



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Product Guide

D_1111C Series, Ultra Compact InGaN/SiC SMT LED



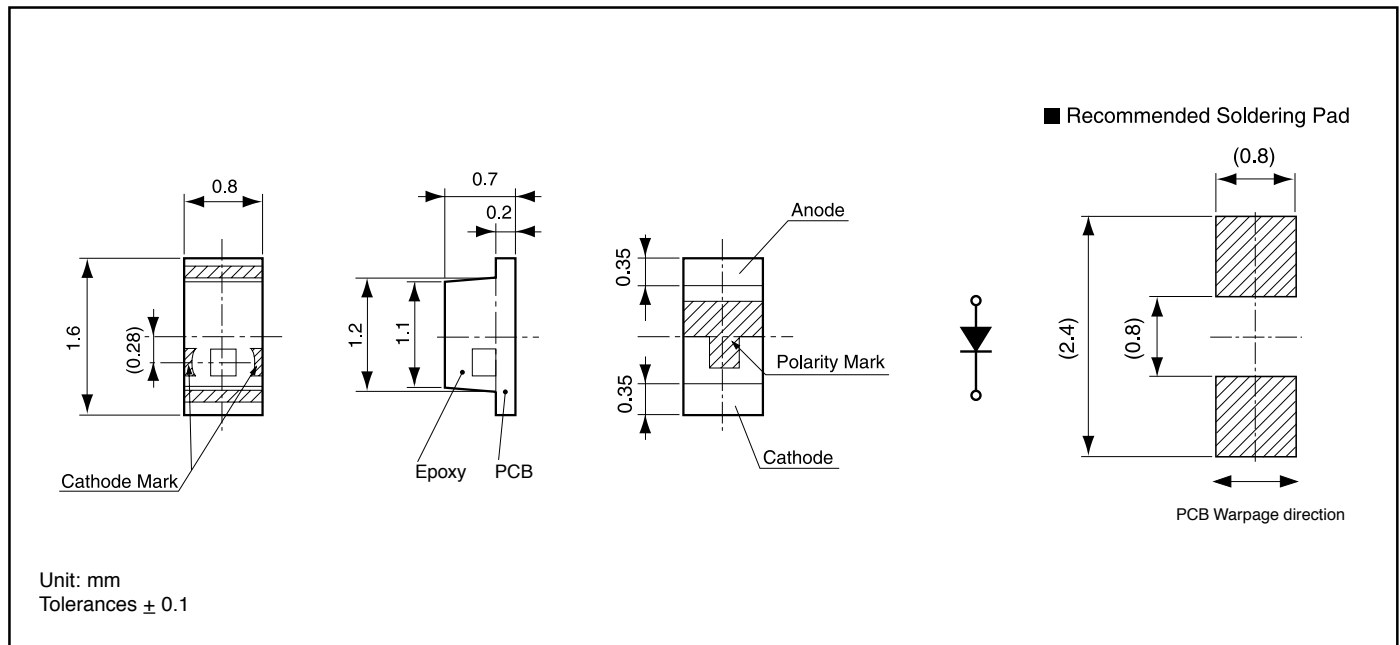
Features

- High brightness (InGaN/SiC) die material
- Available in green (525nm), bluish-green (505nm) and blue (470nm) colors
- Wide 130 degree viewing angle
- Reflow and dip soldering compatible
- 1000V minimum ESD protection

Applications

- Portable phone key pad backlight
- Various other backlight uses

Outline Dimensions



Electro-Optical Characteristics

(Ta=25°C)

| Part No. | Material | Emitted Color | Lens Color | Luminous Intensity I _v | | | Wavelength | | | | Forward Voltage v _f | | | Reverse Current I _r | | Viewing Angle (2 θ 1/2) |
|----------|-----------|---------------|-------------|-----------------------------------|------|----------------|--------------------------|------------------------------|----------------------------------|----------------|--------------------------------|------|----------------|--------------------------------|----------------|-------------------------|
| | | | | MIN. | TYP. | I _f | Peak λ _p TYP. | Dominant λ _d TYP. | Spectral Line Half Width Δλ TYP. | I _f | TYP. | MAX. | I _f | MAX. | V _r | |
| DG1111C | InGaN/SiC | Green | Milky White | 24 | 40 | 10 | 522 | 525 | 30 | 10 | 3.3 | 3.8 | 10 | 100 | 5 | 130° |
| DC1111C | InGaN/SiC | Bluish-Green | | 24 | 34 | 10 | 502 | 505 | 30 | 10 | 3.3 | 3.8 | 10 | 100 | 5 | |
| DB1111C | InGaN/SiC | Blue | | 8.5 | 14 | 10 | 467 | 470 | 26 | 10 | 3.3 | 3.8 | 10 | 100 | 5 | |
| Units | | | | mcd | | mA | nm | | | mA | V | mA | μA | V | Deg. | |

