	—	50	μA
Luminous intensity	I_V	I_F = 20mA(Note2)	47.6	180	—	mcd
Peak emission wavelength	λ_p	I_F = 20mA	—	574	—	nm
Spectral line half width	Δλ	I_F = 20mA	—	17	—	nm
Dominant wavelength	λ_d	I_F = 20mA (Note2)	565	571	576	nm

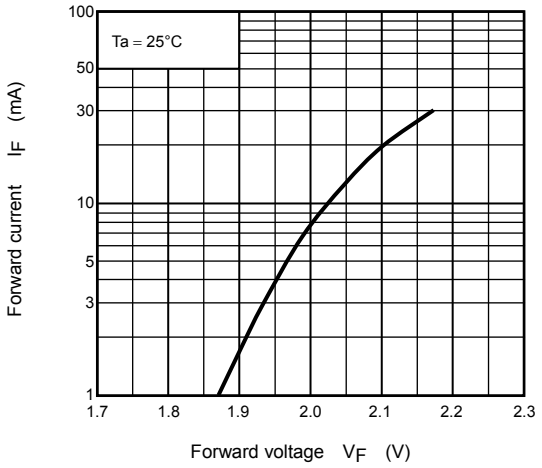
(Note2):Lamps are classified into the following ranks according to their luminous intensity and dominant wavelength.
Each packing box includes single luminous Intensity class and single dominant wavelength class.
I_V _ rank M:47.6－129 mcd, N: 85－230mcd, P: 153mcd－
λ_d _rank 1: 565－573nm, 2: 569－576nm

Precaution

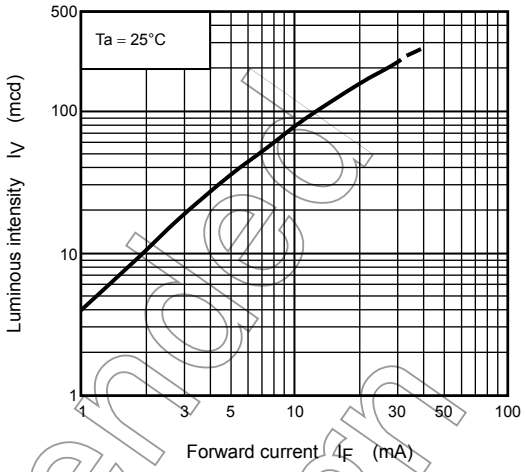
Please be careful of the following

- Soldering temperature: 260°C max soldering time: 3s 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.

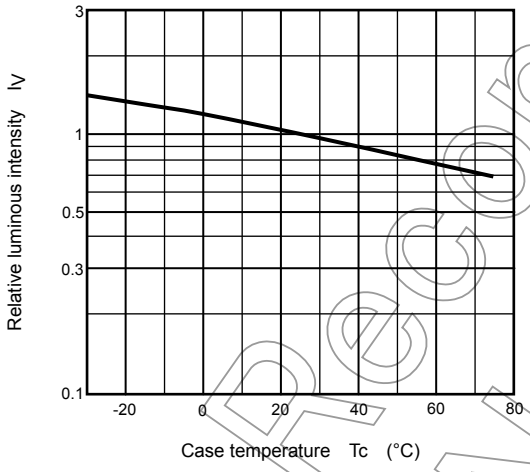
$I_F - V_F$



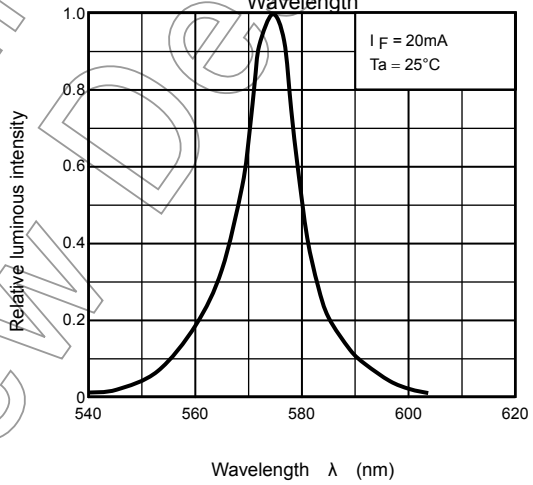
$I_V - I_F$



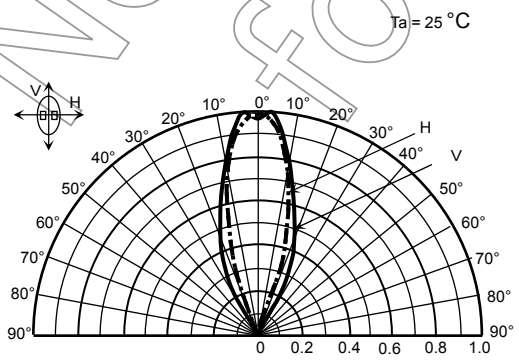
$I_V - Tc$



Relative Luminous Intensity-Wavelength



Radiation Pattern



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