

# T-1 (3mm) TRI-LEVEL LED INDICATOR

Part Number: L-7104SA/3ID HIGH EFFICIENCY RED

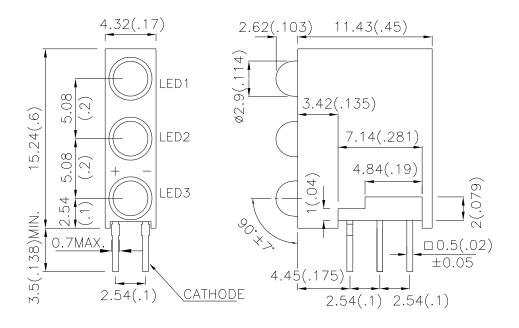
### **Features**

- •PRE-TRIMMED LEADS FOR PC MOUNTING.
- •I.C. COMPATIBLE.
- •BLACK CASE ENHANCES CONTRAST RATIO.
- •WIDE VIEWING ANGLE.
- •HIGH RELIABILITY LIFE MEASURED IN YEARS.
- •UL RATING: 94V-0.
- •HOUSING MATERIAL: TYPE 66 NYLON.
- •Rohs Compliant.

### Description

The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

# **Package Dimensions**



- Notes:
  1. All dimensions are in millimeters (inches).
- 2. Tolerance is ±0.25(0.01") unless otherwise noted.

  3. Lead spacing is measured where the leads emerge from the package.

  4. Specifications are subject to change without notice.





SPEC NO: DSAH5497 **REV NO: V.1** DATE: JUN/28/2007 **PAGE: 1 OF 3** DRAWN: S.J.LIU

APPROVED: WYNEC **CHECKED: Allen Liu** 

# Kingbright

### **Selection Guide**

| Part No.     | Dice                            | Lens Type    | lv (mcd) [2]<br>@ 10mA |      | Viewing<br>Angle [1] |
|--------------|---------------------------------|--------------|------------------------|------|----------------------|
|              |                                 |              | Min.                   | Тур. | 2 θ 1/2              |
| L-7104SA/3ID | HIGH EFFICIENCY RED (GaAsP/GaP) | RED DIFFUSED | 8                      | 20   | 40°                  |

#### Notes:

- 1.  $\theta$ 1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
- 2. Luminous Intensity / Luminous Flux: +/-15%.

# Electrical / Optical Characteristics at Ta=25°C

| Symbol | Parameter                | Device              | Тур. | Max. | Units | Test Conditions |
|--------|--------------------------|---------------------|------|------|-------|-----------------|
| λpeak  | Peak Wavelength          | High Efficiency Red | 627  |      | nm    | IF=20mA         |
| λD [1] | Dominant Wavelength      | High Efficiency Red | 625  |      | nm    | IF=20mA         |
| Δλ1/2  | Spectral Line Half-width | High Efficiency Red | 45   |      | nm    | IF=20mA         |
| С      | Capacitance              | High Efficiency Red | 15   |      | pF    | VF=0V;f=1MHz    |
| VF [2] | Forward Voltage          | High Efficiency Red | 2.0  | 2.5  | V     | IF=20mA         |
| lr     | Reverse Current          | High Efficiency Red |      | 10   | uA    | VR = 5V         |

#### Notes:

- 1.Wavelength: +/-1nm.
- 2. Forward Voltage: +/-0.1V.

# Absolute Maximum Ratings at Ta=25°C

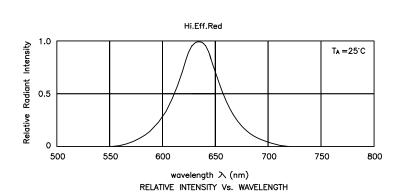
| Parameter                     | High Efficiency Red | Units |  |  |
|-------------------------------|---------------------|-------|--|--|
| Power dissipation             | 75                  | mW    |  |  |
| DC Forward Current            | 30                  | mA    |  |  |
| Peak Forward Current [1]      | 160                 | mA    |  |  |
| Reverse Voltage               | 5                   | V     |  |  |
| Operating/Storage Temperature | -40°C To +85°C      |       |  |  |
| Lead Solder Temperature [2]   | 260°C For 3 Seconds |       |  |  |
| Lead Solder Temperature [3]   | 260°C For 5 Seconds |       |  |  |

#### Notes

- 1. 1/10 Duty Cycle, 0.1 ms Pulse Width.
- 2. 2mm below package base.
- 3. 5mm below package base.

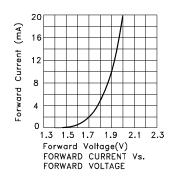
SPEC NO: DSAH5497 REV NO: V.1 DATE: JUN/28/2007 PAGE: 2 OF 3
APPROVED: WYNEC CHECKED: Allen Liu DRAWN: S.J.LIU

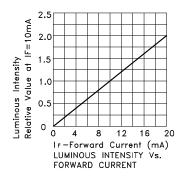
# Kingbright

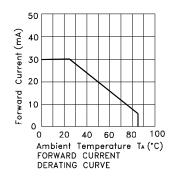


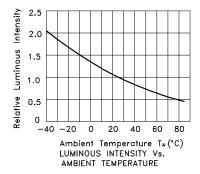
High Efficiency Red

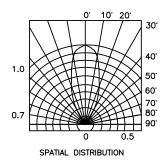
L-7104SA/3ID











SPEC NO: DSAH5497 REV NO: V.1 DATE: JUN/28/2007 PAGE: 3 OF 3

APPROVED: WYNEC CHECKED: Allen Liu DRAWN: S.J.LIU