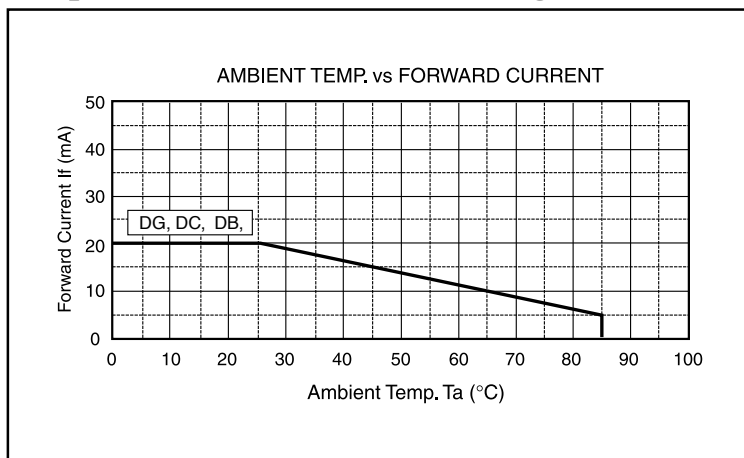
Absolute Maximum Ratings

(Ta=25°C)

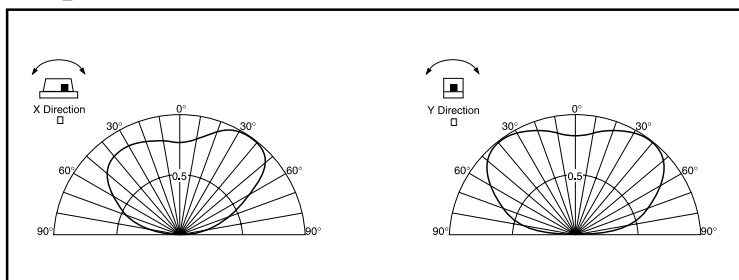
| Item | Symbol | Green | Bluish-Green | Blue | Units |
|-----------------------|-----------------|------------------------|--------------|------|-------|
| | | DG | DC | DB | |
| Power Dissipation | Pd | 76 | 76 | 76 | mW |
| Forward Current | I _F | 20 | 20 | 20 | mA |
| Peak Forward Current | I _{FM} | 48 | 48 | 48 | mA |
| Reverse Voltage | V _R | 5 | 5 | 5 | V |
| Operating Temperature | Topr | -40 to +85 | | | °C |
| Storage Temperature | Tstg | -40 to +100 | | | °C |
| Derating* | ΔI _F | 0.28 (DC) 0.69 (Pulse) | | | mA/°C |

* Ta=25°C, I_{FM} applies for the pulse width ≤ 1msec. and duty cycle ≤ 1/20.

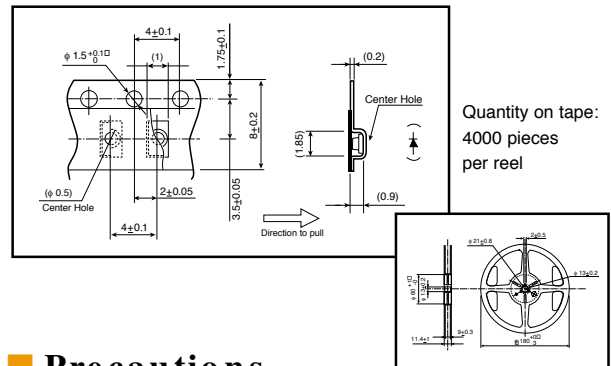
Operation Current Derating Chart (DC)



Spatial Distribution



Taping Specifications

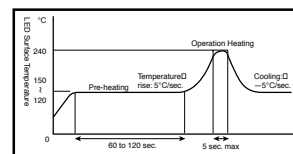


Precautions

Please follow these handling precautions to prevent damage to the chip and ensure its reliability.

1. Soldering conditions:

- **Soldering iron:** Temperature at tip of iron: 280°C max. (30W max.) Soldering time: 3 sec. max.
- **Dip soldering:** Preheating: 120 ~ 150°C max. (resin surface temp.) 60 ~ 120 sec. max. Bath temperature: 260°C max. Dipping Time: 5 sec. max.
- **Reflow Soldering:**



2. Cleaning:

- If cleaning is required, use the following solutions for less than 1 minute, at less than 40°C.
- Appropriate chemicals: Ethyl alcohol and isopropyl alcohol.
- Effect of ultrasonic cleaning on the LED resin body differs depending on such factors as the oscillator output, size of PCB and LED mounting method. The use of ultrasonic cleaning should be enforced at proper output after confirming there is no problem.

Product specifications subject to change without notice. PGD1111C-0301

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