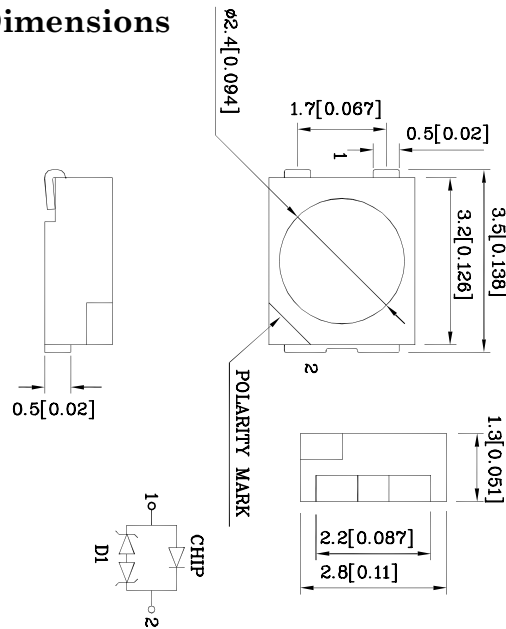


**Package Dimensions**

P/N: ECB109S  
3.5X2.8MM BLUE SMD LED



- Notes:
1. All dimensions are in millimeters (inches).
  2. Tolerance is  $\pm 0.25(0.01")$  unless otherwise noted.
  3. Specifications are subject to change without notice.

| Emitting Color | Emitting Material | Lens-color  | Luminous Intensity (IF=150mA)<br>mcd |      | Luminous Flux (IF=150mA)<br>mlm |      | Viewing Angle<br>2 θ 1/2 [2] |
|----------------|-------------------|-------------|--------------------------------------|------|---------------------------------|------|------------------------------|
|                |                   |             | min.                                 | typ. | min.                            | typ. |                              |
| Blue           | InGaN             | Water Clear | 650                                  | 1300 | 4200                            | 5000 | 120°                         |

**Absolute Maximum Ratings at TA=25°C**

| Parameter   | Symbol | Value      | Unit |
|---|--------|------------|------|
| Power Dissipation                                 | Pd     | 600        | mW   |
| Junction Temperature [1]                          | Tj     | 110        | °C   |
| Operating Temperature                             | Top    | -40 To +85 | °C   |
| Storage Temperature                               | Tstg   | -40 To +85 | °C   |
| Reverse Voltage                                   | VR     | 5          | V    |
| DC Forward Current [1]                            | IF     | 150        | mA   |
| Peak Forward Current [2]                          | IFM    | 300        | mA   |
| Thermal Resistance [1]<br>(Junction/ambient)      | Rthj-a | 180        | °C/W |
| Thermal Resistance [1]<br>(Junction/solder point) | Rthj-s | 60         | °C/W |
| Electrostatic Discharge Threshold (HBM)           |        | 8000       | V    |

**Electrical / Optical Characteristics at TA=25°C**

| Parameter  | Symbol    | Value | Unit  |
|--|-----------|-------|-------|
| Wavelength at peak emission IF=150mA [Typ.]                            | lpeak     | 445   | nm    |
| Dominant Wavelength IF=150mA [Typ.]                                    | l dom [1] | 450   | nm    |
| Spectral Line Half-width IF=150mA [Typ.]                               | Dl        | 20    | nm    |
| Forward Voltage IF=150mA [Min.]  | VF [2]    | 2.7   | V     |
| Forward Voltage IF=150mA [Typ.]  |           | 3.5   |       |
| Forward Voltage IF=150mA [Max.]  |           | 4.0   |       |
| Reverse Current (VR = 5V) [Max.]                                       | IR        | 10    | uA    |
| Temperature coefficient of lpeak<br>IF=150mA, -10°C ≤ T ≤ 100°C [Typ.] | TClpeak   | 0.13  | nm/°C |
| Temperature coefficient of ldom<br>IF=150mA, -10°C ≤ T ≤ 100°C [Typ.]  | TCldom    | 0.1   | nm/°C |
| Temperature coefficient of VF<br>IF=150mA, -10°C ≤ T ≤ 100°C [Typ.]    | TCv       | -3.1  | mV/°C |