

L816BID HIGH EFFICIENCY RED  
 L816BGD GREEN  
 L816BYD YELLOW  
 L816BSRC/B SUPER BRIGHT RED  
 L816BSRD/B SUPER BRIGHT RED

### Features

- T-1 3/4 PACKAGE
- WITH BUILT-IN BLINKING IC.
- OPERATION VOLTAGE FROM 3.5V to 14V.
- BLINKING FREQUENCY FROM 3.0Hz to 1.5Hz.

### Description

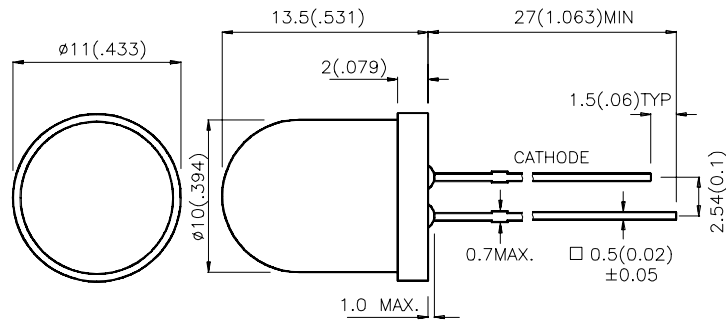
The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

The Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

The Yellow source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Yellow Light Emitting Diode.

The Super Bright 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 lead emerge package.
4. Specifications are subject to change without notice.

## Selection Guide

| Part No.   | Dice                            | Lens Type       | Iv (mcd)<br>@ VF=9V |      | Viewing<br>Angle |
|------------|---------------------------------|-----------------|---------------------|------|------------------|
|            |                                 |                 | Min.                | Typ. | 2θ1/2            |
| L816BID    | HIGH EFFICIENCY RED (GaAsP/GaP) | RED DIFFUSED    | 20                  | 60   | 60°              |
| L816BGD    | GREEN (GaP)                     | GREEN DIFFUSED  | 20                  | 50   | 60°              |
| L816BYD    | YELLOW (GaAsP/GaP)              | YELLOW DIFFUSED | 20                  | 40   | 60°              |
| L816BSRD/B | SUPER BRIGHT RED (GaAlAs)       | RED DIFFUSED    | 100                 | 300  | 60°              |
| L816BSRC/B | SUPER BRIGHT RED (GaAlAs)       | WATER CLEAR     | 500                 | 800  | 40°              |

Notes:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

## Electrical / Optical Characteristics at T<sub>A</sub>=25°C

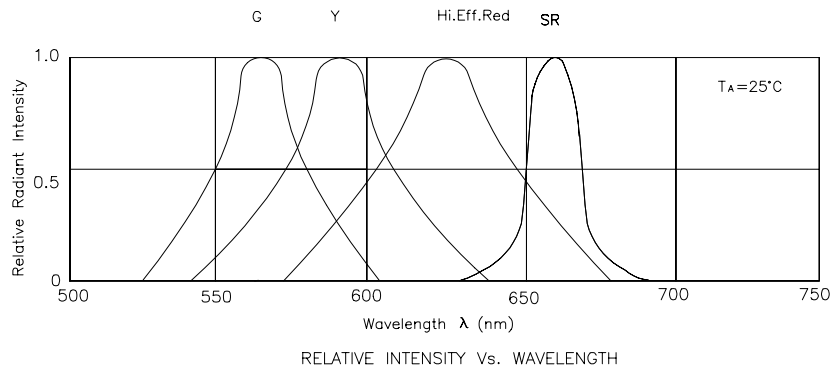
| Symbol            | Parameter               | Device   | Min.                     | Typ.                                 | Units | Test Conditions |
|-------------------|-------------------------|--|--------------------------|--------------------------------------|-------|-----------------|
| λ <sub>peak</sub> | Peak Wavelength         | High Efficiency Red<br>Green<br>Yellow<br>Super Bright Red | 627<br>565<br>590<br>660 |                                      | nm    |                 |
| λ <sub>D</sub>    | Dominate Wavelength     | High Efficiency Red<br>Green<br>Yellow<br>Super Bright Red | 625<br>568<br>588<br>640 |                                      | nm    |                 |
| Δλ <sub>1/2</sub> | Spectral Line Halfwidth | High Efficiency Red<br>Green<br>Yellow<br>Super Bright Red | 45<br>30<br>35<br>20     |                                      | nm    |                 |
| I <sub>F</sub>    | Forward Current         | High Efficiency Red<br>Green<br>Yellow<br>Super Bright Red | 8<br>8<br>8<br>8         | 22<br>20<br>21<br>25                 | V     | VF=3.5V ~ 14V   |
| I <sub>SON</sub>  | Supply Current          | High Efficiency Red<br>Green<br>Yellow<br>Super Bright Red |                          | 8 ~ 44<br>8 ~ 42<br>8 ~ 43<br>8 ~ 45 | mA    | VF=3.5V ~ 14V   |
| f                 | Blink Frequency         | All  |                          | 3 ~ 1.5                              | Hz    | F=3.5V ~ 14V    |

