

TENTATIVE

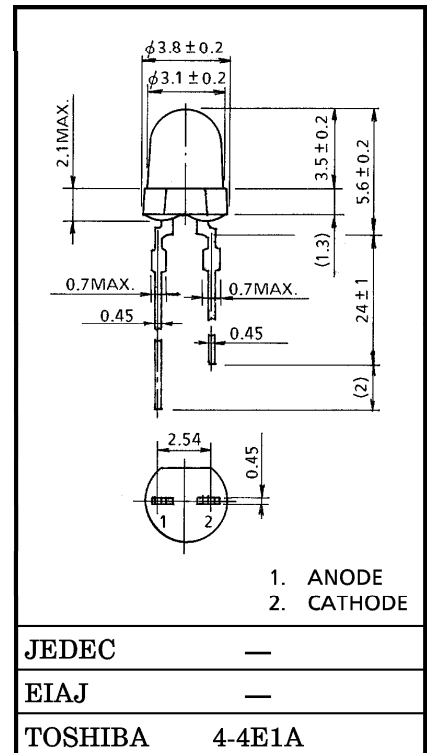
TOSHIBA InGaAlP LED

TLOU123, TLSU123, TLYU123

PANEL CIRCUIT INDICATOR

Unit in mm

- InGaAlP LED
- All Plastic Mold Type
- Colored Transparent Lens
- Lineup : 3 Colors (Red, Orange, Yellow)
- Suitable for High-Brightness and Less Electricity Consumption.
- All Plastic Molded Lens, Provides an Excellent ON-OFF Contrast Ratio.
- Applications : Backlight, Light for Decoration, Switches, Various Indicator, Personal Equipment



LINEUP

PRODUCT	COLOR	MATERIAL
TLOU123	ORANGE	InGaAlP
TLSU123	RED	InGaAlP
TLYU123	YELLOW	InGaAlP

Weight : 0.14 g

MAXIMUM RATINGS (Ta = 25°C)

PRODUCT	FORWARD CURRENT IF (mA)	REVERSE VOLTAGE VR (V)	POWER DISSIPATION PD (mW)	OPERATING TEMPERATURE Topr (°C)	STORAGE TEMPERATURE Tstg (°C)
TLOU123	30	4	72	-20~75	-30~100
TLSU123	30	4	72	-20~75	-30~100
TLYU123	30	4	75	-20~75	-30~100

961001EAC1

- 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.
- 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.
- The information contained herein is presented only as a guide for the applications of our products. No responsibility is assumed by TOSHIBA CORPORATION for any infringements of intellectual property or other rights of the third parties which may result from its use. No license is granted by implication or otherwise under any intellectual property or other rights of TOSHIBA CORPORATION or others.
- The information contained herein is subject to change without notice.

ELECTRICAL AND OPTICAL CHARACTERISTICS (Ta = 25°C)

PRODUCT	TYP. EMISSION WAVELENGTH			LUMINOUS INTENSITY I _V			FORWARD VOLTAGE V _F			REVERSE CURRENT I _R	
	λ _p	Δλ	I _F	MIN	TYP.	I _F	TYP.	MAX	I _F	MAX	V _R
TLOU123	612	15	20	85	400	20	2.0	2.4	20	50	4
TLSU123	636	17	20	85	270	20	2.0	2.4	20	50	4
TLYU123	590	13	20	85	220	20	2.1	2.5	20	50	4
UNIT	nm		mA	mcd		mA	V		mA	μA	V

