



## SINGLE COLOR LED

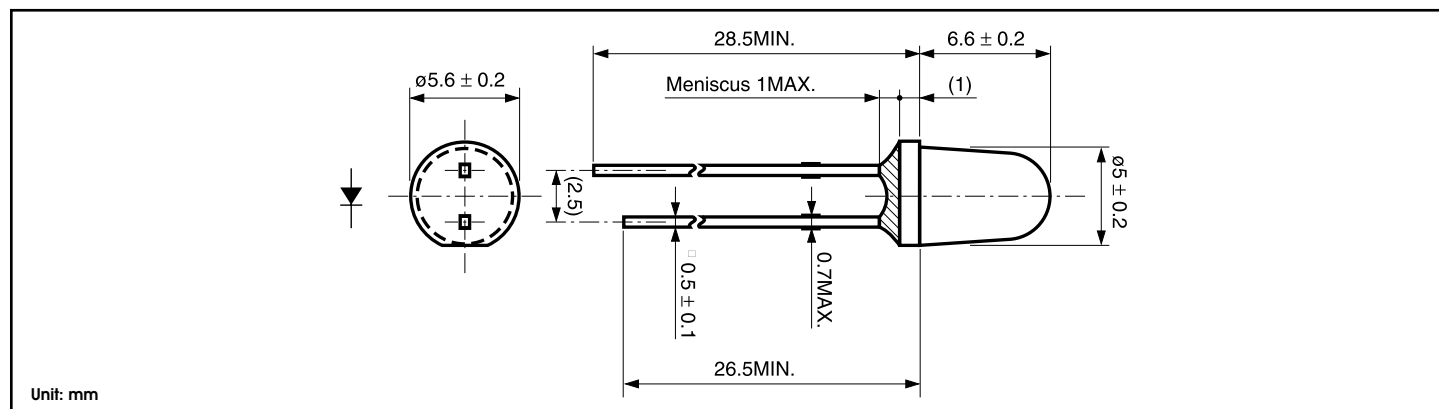
5mm Round Shape



### 5305S 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     | PR   | EVR, VR | EAA, AA | EAY, AY | EPY, PY      | EPG, PG | EBG, BG    |       |
| Power Dissipation     | Pd     | 100         | 75   | 75      | 125     | 125     | 125          | 125     | 125        | mW    |
| Forward Current       | IF     | 50          | 30   | 30      | 50      | 50      | 50           | 50      | 50         | mA    |
| Peak Forward Current  | IFM    | 300         | 100  | 100     | 100     | 100     | 100          | 100     | 100        | 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        | 0.33 |         |         | 0.67    |              |         |            | mA/°C |

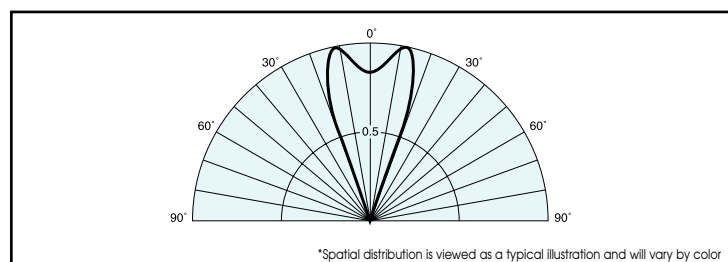
\* Ta=25°C, IFM applies for the pulse width 1msec. and duty cycle 1/20  
The current derating for operation applies when the temperature is above 25°C

#### 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<br><small>Spectral Line Half Width</small> |                 |      |                | Forward Voltage V <sub>F</sub> |      |                | Reverse Current I <sub>R</sub> |                | Viewing Angle<br>(2 1/2) |      |
|-------------|----------|---------------|-------------|-----------------------------------|-------|----------------|-------------------------------------------------------|-----------------|------|----------------|--------------------------------|------|----------------|--------------------------------|----------------|--------------------------|------|
|             |          |               |             | MIN.                              | TYP.  | I <sub>F</sub> | Peak TYP.                                             | Dominant d TYP. | TYP. | I <sub>F</sub> | TYP.                           | MAX. | I <sub>F</sub> | MAX.                           | V <sub>R</sub> |                          |      |
|             |          |               |             |                                   |       |                |                                                       |                 |      |                |                                |      |                |                                |                |                          |      |
| EBR/BR5305S | GaAlAs   | Red           | Water Clear | 20/10                             | 30/20 | 20             | 660                                                   | 647             | 30   | 20             | 1.7                            | 2.0  | 20             | 100                            | 4              | 50°                      |      |
| PR5305S     | GaP      |               |             | 4                                 | 8     | 10             | 700                                                   | 635             | 100  | 10             | 2.1                            | 2.5  | 10             | 100                            | 4              | 35°                      |      |
| EVR/VR5305S | GaAsP    |               |             | 20/10                             | 30/20 | 20             | 630                                                   | 624             | 30   | 20             | 2.0                            | 2.5  | 20             | 100                            | 4              |                          |      |
| EAA/AA5305S | GaAsP    | Orange        |             | 30/15                             | 45/30 | 20             | 605                                                   | 606             | 30   | 20             | 2.2                            | 2.5  | 20             | 100                            | 4              |                          |      |
| EAY/AY5305S | GaAsP    | Yellow        |             | 30/15                             | 45/30 | 20             | 580                                                   | 590             | 30   | 20             | 2.2                            | 2.5  | 20             | 100                            | 4              |                          |      |
| EPY/PY5305S | GaP      | Yellow Green  |             | 50/25                             | 75/50 | 20             | 570                                                   | 572             | 30   | 20             | 2.1                            | 2.5  | 20             | 100                            | 4              |                          |      |
| EPG/PG5305S | GaP      | Green         |             | 40/20                             | 60/40 | 20             | 560                                                   | 567             | 30   | 20             | 2.1                            | 2.5  | 20             | 100                            | 4              |                          |      |
| EBG/BG5305S | GaP      | Pure Green    |             | 12/6                              | 18/12 | 20             | 555                                                   | 558             | 30   | 20             | 2.1                            | 2.5  | 20             | 100                            | 4              |                          |      |
| Units       |          |               |             | mcd                               |       | mA             | nm                                                    |                 | mA   |                | V                              |      | mA             |                                | μA             | V                        | Deg. |

#### Spatial Distribution (x)



#### Operation Current Derating Chart

