Product Guide

D_1111C Series, Ultra Compact InGaN/SiC SMT LED



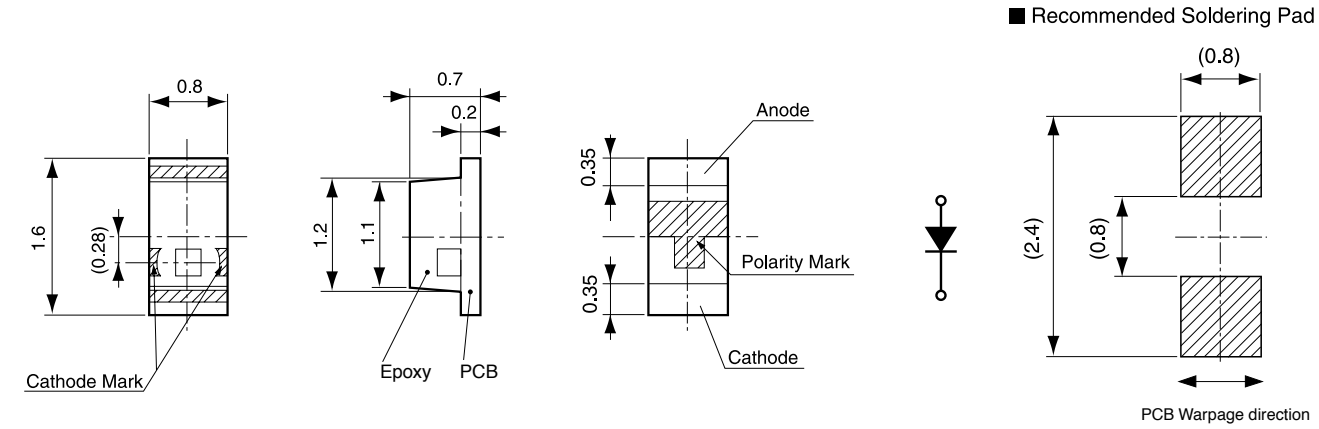
Features

- 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



Unit: mm
Tolerances ± 0.1

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)
							Peak λp	Dominant λd	Spectral Line Half Width Δλ							
				MIN.	TYP.	I_F	TYP.	TYP.	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.

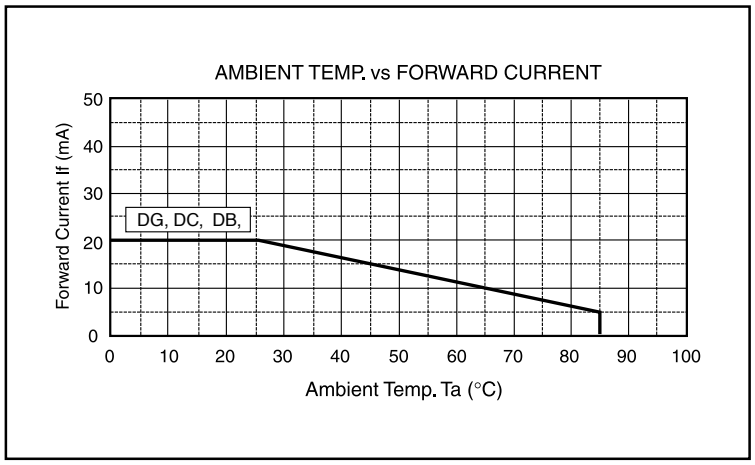
Absolute Maximum Ratings

(Ta=25°C)

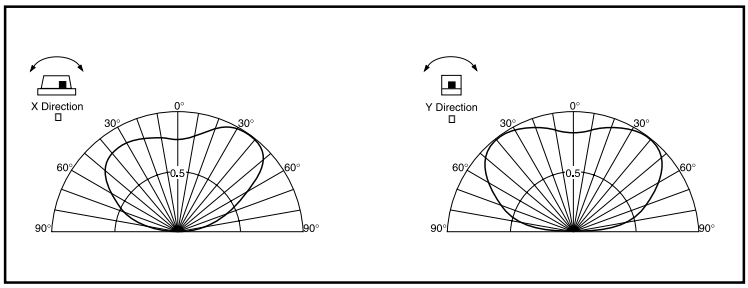
Item	Symbol	Green DG	Bluish-Green DC	Blue DB	Units
Power Dissipation	Pd	76	76	76	mW
Forward Current	I_F	20	20	20	mA
Peak Forward Current	I_{FM}	48	48	48	mA
Reverse Voltage	V_R	5	5	5	V
Operating Temperature	Topr	-40 to +85			°C
Storage Temperature	Tstg	-40 to +100			°C
Derating*	ΔI_F	0.28 (DC) 0.69 (Pulse)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

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

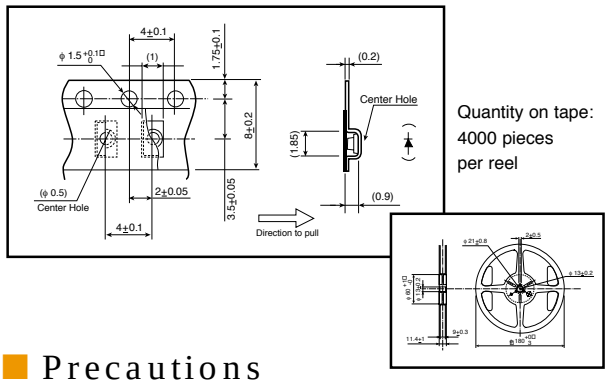
Operation Current Derating Chart (DC)



Spatial Distribution



Taping Specifications



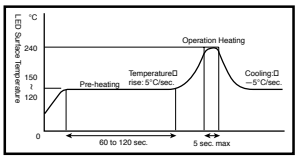
Quantity on tape:
4000 pieces
per reel

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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