

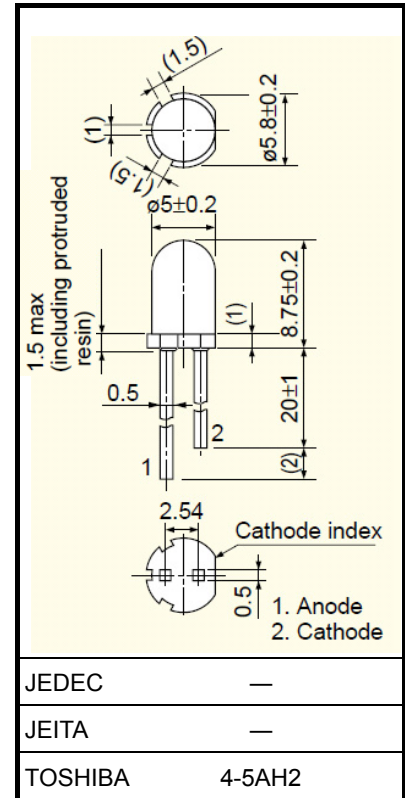
TOSHIBA LED Lamp InGaAlP Yellow Light Emission

TLYU172P(F)

Panel Circuit Indicator

- Lead(Pb)-free products (lead: Sn-Ag-Cu)
- 5mm package
- InGaAlP yellow LED
- Colored transparent lens
- Low drive current, high intensity yellow light emission
- All plastic molded lens, provides an excellent on-off contrast ratio.
- Fast response time, capable of pulse operation.
- Without stand-offs

Unit in mm



Weight: 0.31 g(Typ.)

Absolute Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Forward current (DC)	I _F	30	mA
Reverse voltage	V _R	4	V
Power dissipation	P _D	75	mW
Operating temperature range	T _{opr}	-30~85	°C
Storage temperature range	T _{stg}	-40~120	°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).

Electrical Characteristics (Ta = 25°C)

