

# L806TR3K

## Ultra Red

20mm, Big Dome 6-Chip LEDs, 13.5mm Height  
120° viewing angle

DWG BY:  
KB / GP  
12-02-11

CHK BY:  
PL  
12-02-11

REVISION LTR: -  
  
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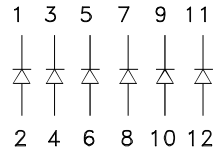
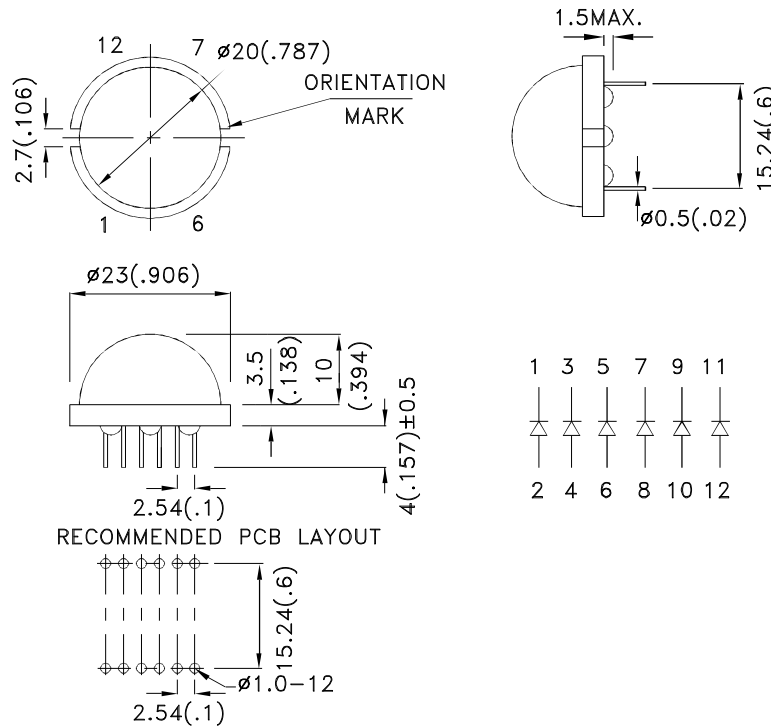
**Features**

- 12 pins.
- High luminous intensity.
- Low power consumption.
- Wide viewing angle.
- Categorized for luminous intensity.
- Excellent on / off contrast.
- Easy mounting on P.C. board or sockets.
- Solid state reliability.
- RoHS compliant.

**Description**

The Ultra Red source color devices are made with Gallium Aluminum Arsenide Red Light Emitting Diode.

**Package Dimensions**



**Notes:**

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.25(0.01)$  unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.
4. Specifications are subject to change without notice.

| Dice               | Lens Type    | Iv (mcd) [2]<br>@ 10mA |      | Viewing<br>Angle [1] |
|--------------------|--------------|------------------------|------|----------------------|
|                    |              | Min.                   | Typ. | 2θ1/2                |
| Ultra Red (GaAlAs) | RED DIFFUSED | -                      | 285  | 120°                 |

**Notes:**

1. θ1/2 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    | Typ. | Max. | Units | Test Conditions           |
|--------------------|--------------------------|-----------|------|------|-------|---------------------------|
| λ <sub>peak</sub>  | Peak Wavelength          | Ultra Red | 652  |      | nm    | I <sub>F</sub> =20mA      |
| λ <sub>D</sub> [1] | Dominant Wavelength      | Ultra Red | 640  |      | nm    | I <sub>F</sub> =20mA      |
| Δλ <sub>1/2</sub>  | Spectral Line Half-width | Ultra Red | 22   |      | nm    | I <sub>F</sub> =20mA      |
| C                  | Capacitance              | Ultra Red | 45   |      | pF    | V <sub>F</sub> =0V;f=1MHz |
| V <sub>F</sub> [2] | Forward Voltage          | Ultra Red | 1.8  | 2.5  | V     | I <sub>F</sub> =20mA      |
| I <sub>R</sub>     | Reverse Current          | Ultra Red |      | 10   | uA    | V <sub>R</sub> = 5V       |
|                    | Radiant Intensity        | Ultra Red | 3500 |      | uW/sr | I <sub>F</sub> =20mA      |
| X                  | Chromaticity Coordinates | Ultra Red | 0.72 |      |       | I <sub>F</sub> =20mA      |
| Y                  |                          |           | 0.28 |      |       |                           |

**Notes:**

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

**Absolute Maximum Ratings at TA=25°C**

| Parameter                     | Ultra Red           | Units |
|-------------------------------|---------------------|-------|
| Power dissipation             | 75                  | mW    |
| DC Forward Current            | 30                  | mA    |
| Peak Forward Current [1]      | 155                 | mA    |
| Reverse Voltage               | 5                   | V     |
| Operating/Storage Temperature | -40°C To +85°C      |       |
| Lead Solder Temperature [2]   | 260°C For 3 Seconds |       |

**Notes:**

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

