### TOSHIBA InGaAlP LED

# TLOE50C(F)

## O Panel Circuit Indicator

- Lead(Pb)-free products (lead: Sn-Ag-Cu)
- Φ3.1 mm wide viewing angle
- InGaAℓP
- Emitted color: Orange
- Colored, Transparent lens
- Applications: Various types of information panels, indicators for amusement equipment and panel backlighting

illumination sources.

## Maximum Ratings (Ta = 25°C)

CHARACTERISTICS	SYMBOL	RATING	UNIT
FORWARD CURRENT	I <sub>F</sub>	50	mA
REVERSE VOLTAGE	V <sub>R</sub>	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

# Unit: mm (a) 3.8 ± 0.2 (b) 3.8 ± 0.2 (c) 3.8 ± 0.2 (d) 3.8 ± 0.2 (e) 3.7MAX (o.45) 0.45 (e) 1. Anode 2. Cathode JEDEC — EIAJ — TOSHIBA 4–3E1A

Weight: 0.14 g

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

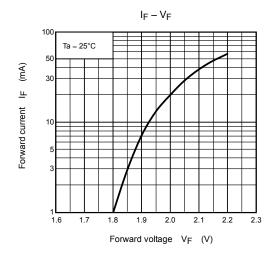
CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
FORWARD VOLTAGE	$V_{F}$	I <sub>F</sub> =20mA	_	2.0	2.4	V
REVERSE CURRENT	I <sub>R</sub>	V <sub>R</sub> =4V			50	μA
LUMINOUS INTENSITY	ly	I <sub>F</sub> =20mA(Note)	1530	7000	_	mcd
PEAK WAVELENGTH	λ <sub>P</sub>	I <sub>F</sub> =20mA		(612)	_	nm
SPECTRAL LINE HALF WIDTH	Δλ	I <sub>F</sub> =20mA		20	_	nm
DOMINANT WAVELENGTH	$\lambda_{d}$	I <sub>F</sub> =20mA	_	605	_	nm

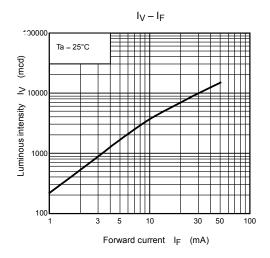
(Note): Lamps are classified into the following ranks according to their luminous intensity. Each packing box includes single Luminous Intensity class.

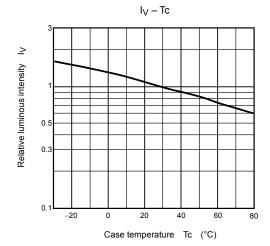
U:2720-7360mcd, V:4760-12900mcd, W:8500-23000mcd.

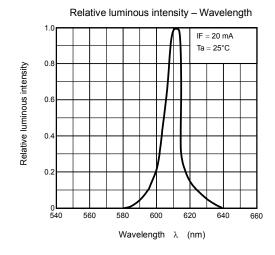
## **Precautions**

- These LED lamps made of InGaAℓP 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.



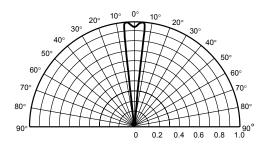


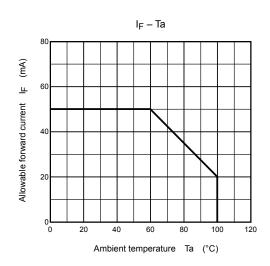




Radiation pattern

 $Ta = 25^{\circ}C$ 





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