

TOSHIBA InGaAlP LED

TLFGE19CP(F)

Unit: mm

○ Panel Circuit Indicator

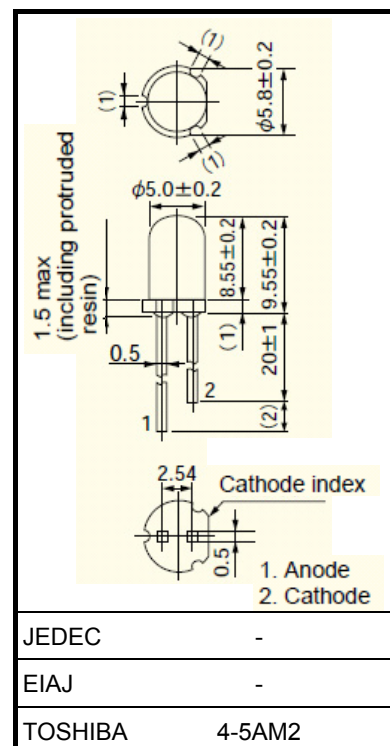
- Pb(Lead) free (Sn-Ag-Cu)
- 5mm package
- InGaAlP
- Colored, transparent lens
- Color: Green
- Applications: Various types of information panels, indicators for amusement equipment and panel backlighting illumination sources.
- Stopper lead type is also available.
TLFGE19C(F)

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Absolute Maximum Ratings (Ta = 25°C)

CHARACTERISTICS	SYMBOL	RATING	UNIT
FORWARD CURRENT	I_F	50	mA
REVERSE VOLTAGE	V_R	4	V
POWER DISSIPATION	P_D	120	mW
OPERATING TEMPERATURE	T_{opr}	-40~100	°C
STORAGE TEMPERATURE	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).



Weight: 0.31g(Typ.)

Electrical and Optical Characteristics (Ta = 25°C)

CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
FORWARD VOLTAGE	V_F	$I_F=20\text{mA}$	—	2.0	2.4	V
REVERSE CURRENT	I_R	$V_R=4\text{V}$	—	—	50	μA
LUMINOUS INTENSITY	I_V	$I_F=20\text{mA}$ (Note)	272	800	—	mcd
PEAK WAVELENGTH	λ_P	$I_F=20\text{mA}$	—	(568)	—	nm
SPECTRAL LINE HALF WIDTH	$\Delta\lambda$	$I_F=20\text{mA}$	—	15	—	nm
DOMINANT WAVELENGTH	λ_d	$I_F=20\text{mA}$ (Note)	559	565	570	nm

