

**RED****TOSHIBA T-1<sup>3</sup>/<sub>4</sub> InGaAlP Ultra Bright LED**

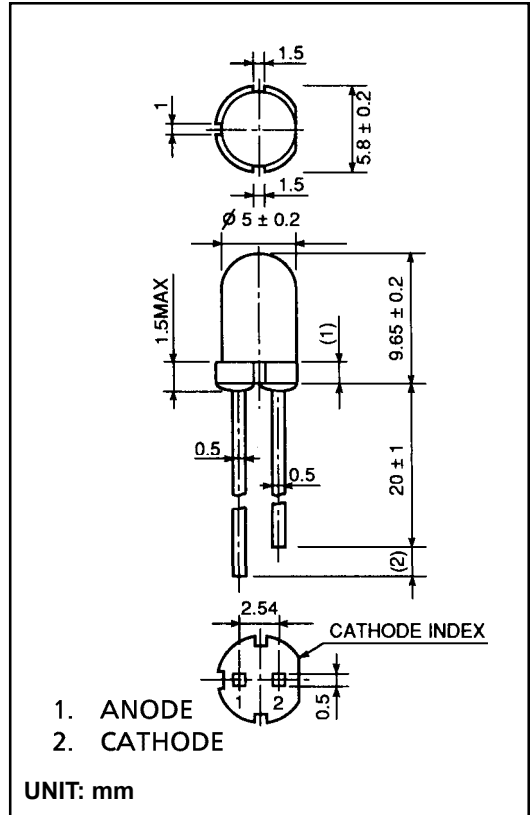
# TLRE180AP

## Product Features -

- InGaAlP Technology
- T-1<sup>3</sup>/<sub>4</sub> (5 mm) Package
- Red Light ( $\lambda_p = 644$  nm) Emission
- Water Clear Lens
- Narrow Radiation Pattern

## MAXIMUM RATINGS (Ta = 25°C)

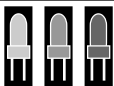
CHARACTERISTIC	SYMBOL	RATING	UNIT
Forward Current	$I_F$	50	mA
Reverse Voltage	$V_R$	4	V
Power Dissipation	$P_D$	125	mW
Operating Temperature	$T_{opr}$	-30 ~ 85	°C
Storage Temperature	$T_{stg}$	-40 ~ 120	°C



## OPTO-ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Forward Voltage	$V_F$	$I_F = 20$ mA	—	1.85	2.4	V
Reverse Current	$I_R$	$V_R = 4$ V	—	—	50	$\mu$ A
Luminous Intensity	$I_V$	$I_F = 20$ mA	850	2500	—	mcd
Viewing Angle	$2\theta_{1/2}$	—	—	8	—	°
Peak Wavelength	$\lambda_p$	$I_F = 20$ mA	—	644	—	nm
Dominant Wavelength	$\lambda_d$	$I_F = 20$ mA	—	630	—	nm
Spectral Line Half Width	$\Delta\lambda$	$I_F = 20$ mA	—	18	—	nm

\* Luminous Ranks: (S : 1000-2000mcd), (T : 1800-3600mcd), (U : 3200-6400mcd) Upper and lower limit tolerance  $\pm 15\%$   
Available in Two Bin Combinations: (ST), (TU)



**marktech**  
**optoelectronics**

120 Broadway • Menands, New York 12204

Toll Free: (800) 98-4LEDS • Fax: (518) 432-7454

## TLRE180AP Graphs -

