

TOSHIBA LED LAMP GaP GREEN LIGHT EMISSION

# TLGD135AP

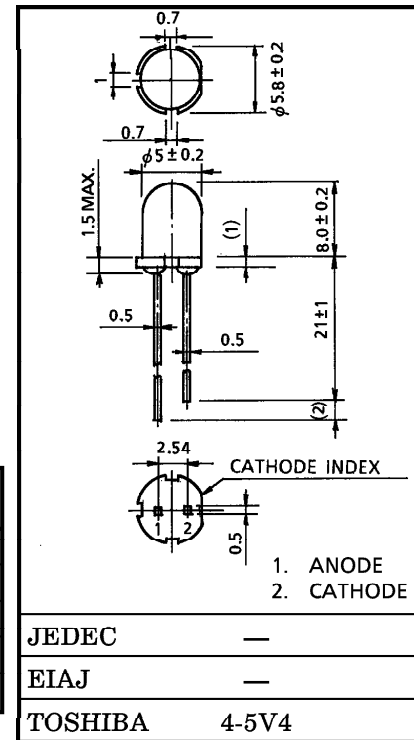
PANEL CIRCUIT INDICATOR

Unit in mm

- All Plastic Mold Type  
Clear Transparent Lens
- High Intensity & Moderate Radiation Angle  
Half Angle = ±15 deg. (Typ.) (limits for 50% of  $I_V$ )  
Recommended Forward Current :  $I_F = 15 \sim 20\text{mA}$  (DC)
- Fast Response Time, Capable of Pulse Operation.
- Without stand-offs

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Forward Current (DC)	$I_F$	40	mA
Reverse Voltage	$V_R$	4	V
Power Dissipation	$P_D$	120	mW
Operating Temperature Range	$T_{opr}$	-20~85	°C
Storage Temperature Range	$T_{stg}$	-30~100	°C



Weight : 0.33g

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Forward Voltage	$V_F$	$I_F = 20\text{mA}$	—	2.15	2.8	V
Reverse Current	$I_R$	$V_R = 4\text{V}$	—	—	5	$\mu\text{A}$
Luminous Intensity	$I_V$	$I_F = 20\text{mA}$ (Note)	153	300	—	mcd
			153	—	736	
Peak Emission Wave Length	$\lambda_p$	$I_F = 20\text{mA}$	—	567	—	nm
Spectral Line Half Width	$\Delta\lambda$	$I_F = 20\text{mA}$	—	25	—	nm

(Note) Rank selection carried out under next standard range respectively, although it needs ±15% sdditionary for guaranteed limits.

P : 180-360mcd    Q : 320-640mcd

Each rank products is classified by package unit, and (PQ) includes P and Q.

961001EAA2

- 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.
- 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.

## 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.

