



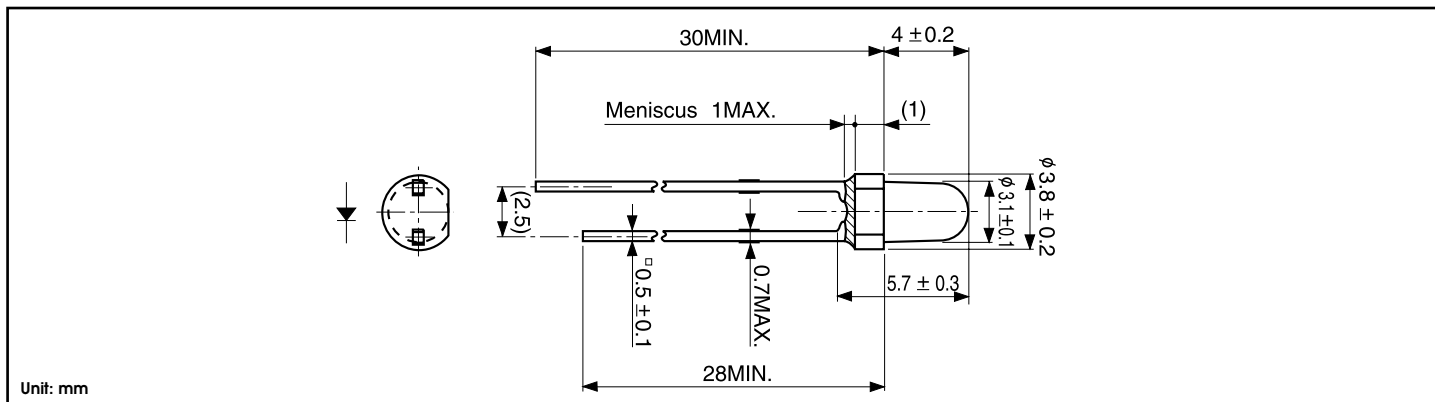
# SINGLE COLOR LED

3mm Round Shape

## 3338S Series

S T A N D A R D C O L O R

### Outline Dimensions



### Absolute Maximum Ratings

(Ta=25°C)

| Item                  | Symbol | Red         |      |          | Orange   | Yellow   | Yellow Green | Green    | Pure Green | Units |
|-----------------------|--------|-------------|------|----------|----------|----------|--------------|----------|------------|-------|
|                       |        | EBR/BR      | MPR  | EMVR/MVR | EMAA/MAA | EMAY/MAY | EMPY/MPY     | EMPG/MPG | EMBG/MBG   |       |
| Power Dissipation     | Pd     | 100         | 75   | 75       | 70       | 85       | 85           | 70       | 70         | mW    |
| Forward Current       | IF     | 50          | 30   | 30       | 25       | 30       | 30           | 25       | 25         | mA    |
| Peak Forward Current  | IFM    | 300         | 75   | 75       | 60       | 75       | 75           | 60       | 60         | mA    |
| Reverse Voltage       | VR     | 4           | 4    | 4        | 4        | 4        | 4            | 4        | 4          | V     |
| Operating Temperature | Topr   | -30 to +85  |      |          |          |          |              |          |            | °C    |
| Storage Temperature   | Tstg   | -30 to +100 |      |          |          |          |              |          |            | °C    |
| Derating (DC)*        | IF     | 0.67        | 0.40 |          | 0.33     | 0.40     |              | 0.33     |            | mA/°C |

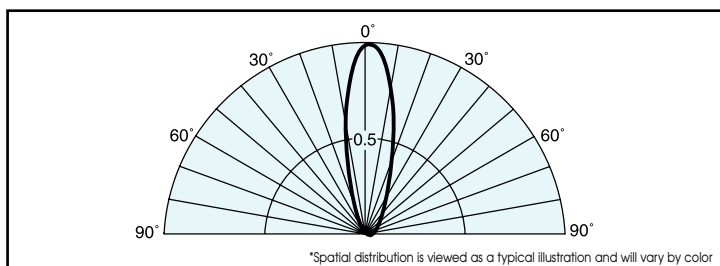
\*Ta=25°C, IFM applies for the pulse width 1msec. and duty cycle 1/20  
The current derating for operation applies when the temperature is above 25°C

### Electro-Optical Characteristics

\*The viewing angle is an average and will vary by color (Ta=25°C)

| Part No.      | Material | Emitted Color | Lens Color      | Luminous Intensity I <sub>v</sub> |       |                | Wavelength Spectral Line Dominant Half Width |                 |      |                | Forward Voltage V <sub>F</sub> |      |                | Reverse Current I <sub>R</sub> |                | Viewing Angle (2 1/2) |
|---------------|----------|---------------|-----------------|-----------------------------------|-------|----------------|----------------------------------------------|-----------------|------|----------------|--------------------------------|------|----------------|--------------------------------|----------------|-----------------------|
|               |          |               |                 | MIN.                              | TYP.  | I <sub>F</sub> | Peak P TYP.                                  | Dominant d TYP. | TYP. | I <sub>F</sub> | TYP.                           | MAX. | I <sub>F</sub> | MAX.                           | V <sub>R</sub> |                       |
|               |          |               |                 |                                   |       |                |                                              |                 |      |                |                                |      |                |                                |                |                       |
| EBR/BR3338S   | GaAlAs   | Red           | Diffused Red    | 30/15                             | 45/30 | 20             | 660                                          | 647             | 30   | 20             | 1.7                            | 2.0  | 20             | 100                            | 4              | 25°                   |
| MPR3338S      | GaP      |               |                 | 1.5                               | 3     | 10             | 700                                          | 635             | 100  | 10             | 2.1                            | 2.8  | 10             | 20                             | 4              |                       |
| EMVR/MVR3338S | GaAsP    |               |                 | 20/10                             | 30/20 | 20             | 630                                          | 624             | 30   | 20             | 2.0                            | 2.8  | 20             | 20                             | 4              |                       |
| EMAA/MAA3338S | GaAsP    | Orange        | Diffused Orange | 20/10                             | 30/20 | 20             | 605                                          | 606             | 30   | 20             | 2.2                            | 2.8  | 20             | 20                             | 4              |                       |
| EMAY/MAY3338S | GaAsP    | Yellow        | Diffused Yellow | 20/10                             | 30/20 | 20             | 580                                          | 590             | 30   | 20             | 2.2                            | 2.8  | 20             | 20                             | 4              |                       |
| EMPY/MPY3338S | GaP      | Yellow Green  |                 | 30/15                             | 45/30 | 20             | 570                                          | 572             | 30   | 20             | 2.1                            | 2.8  | 20             | 20                             | 4              |                       |
| EMPG/MPG3338S | GaP      | Green         | Diffused Green  | 20/10                             | 30/20 | 20             | 560                                          | 567             | 30   | 20             | 2.1                            | 2.8  | 20             | 20                             | 4              |                       |
| EMBG/MBG3338S | GaP      | Pure Green    |                 | 8/4                               | 12/8  | 20             | 555                                          | 558             | 30   | 20             | 2.1                            | 2.8  | 20             | 20                             | 4              |                       |
| Units         |          |               |                 | mcd                               |       | mA             | nm                                           |                 |      | mA             | V                              |      | mA             | μA                             | V              | Deg.                  |

### Spatial Distribution (x)



### Operation Current Derating Chart

