

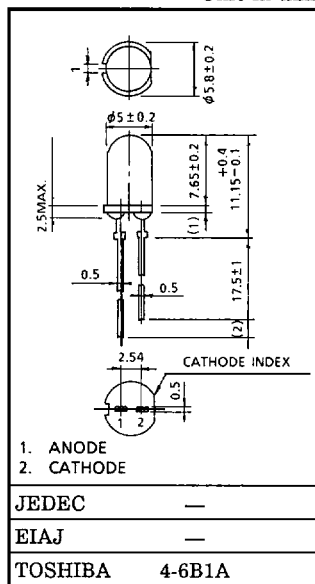
TOSHIBA LED LAMP

TLR116A, TLR120A, TLUR120

PANEL CIRCUIT INDICATOR

Unit in mm

- All Plastic Mold Type
 - TLR116A : Milky Diffused Lens
 - TLR120A : Colorless Transparent Lens
 - TLUR120 : Light Red Transparent Lens
- Low Drive Current, High Intensity Red Light Emission.
Recommended Forward Current : $I_F = 10 \sim 15 \text{mA}$ (DC)
- All Plastic Molded Lens, Provides an Excellent ON-OFF Contrast Ratio.
- Fast Response Time, Capable of Pulse Operation.



Weight : 0.31g

MATERIALS

PRODUCT NAME	MATERIALS	LIGHT EMITTING COLOR
TLR116A	GaP	Red
TLR120A	GaP	
TLUR120	GaAlAs	

MAXIMUM RATINGS (Ta = 25°C)

PRODUCT NAME	FORWARD CURRENT I_F (mA)	REVERSE VOLTAGE V_R (V)	POWER DISSIPATION P_D (mW)	OPERATING TEMPERATURE RANGE T_{opr} (°C)	STORAGE TEMPERATURE RANGE T_{stg} (°C)
TLR116A	20	4	90	-20~75	-30~100
TLR120A	20	4	90	-20~75	-30~100
TLUR120	25	4	55	-20~75	-30~100

ELECTOR-OPTICAL CHARACTERISTICS (Ta = 25°C)

PRODUCT NAME	EMISSION SPECTRUM			LUMINOUS INTENSITY I_V			FORWARD VOLTAGE V_F			REVERSE CURRENT I_R	
	λ_p	$\Delta\lambda$	I_F	MIN.	TYP.	I_F	TYP.	MAX.	I_F	MAX.	V_R
TLR116A	700	100	15	0.8	3.0	15	2.15	2.8	20	5	4
TLR120A	700	100	15	1.0	7.0	15	2.15	2.8	20	5	4
TLUR120	660	25	15	6.0	30	15	1.75	2.2	20	100	4
Unit	nm		mA	mcd			mA	V		μA	V

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PRECAUTION

Please be careful of the followings.

- Soldering temperature : 260°C MAX. Soldering time : 3s MAX.
(Soldering portion of lead : below the lead stopper)
- If the lead is formed, the lead should be formed up to 5mm from the body of the device without forming stress to the resin. Soldering should be performed after lead forming.