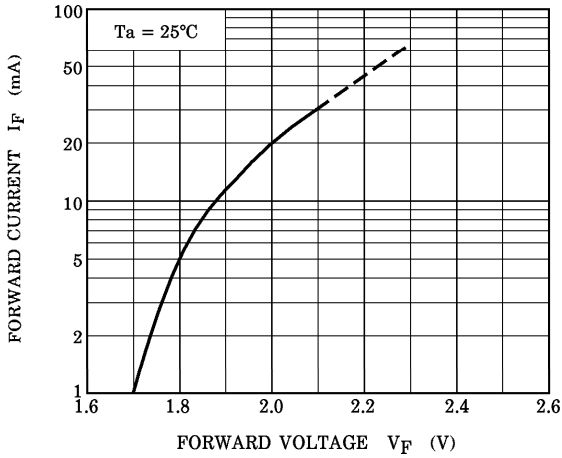
PRECAUTION

Please be careful of the followings

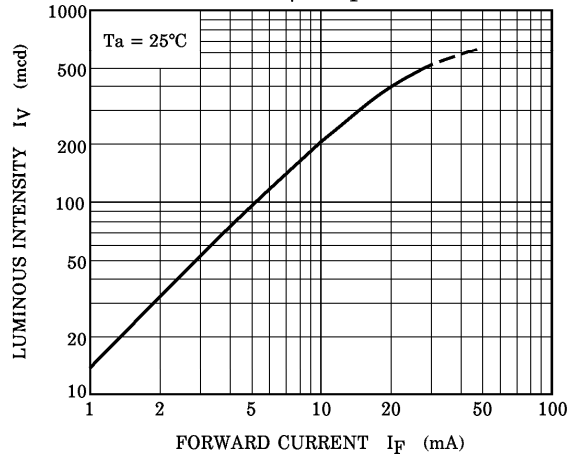
- Soldering temperature : 260°C max Soldering time : 3 s max
(Soldering portion of lead : up to 2 mm from the body of the device)
- If the lead is formed, the lead should be formed up to 5 mm from the body of the device without forming stress to the resin. Soldering should be performed after lead forming.
- This visible LED lamp also emits some IR light. If a photodetector is located near the LED lamp, please ensure that it will not be affected by this IR light.

