TOSHIBA TLN119

TOSHIBA INFRARED LED GaAs INFRARED EMITTER

TLN119

PRINTER, FACSIMILE
FLOPPY DISK DRIVE
HOME ELECTRIC EQUIPMENT
OPTO-ELECTRONIC SWITCH

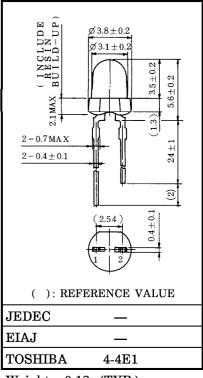
• φ3.1mm plastic package

• Radiant intensity: IE=5mW/sr(TYP.)

• Half value angle : $\theta_{\frac{1}{2}} = \pm 30^{\circ}$ (TYP.)

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Forward Current	${ m I_F}$	60	mA
Forward Current Derating (Ta>25°C)	$\Delta I_{\mathbf{F}}/^{\circ}\mathbf{C}$	-0.8	mA/°C
Pulse Forward Current (Note 1)	$I_{ extbf{FP}}$	600	mA
Reverse Voltage	$v_{ m R}$	5	V
Operating Temperature Range	$T_{ m opr}$	-25~85	°C
Storage Temperature Range	$\mathrm{T_{stg}}$	-30~100	°C
Soldering Temperature (3s)	T _{sol} (Note 2)	260	°C



Unit in mm

Weight: 0.12g (TYP.)

PIN CONNECTION

Note 1. Pulse Width $\leq 100 \mu$ s, Repetitive Frequency=100Hz

2. Soldering portion of lead: above 2mm from the body of the device.

$1 \circ \hspace{-5pt} \longrightarrow \hspace{-5pt} \hspace{-5pt} \circ 2$

- 1. ANODE
- 2. CATHODE

OPTO-ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Forward Voltage	$v_{ m R}$	$I_{\mathbf{F}} = 10 \text{mA}$	1.00	1.15	1.30	V
Reverse Current	$I_{\mathbf{R}}$	$V_R = 5V$	_	_	10	μ A
Radiant Intensity (Note 3)	${ m I_{ m E}}$	$I_{\mathbf{F}} = 20 \text{mA}$	2.5	5.0	10.0	mW/sr
Radiant Power	PO	$I_{\mathbf{F}} = 20 \text{mA}$	_	4.5	_	mW
Peak Emission Wavelength	$\lambda_{\mathbf{P}}$	$I_{\mathbf{F}} = 20 \text{mA}$	_	945	_	nm
Spectral Line Half Width	Δλ	$I_{\mathbf{F}} = 20 \text{mA}$	_	50	_	nm
Half Value Angle	$\theta_{\frac{1}{2}}$	$I_{\mathbf{F}} = 20 \text{mA}$	_	±30	_	0

Note 3. IE classification A : 2.5~6.0mW/sr, B : 4.2~10mW/sr

961001EAC2

TOSHIBA is continually working to improve the quality and the 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 observe standards of safety, and to avoid situations in which a malfunction or failure of a TOSHIBA product 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 products specifications. Also, please keep in mind the precautions and conditions set forth in the TOSHIBA Semiconductor Reliability Handbook.

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PRECAUTION

Please be careful of the followings.

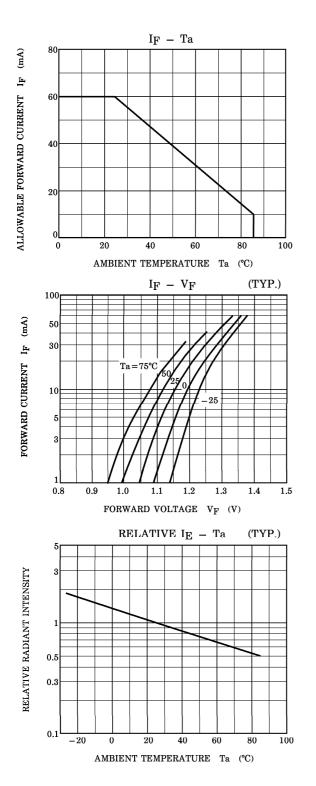
When the lead is formed, the lead shall be formed at a distance of 2mm from the body without leaving forming stress to the body of the device. Soldering shall be performed after lead forming.

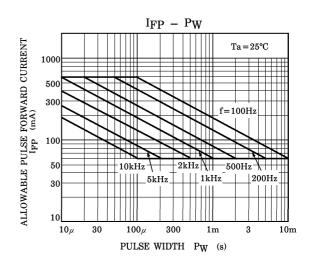
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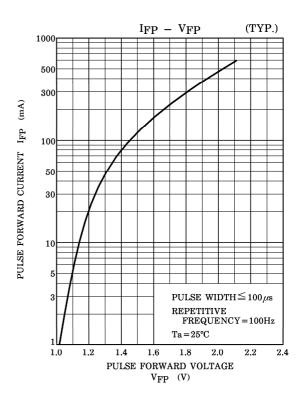
Gallium arsenide (GaAs) is a substance used in the products described in this document. GaAs dust and fumes are toxic. Do not break, cut or pulverize the product, or use chemicals to dissolve them. When disposing of the products, follow the appropriate regulations. Do not dispose of the products with other industrial waste or with domestic garbage.

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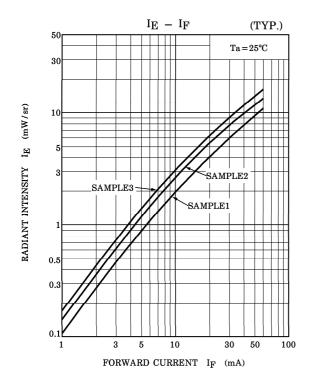
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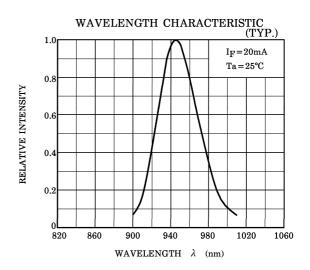






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RADIATION PATTERN (TYP.) $(Ta = 25^{\circ}C)$