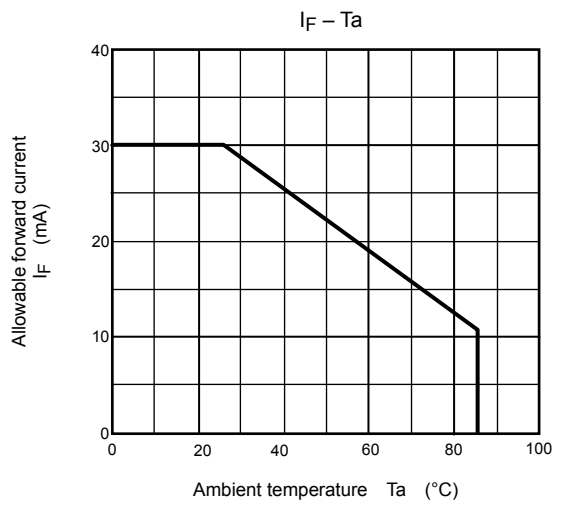
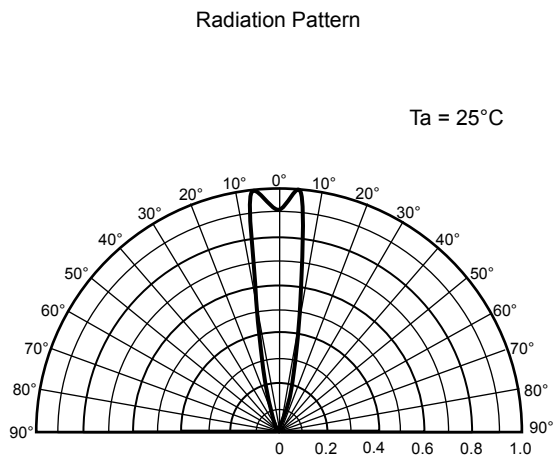
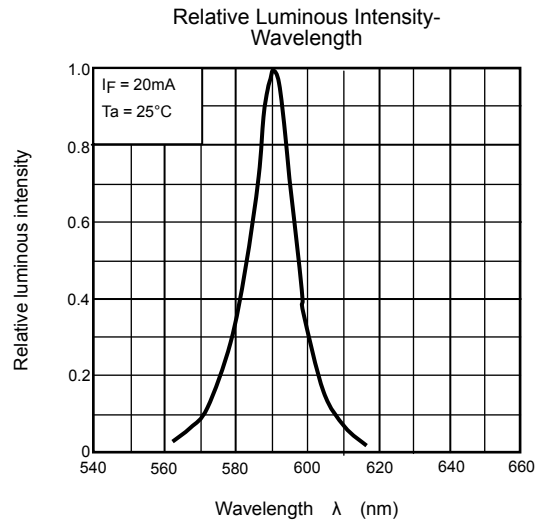
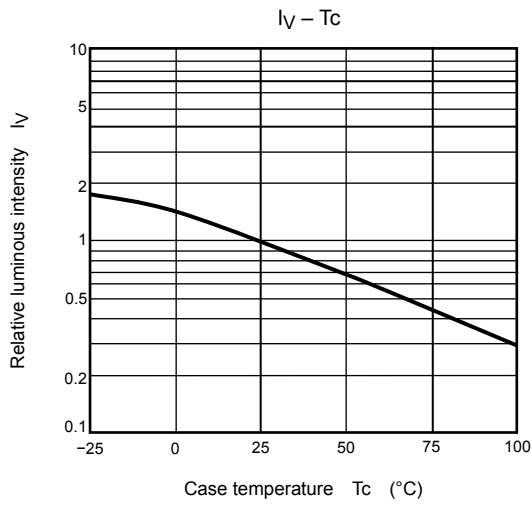
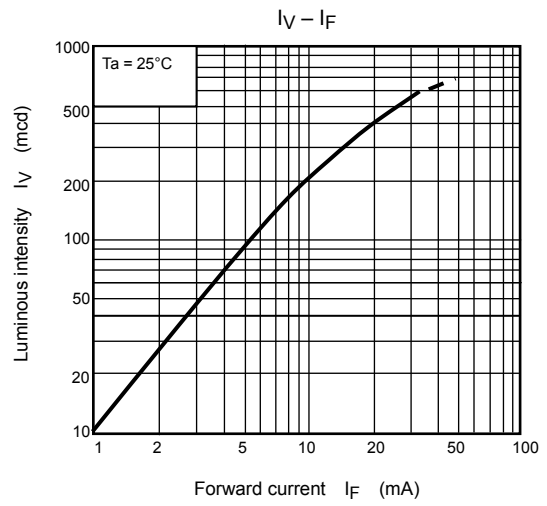
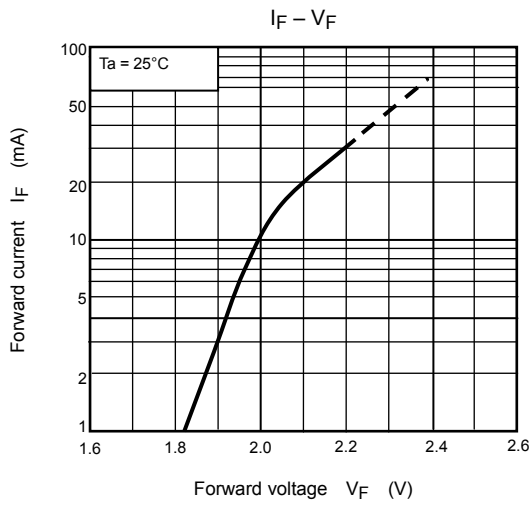
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Forward voltage	V_F	$I_F = 20\text{mA}$	—	2.1	2.5	V
Reverse current	I_R	$V_R = 4\text{V}$	—	—	50	μA
Luminous intensity	I_V	$I_F = 20\text{mA}$ (Note)	153	400	—	mcd
Peak emission wavelength	λ_P	$I_F = 20\text{mA}$	—	(590)	—	nm
Spectral line half width	$\Delta\lambda$	$I_F = 20\text{mA}$	—	13	—	nm
Dominant wavelength	λ_d	$I_F = 20\text{mA}$	—	587	—	nm

(Note): Lamps are classified into the following ranks according to their luminous intensity, and packed in boxes by each rank. P: 153–414 mcd, Q: 272–736 mcd, R: 476 mcd–

Precaution

Please be careful of the followings

- Soldering temperature: 260°C max Soldering time: 3s max
(Soldering portion of lead: Up to 1.6mm from the body of the device)
- If the lead is formed, the lead should be formed up to 1.6mm 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.



RESTRICTIONS ON PRODUCT USE

20070701-EN

- The information contained herein is subject to change without notice.
- TOSHIBA is continually working to improve the quality and reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to comply with the standards of safety in making a safe design for the entire system, and to avoid situations in which a malfunction or failure of such TOSHIBA products could cause loss of human life, bodily injury or damage to property.
In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent TOSHIBA products specifications. Also, please keep in mind the precautions and conditions set forth in the "Handling Guide for Semiconductor Devices," or "TOSHIBA Semiconductor Reliability Handbook" etc.
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