TOSHIBA InGaAℓP LED

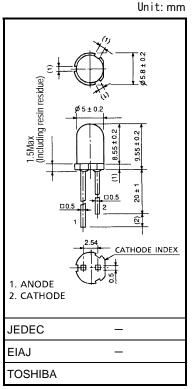
# TLFGE19CP(F)

### O Panel Circuit Indicator

- Pb(Lead) free (Sn-Ag-Cu)
- Φ5 mm wide viewing angle
- 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)

## Maximum Ratings (Ta = 25°C)

CHARACTERISTICS	SYMBOL	RATING	UNIT
FORWARD CURRENT	IF	50	mA
REVERSE VOLTAGE	$V_{R}$	4	V
POWER DISSIPATION	P <sub>D</sub>	120	mW
OPERATING TEMPERATURE	T <sub>opr</sub>	-40~100	°C
STORAGE TEMPERATURE	T <sub>stg</sub>	-40~120	°C



Weight: 0. 31g

# ELECTRICAL AND OPTICAL CHARACTERISTICS (Ta = 25°C)

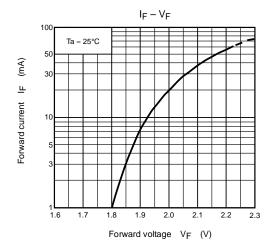
CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
FORWARD VOLTAGE	$V_{F}$	I <sub>F</sub> =20mA	_	2.0	2.4	V
REVERSE CURRENT	I <sub>R</sub>	V <sub>R</sub> =4V	_	_	50	μΑ
LUMINOUS INTENSITY	ly	I <sub>F</sub> =20mA(Note)	272	800	_	mcd
PEAK WAVELENGTH	λ <sub>P</sub>	I <sub>F</sub> =20mA	_	(568)	_	nm
SPECTRAL LINE HALF WIDTH	Δλ	I <sub>F</sub> =20mA	_	15	_	nm
DOMINANT WAVELENGTH	$\lambda_d$	I <sub>F</sub> =20mA	_	565	_	nm

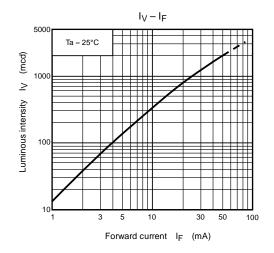
(Note): Lamps are classified into the following ranks according to their luminous intensity. Each packing box includes single Luminous Intensity class.

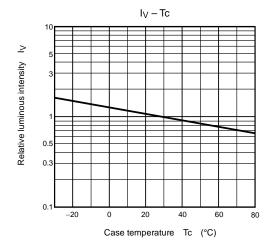
Q:272-736mcd, R:476-1290mcd, S:850-2300mcd.

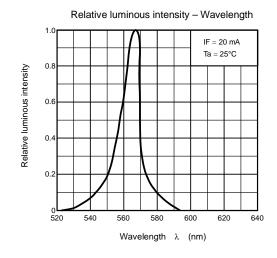
#### **Precautions**

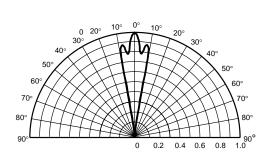
- ullet These LED lamps made of InGaA $\ell P$  will also emit some IR light. If a photodetector is located near an LED lamp, please ensure that it will not be affected by this IR light.
- Manual soldering should be performed within 3 s at a maximum temperature of 300°C or 5 s at a maximum temperature of 260°C.
- When forming the leads, bend each lead without applying any forming stress. Soldering must be performed
  after the leads have been formed.







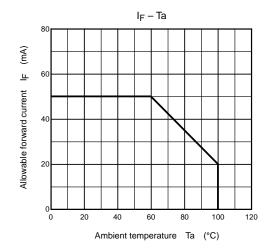




Radiation pattern

 $Ta = 25^{\circ}C$ 

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