TLOU123

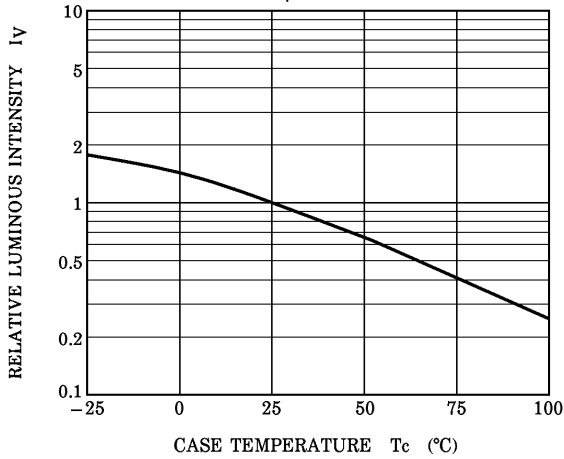
$I_F - V_F$



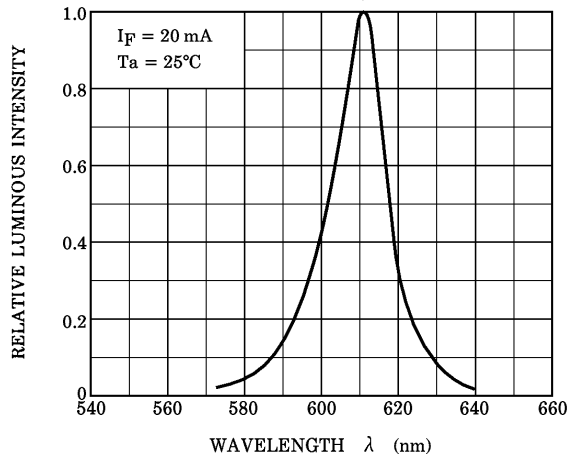
$I_V - I_F$



$I_V - T_c$

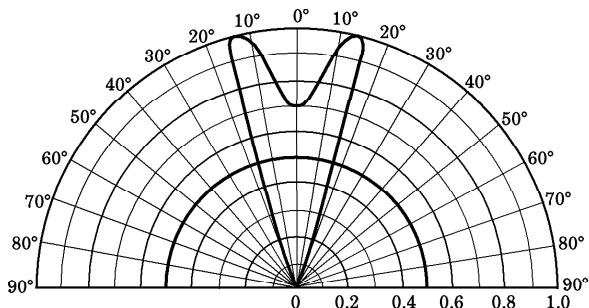


RELATIVE LUMINOUS INTENSITY - WAVELENGTH

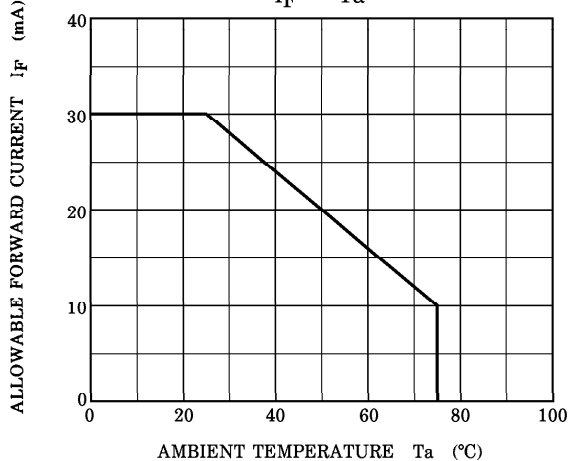


RADIATION PATTERN

$T_a = 25^\circ\text{C}$

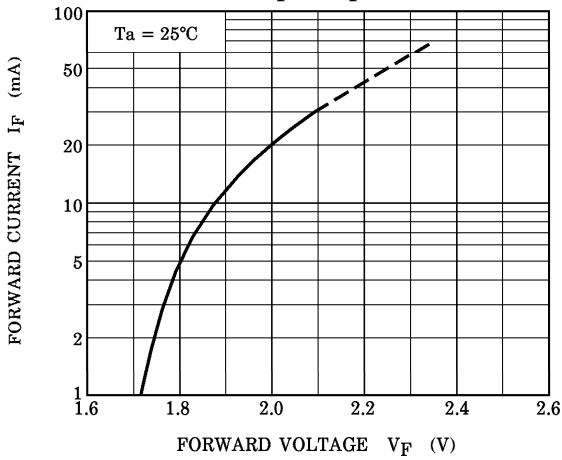


$I_F - T_a$

