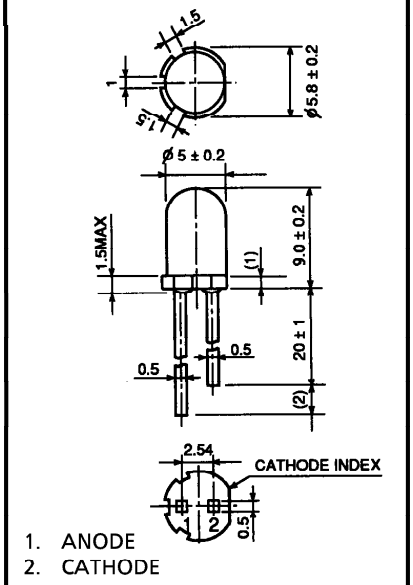
TOSHIBA LED LAMP InGaAℓP GREEN LIGHT EMISSION

TLGA158P

PANEL CIRCUIT INDICATOR

Unit in mm

- 5mm DIAMETER (T1-3/4)
- InGaAℓP GREEN LED
- All Plastic Mold Type.
- Colorless Clear Lens
- Low Drive Current, High Intensity Green Light Emission
  Recommended Forward Current : $I_F = 15 \sim 20$mA (DC)
- All Plastic Molded Lens, Provides an Excellent ON-OFF Contrast Ratio.
- Fast Response Time, Capable of Pulse Operation.
- High Power Luminous Intensity
- Without stand-offs
- APPLICATIONS : Suitable for Outdoor Message Signboard, Safety equipment, etc.



1. ANODE
2. CATHODE

JEDEC	—
EIAJ	—
TOSHIBA	

Weight : 0.31g

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Forward Current (DC)	I_F	50	mA
Reverse Voltage	V_R	4	V
Power Dissipation	P_D	140	mW
Operating Temperature Range	T_{opr}	−30~85	°C
Storage Temperature Range	T_{stg}	−40~120	°C

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- 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.
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ELECTRO-OPTICAL CHARACTERISTICS (Ta = 25°C)

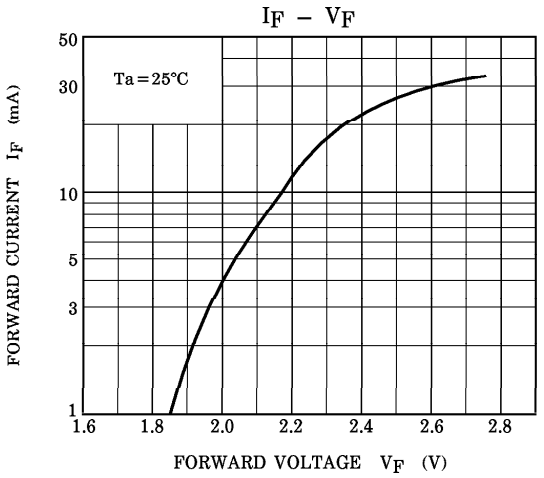
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Forward Voltage		V_F	$I_F = 20mA$	—	2.35	2.8	V
Reverse Current		I_R	$V_R = 4V$	—	—	50	μA
Luminous Intensity	TLGA158P	I_V	$I_F = 20mA$ (Note)	153	350	—	mcd
	TLGA158P (PQ)			153	—	736	
Peak Emission Wavelength		λ_p	$I_F = 20mA$	—	574	—	nm
Spectral Line Half Width		$\Delta\lambda$	$I_F = 20mA$	—	11	—	nm
Dominant Wavelength		λ_d	$I_F = 20mA$	—	571	—	nm

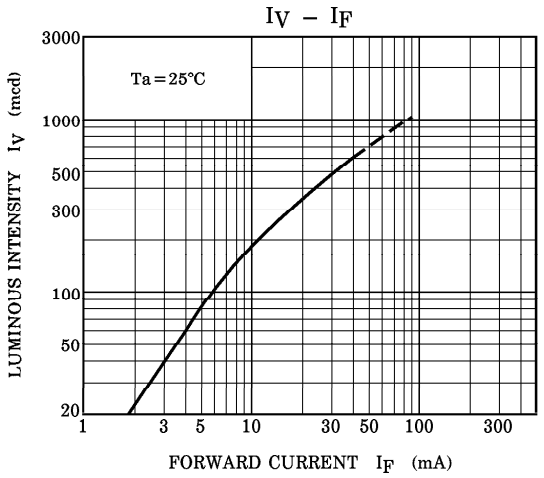
(Note) Rank selection carried out under next range respectively, although it needs ±15% additionary for guaranteed limits.
P : 180-360mcd, Q : 320-640mcd, R : 560-1120mcd.

