

## DESCRIPTION

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

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

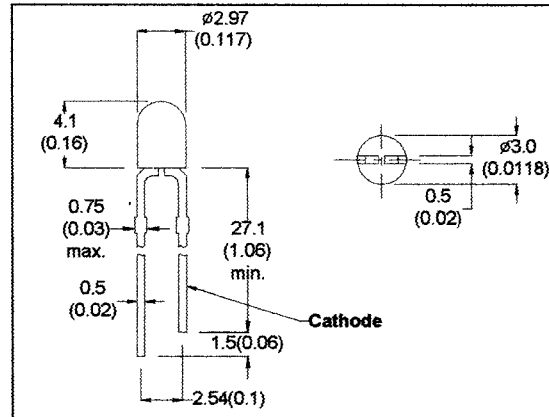
MSB38D is a GaP/GaP red chip with red diffused lens.

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           | M  | M   | M   | M   | M  | UNIT |
|---|-------------|----|-----|-----|-----|----|------|
|   | R           | S  | O   | O   | G   | Y  |      |
|   | B           | B  | B   | B   | B   | B  |      |
|   | 3           | 3  | 3   | 3   | 3   | 3  |      |
|   | 8           | 8  | 8   | 8   | 8   | 8  |      |
|   | D           | D  | D   | D   | D   | D  |      |
| 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      | M   | M     | M   | M   | M   | U   | CONDITIONS |           |
|---------------------------|-----|--------|-----|-------|-----|-----|-----|-----|------------|-----------|
|                           |     | Y      | R   | S     | O   | O   | G   | N   |            |           |
|                           |     | M      | B   | B     | B   | B   | B   | I   |            |           |
|                           |     | B      | 3   | 3     | 3   | 3   | 3   | 3   |            |           |
|                           |     | O      | 8   | 8     | 8   | 8   | 8   | 8   |            |           |
|                           |     | L      | D   | D     | D   | D   | D   | D   |            |           |
| 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.

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