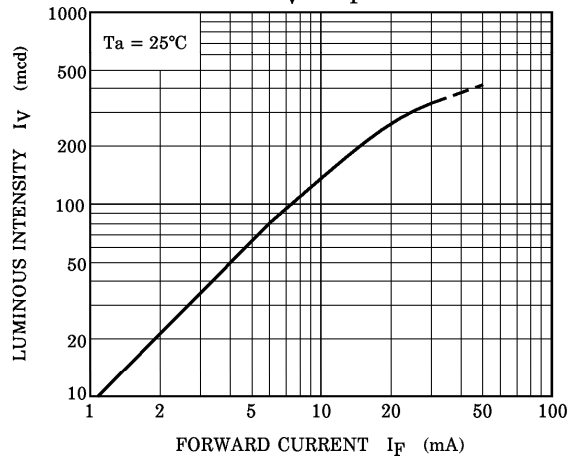


TLSU123

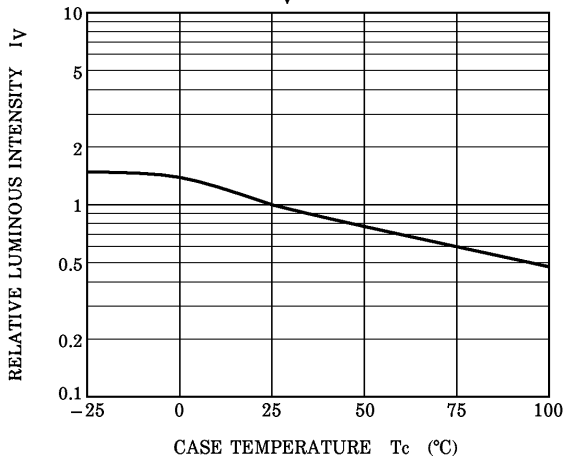
$I_F - V_F$



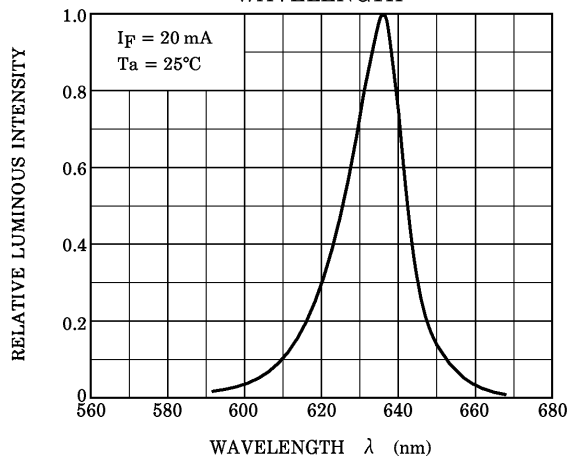
$I_V - I_F$



$I_V - T_c$

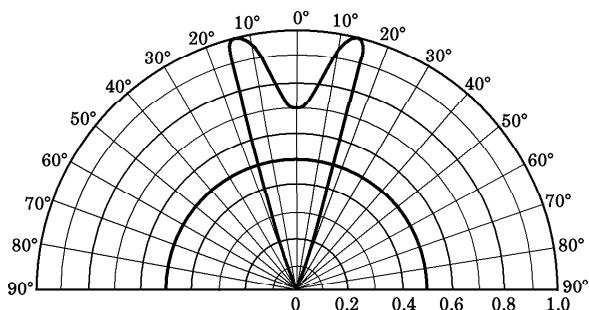


RELATIVE LUMINOUS INTENSITY - WAVELENGTH

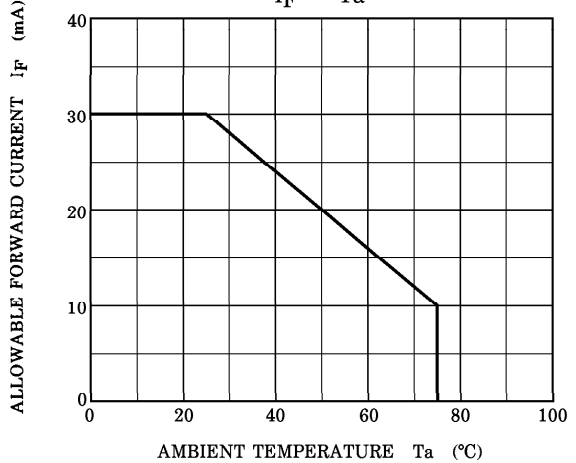


RADIATION PATTERN

$T_a = 25^\circ\text{C}$

