

TOSHIBA LED LAMP GaAlAs RED LIGHT EMISSION

TLRC160, TLRC163, TLRC164

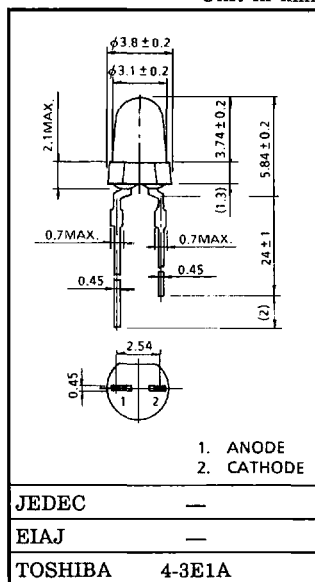
PANEL CIRCUIT INDICATOR

Unit in mm

- STRIKING-BRIGHT
- All Plastic Mold Type
 - TLRC160 : Colorless Clear Lens
 - TLRC163 : Light Red Transparent Lens
 - TLRC164 : Light Red Lusterless Lens
- Low Drive Current, High Intensity Red Light Emission.
Recommended Forward Current : $I_F=15\sim 20\text{mA}$ (DC)
- All Plastic Molded Lens, Provides an Excellent ON-OFF Contrast Ratio.
- Fast Response Time, Capable of Pulse Operation.

MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Forward Current (DC)	I_F	25	mA
Reverse Voltage	V_R	4	V
Power Dissipation	P_D	55	mW
Operating Temperature Range	T_{opr}	$-20\sim 75$	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	$-30\sim 100$	$^\circ\text{C}$



Weight : 0.12g

ELECTRO-OPTICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Forward Voltage	V_F	$I_F=20\text{mA}$	—	1.75	2.2	V
Reverse Current	I_R	$V_R=4\text{V}$	—	—	100	μA
Luminous Intensity	TLRC160	$I_F=20\text{mA}$	153	400	—	mcd
	TLRC163		153	400	—	
	TLRC164		27.2	100	—	
Peak Emission Wave Length	λ_p	$I_F=20\text{mA}$	—	660	—	nm
Spectral Line Half Width	$\Delta\lambda$	$I_F=20\text{mA}$	—	25	—	nm

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LUMINOUS INTENSITY SELECTION TABLE (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Luminous Intensity	TLRC160 (PQ)	I _V	I _F = 20mA (Note)	153	—	736	mcd
	TLRC160 (QR)			272	—	1290	
	TLRC163 (PQ)	I _V		153	—	736	
	TLRC163 (QR)			272	—	1290	
	TLRC164 (LM)	I _V		27.2	—	129	
	TLRC164 (MN)			47.6	—	230	

(Note) Rank selection carried out under next standard range respectively, although it needs $\pm 15\%$ additional for guaranteed limits.

L : 32~64mcd, M : 56~112mcd, N : 100~200mcd, P : 180~360mcd,

Q : 320~640mcd, R : 560~1120mcd

Each rank products is classified by package unit, and (LM) includes L and M, (MN) includes M and N, (PQ) includes P and Q, (QR) includes Q and R.

PRECAUTION

Please be careful of the followings.

- Soldering temperature : 260°C MAX. Soldering time : 3s MAX.
(Soldering portion of lead : up to 2mm from the body of the device)
- 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.
- The TLRC series should not be used in high-temperature, high-humidity environments.

