

## DESCRIPTION

This series of solid state indicators are 3mm diameter flangeless LED lamp.

MRB38D is a GaAsP/GaAs red chip with red diffused lens.

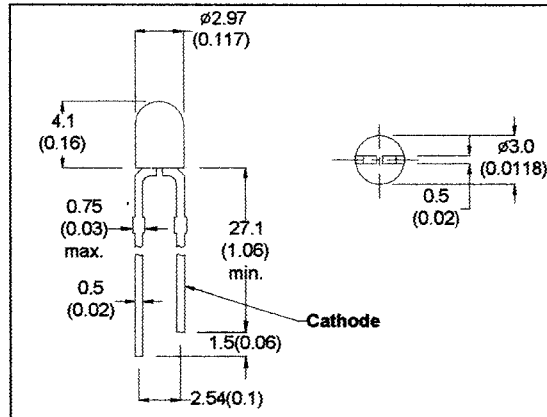
MSB38D is a GaP/GaP red chip with red diffused lens.

MOB38DR is high efficiency red chip with red diffused lens.

MOB38D is a GaAsP/GaP orange chip with orange diffused lens.

MGB38D is a GaP/GaP green chip with green diffused lens.

MYB38D is a GaAsP/GaP yellow chip with yellow diffused lens.



- All Dimension in (inch)
- No Scale
- Tol.: +/- 0.3mm

## ABSOLUTE MAXIMUM RATINGS

| TYPE NO.  | M<br>R<br>B<br>3<br>8<br>D | M<br>S<br>B<br>3<br>8<br>D | M<br>O<br>B<br>3<br>8<br>D<br>R | M<br>O<br>B<br>3<br>8<br>D | M<br>G<br>B<br>3<br>8<br>D | M<br>Y<br>B<br>3<br>8<br>D | UNIT |
|---|----------------------------|----------------------------|---------------------------------|----------------------------|----------------------------|----------------------------|------|
| Power Dissipation @ Ta=25°C                         | 80                         | 40                         | 100                             | 100                        | 100                        | 60                         | mW   |
| Forward Current, DC (IF)                            | 40                         | 15                         | 30                              | 30                         | 30                         | 20                         | mA   |
| Reverse Voltage                                     | 5                          | 5                          | 5                               | 5                          | 5                          | 5                          | V    |
| Operating & Storage Temperature Range               | -55 to +100                |                            |                                 |                            |                            |                            | °C   |
| Lead Temperature (Soldering 5 sec, 1/16" from body) | 260                        |                            |                                 |                            |                            |                            | °C   |

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

| PARAMETER                 |     | S<br>Y<br>M<br>B<br>O<br>L | M<br>R<br>B<br>3<br>8<br>D | M<br>S<br>B<br>3<br>8<br>D | M<br>O<br>B<br>3<br>8<br>D<br>R | M<br>O<br>B<br>3<br>8<br>D | M<br>G<br>B<br>3<br>8<br>D | M<br>Y<br>B<br>3<br>8<br>D | U<br>N<br>I<br>T | CONDITIONS |
|---------------------------|-----|----------------------------|----------------------------|----------------------------|---------------------------------|----------------------------|----------------------------|----------------------------|------------------|------------|
| Forward Voltage           | MAX | VF                         | 2.0                        | 3.0                        | 3.0                             | 3.0                        | 3.0                        | 3.0                        | V                | IF=20mA    |
| Reverse Breakdown Voltage | MIN | BVR                        | 5                          | 5                          | 5                               | 5                          | 5                          | 5                          | V                | IR=100 μA  |
| Luminous Intensity        | MIN | IV                         | 0.9                        | 0.75*                      | 12                              | 12                         | 18                         | 9                          | mcd              | IF=20mA    |
|                           | TYP |                            | 1.3                        | 1*                         | 20                              | 20                         | 25                         | 15                         | mcd              | IF=20mA    |
| Peak Wavelength           | TYP | λp                         | 660                        | 700                        | 640                             | 630                        | 570                        | 585                        | nm               | IF=20mA    |
| Spectral Line Half Width  | TYP | Δλ                         | 20                         | 100                        | 40                              | 40                         | 30                         | 40                         | nm               | IF=20mA    |
| Viewing Angle             | TYP | 2θ 1/2                     | 70                         | 70                         | 70                              | 70                         | 70                         | 70                         | degree           | IF=20mA    |

\* IV @ IF=10mA.

MICRO ELECTRONICS LTD.

38, Hung To Road, Microtron Building, Kwun Tong, Kowloon, Hong Kong.

Kwun Tong P.O. Box 69477 Hong Kong. Fax No. 2341 0321 Telex:43510 Micro Hx. Tel: 2343 0181-5

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