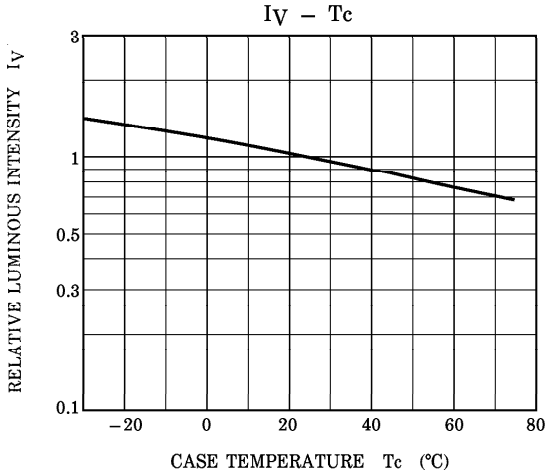
PRECAUTION

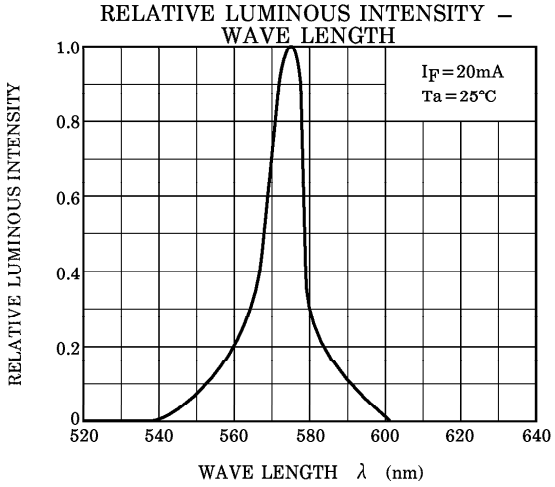
Please be careful of the followings

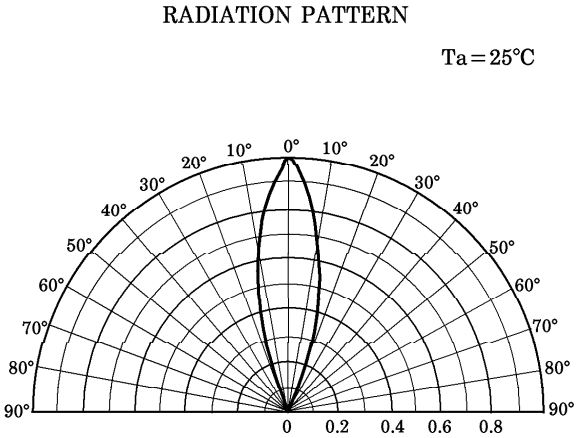
- Soldering temperature : 260°C MAX. Soldering time : 3s MAX.
  (Soldering portion of lead : up to 2mm from the body of the device)
- If the lead is formed, the lead should be formed up to 5mm from the body of the device without forming stress to the resin. Soldering should be performed after lead forming.

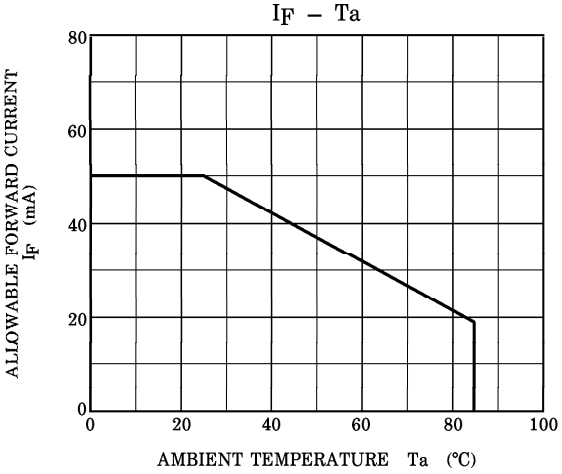

IF – VF
Ta = 25°C
FORWARD CURRENT IF (mA)
50
30
10
5
3
1
1.6
1.8
2.0
2.2
2.4
2.6
2.8
FORWARD VOLTAGE VF (V)


IV – IF
Ta = 25°C
LUMINOUS INTENSITY IV (mcd)
3000
1000
500
300
100
50
20
1
3
5
10
30
50
100
300
FORWARD CURRENT IF (mA)


IV – Tc
RELATIVE LUMINOUS INTENSITY IV
3
1
0.5
0.3
0.1
−20
0
20
40
60
80
CASE TEMPERATURE Tc (°C)


RELATIVE LUMINOUS INTENSITY – WAVE LENGTH
IF = 20mA
Ta = 25°C
RELATIVE LUMINOUS INTENSITY
1.0
0.8
0.6
0.4
0.2
0
520
540
560
580
600
620
640
WAVE LENGTH λ (nm)


RADIATION PATTERN
Ta = 25°C
0°
10°
20°
30°
40°
50°
60°
70°
80°
90°
0
0.2
0.4
0.6
0.8


IF – Ta
ALLOWABLE FORWARD CURRENT IF (mA)
80
60
40
20
0
0
20
40
60
80
100
AMBIENT TEMPERATURE Ta (°C)