TOSHIBA TLRH247

#### **TENTATIVE**

TOSHIBA LED LAMP InGaA&P RED LIGHT EMISSION

# **TLRH247**

#### PANEL CIRCUIT INDICATOR

InGaA&P RED LED

Elliptical Lens: Colorless Clear Lens

Wide Radiation

Low Drive Current, High Intensity Red Light Emission

Plastic Molded Colorless Clear Lens Provides for High Contrast of ON-OFF Ratio.

Fast Response Time, Capable of Pulse Operation.

APPLICATIONS: Suitable for Outdoor Message Signboard, Full Color Panel, Backlight.

#### MAXIMUM RATINGS (Ta = 25°C)

| CHARACTERISTIC              | SYMBOL             | RATING  | UNIT |  |
|-----------------------------|--------------------|---------|------|--|
| Forward Current             | $I_{\mathbf{F}}$   | 50      | mA   |  |
| Reverse Voltage             | $ m V_{R}$         | 4       | V    |  |
| Power Dissipation           | $P_{\mathbf{D}}$   | 125     | mW   |  |
| Operating Temperature Range | $T_{ m opr}$       | -30~85  | °C   |  |
| Storage Temperature Range   | $\mathrm{T_{stg}}$ | -40~120 | °C   |  |

# Unit in mm $5.8 \pm 0.2$ $5.0 \pm 0.2$ $5.8 \pm 0.2$ ± 0.2 9.5MAX <del>4</del>6 8.25 10.75 <u>Q</u> ANODE CATHODE **TOSHIBA**

Weight: 0.3 g

### ELECTRICAL AND OPTICAL CHARACTERISTICS (Ta = 25°C)

| CHARACTERISTIC           | SYMBOL           | TEST CONDITION               | MIN | TYP. | MAX | UNIT    |
|--------------------------|------------------|------------------------------|-----|------|-----|---------|
| Forward Voltage          | $V_{\mathbf{F}}$ | $I_{ m F}=20~{ m mA}$        | _   | 1.9  | 2.5 | V       |
| Reverse Current          | $I_{\mathbf{R}}$ | $V_{R} = 4 V$                | _   | _    | 50  | $\mu$ A |
| Luminous Intensity       | $I_{ m V}$       | $I_F = 20 \text{ mA (Note)}$ | 153 | 450  | _   | mcd     |
| Peak Emission Wavelength | λp               | $I_{ m F}=20~{ m mA}$        | _   | 644  | _   | nm      |
| Spectral Line Half Width | Δλ               | $I_{ m F}=20~{ m mA}$        | _   | 18   | _   | nm      |
| Dominant Wavelength      | λd               | $ m I_F=20~mA$               | _   | 630  | _   | nm      |

(Note): Lamps are classified into the following ranks according to their luminous intensity. Measurement tolerance for each limit is  $\pm 15\%$ .

P:  $180\sim360 \text{ mcd}$ , Q:  $320\sim640 \text{ mcd}$ , R:  $560\sim1120 \text{ mcd}$ .

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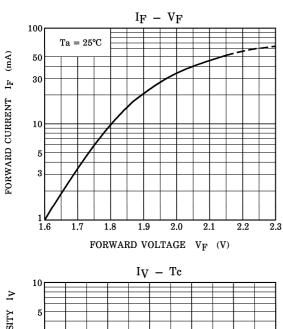
   Gallium arsenide (GaAs) is a substance used in the products described in this document. GaAs dust and fumes are toxic. Do not break, cut or pulverize the product, or use chemicals to dissolve them. When disposing of the products, follow the appropriate regulations. D

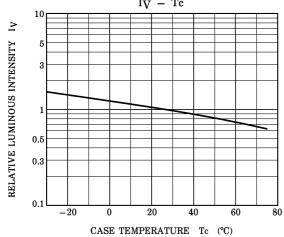
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## **PRECAUTION**

Please be careful of the followings

- Soldering temperature: 260°C max Soldering time: 3 s max (Soldering portion of lead: bellow the lead stopper)
- If the lead is formed, the lead should be formed up to 5 mm from the body of the device without forming stress to the resin. Soldering should be performed after lead forming.
- This visible LED lamp also emits some IR light. If a photodetector is located near the LED lamp, please ensure that it will not be affected by this IR light.







 $Ta = 25^{\circ}C$ 