## Absolute Maximum Ratings at $T_A=25^\circ\text{C}$

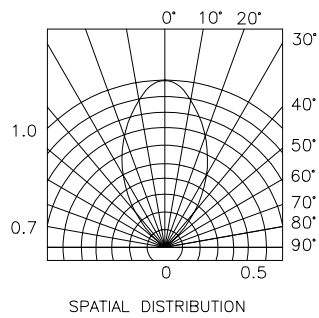
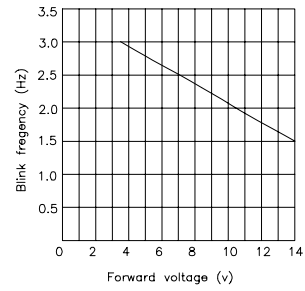
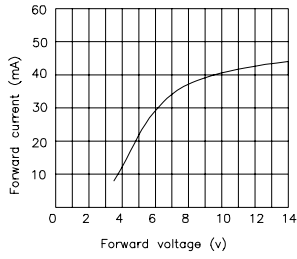
| Parameter                              | High Efficiency Red | Green | Yellow | Super Bright Red | Units |
|--|---------------------|-------|--------|------------------|-------|
| Power dissipation                      | 310                 | 310   | 310    | 310              | mW    |
| DC Forward Current<br>$V_F=14\text{V}$ | 55                  | 55    | 55     | 55               | mA    |
| Reverse Voltage                        | 0.5                 | 0.5   | 0.5    | 0.5              | V     |
| Operating Temperature                  | -40°C To +70°C      |       |        |                  |       |
| Storage Temperature                    | -50°C To +100°C     |       |        |                  |       |
| Lead Soldering Temperature [1]         | 260°C For 5 Seconds |       |        |                  |       |

Notes:

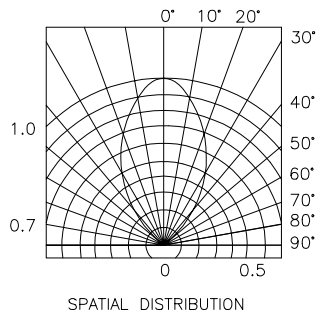
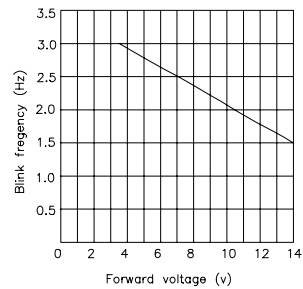
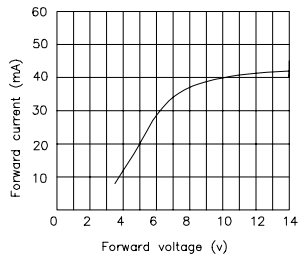
1. 1/10 Duty Cycle, 0.1ms Pulse Width.



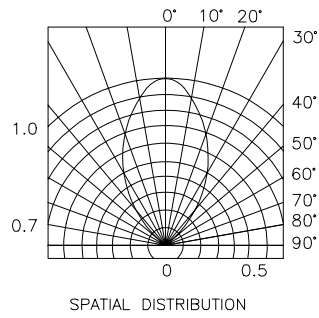
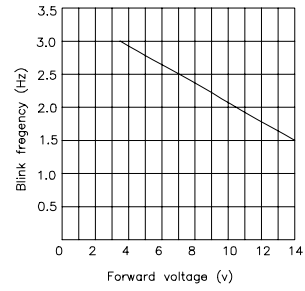
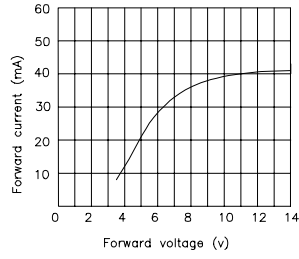
## High Efficiency Red L816BID



## Green L816BGD



## Yellow L816BYD



## Super Bright Red L816BSRD/B,L816SRC/B