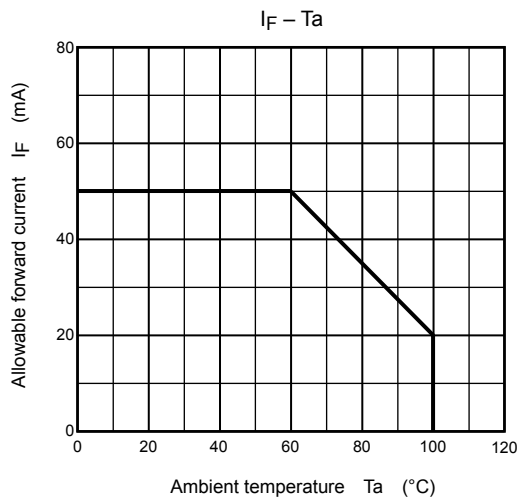
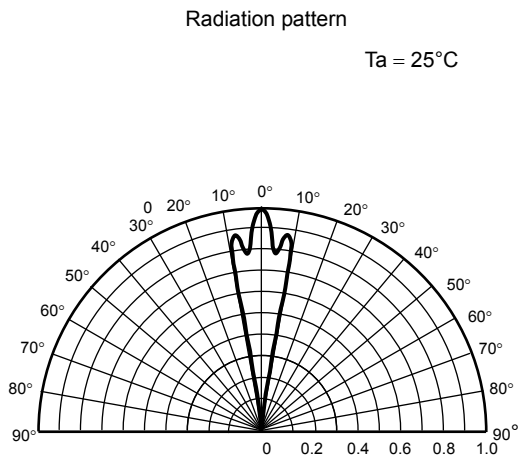
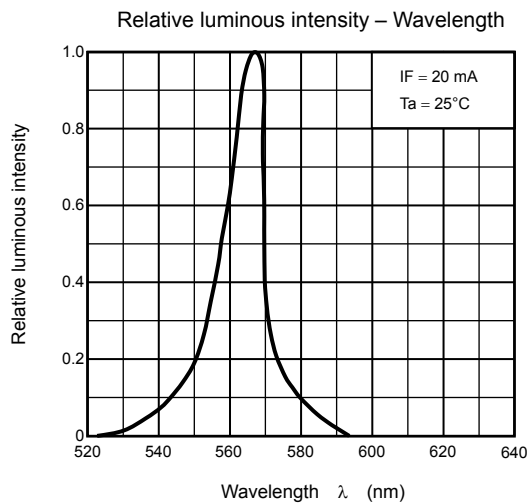
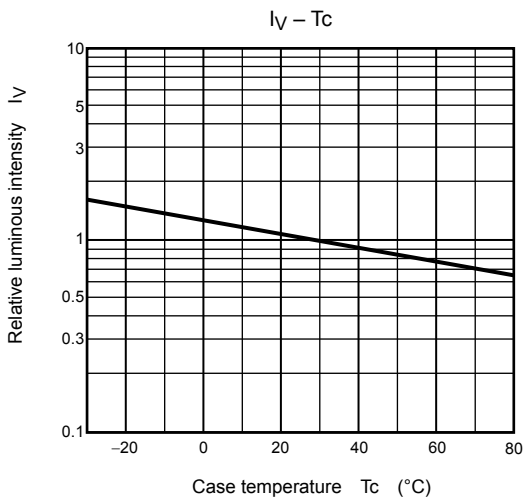
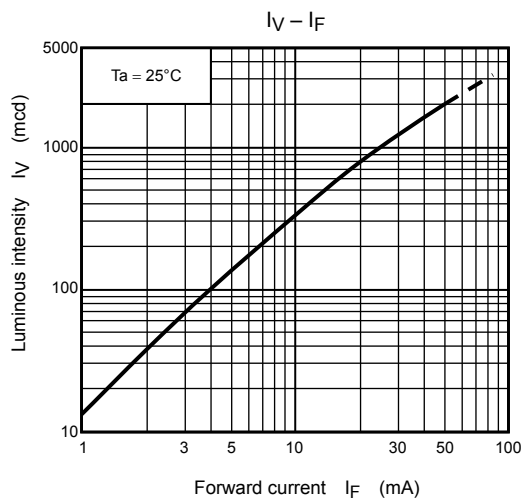
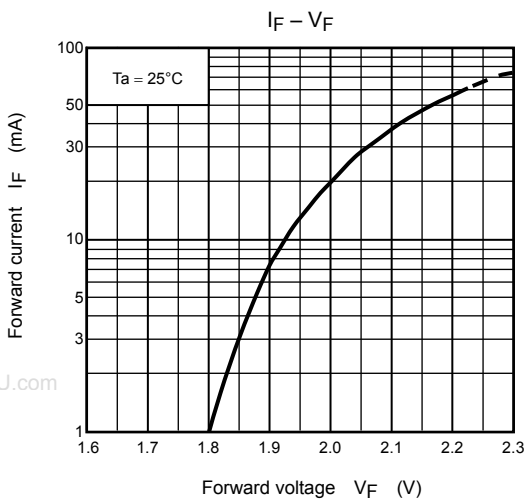
Note: Lamps are classified into the following ranks according to their luminous intensity. Each packing box includes single Luminous Intensity class.

I_V : Q:272-736mcd, R:476-1290mcd, S:850mcd - , λ_d 1: 559-567nm, 2: 563-570nm

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.



RESTRICTIONS ON PRODUCT USE

20070701-EN GENERAL

- 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.
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