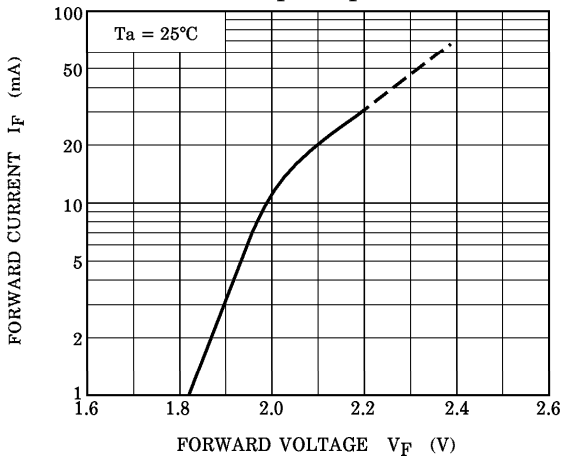


$I_F - T_a$

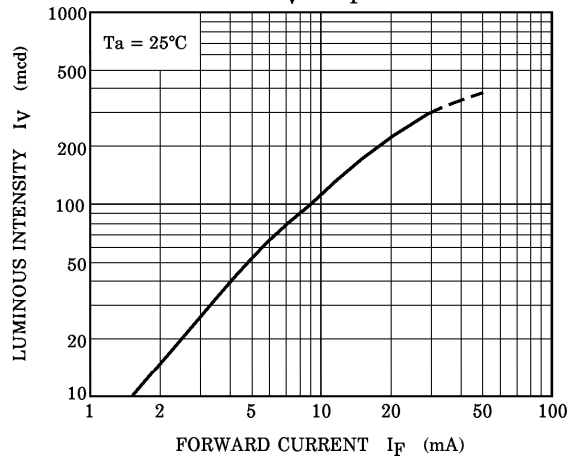


TLYU123

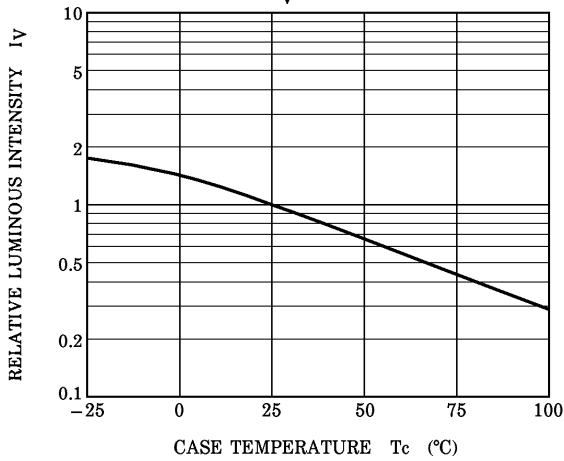
$I_F - V_F$



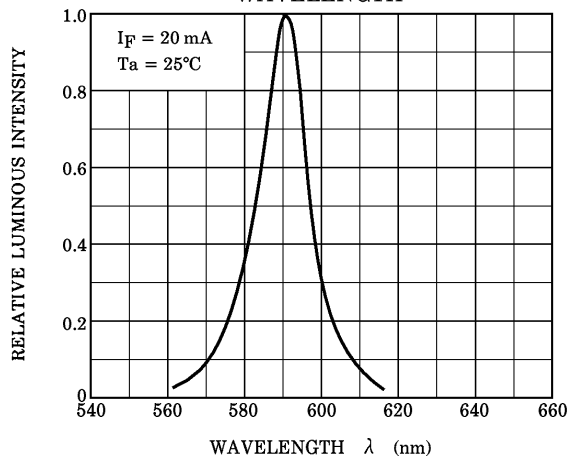
$I_V - I_F$



$I_V - T_c$

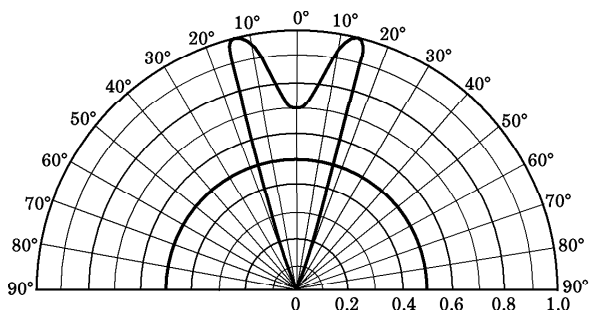


RELATIVE LUMINOUS INTENSITY - WAVELENGTH



RADIATION PATTERN

$T_a = 25^\circ\text{C}$



$I_F - T_a$

