



**THE DATASHEET OF
DB1113F-TR**





Product Guide



D_1113F Series, Right Angle InGaN/SiC SMT LED

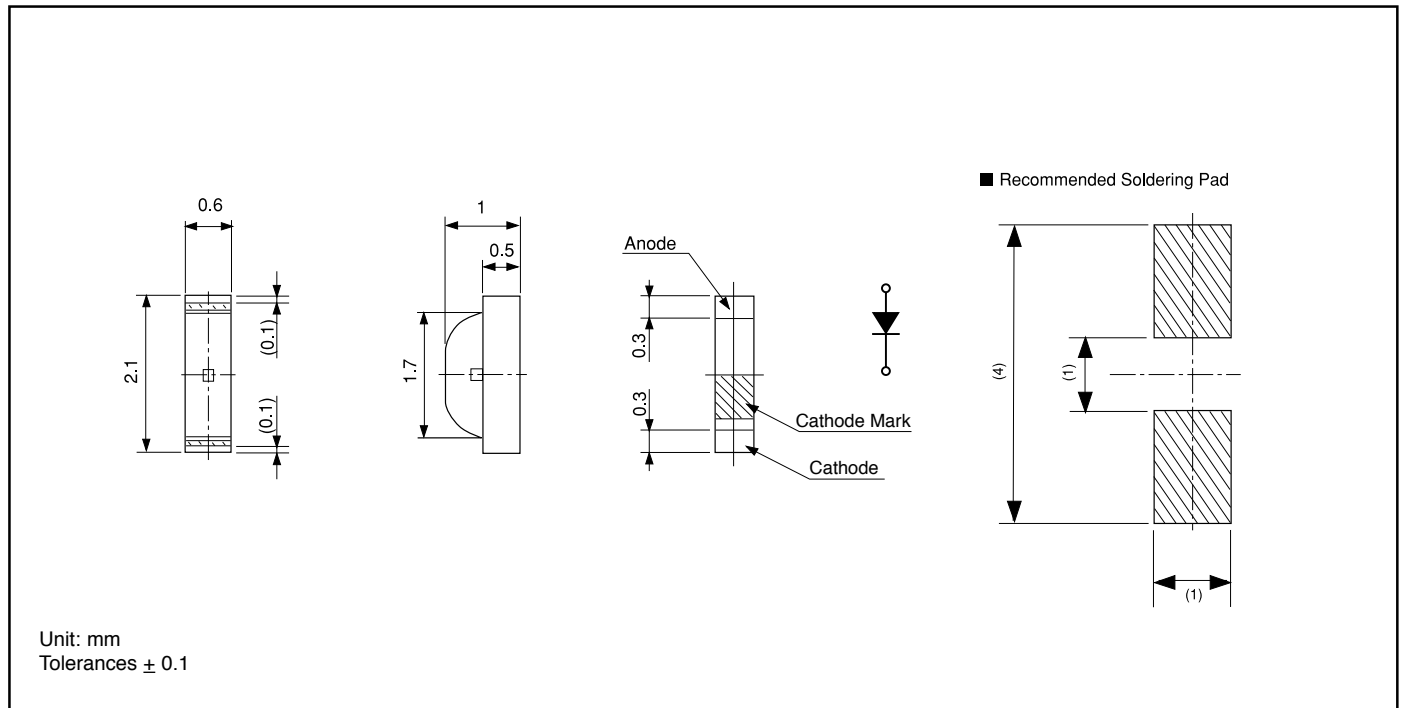
Features

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

Applications

- Portable phone LCD edgelight

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 ($2\theta_{1/2}$)
				MIN.	TYP.	I_F	Peak λ_p TYP.	Dominant λ_d TYP.	Spectral Line Half Width $\Delta\lambda$ TYP.	I_F	TYP.	MAX.	I_F	MAX.	V_R	
DG1113F	InGaN/SiC	Green	Milky White	24	40	10	522	525	30	10	3.3	3.8	10	100	5	130°
DC1113F	InGaN/SiC	Bluish-Green		24	34	10	502	505	30	10	3.3	3.8	10	100	5	
DB1113F	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.

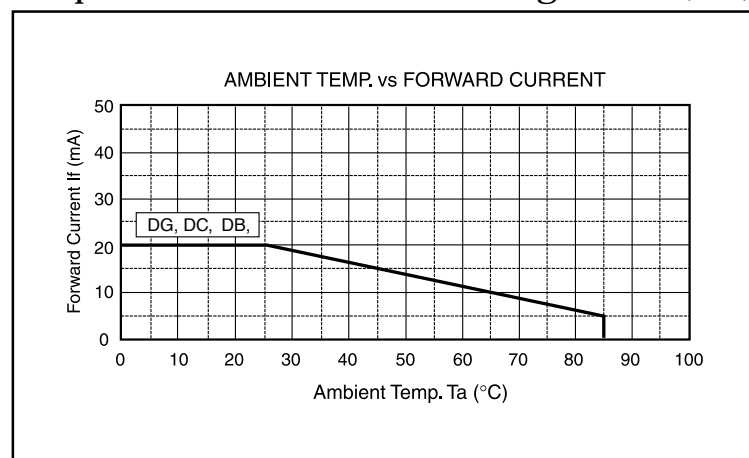
Absolute Maximum Ratings

(Ta=25°C)

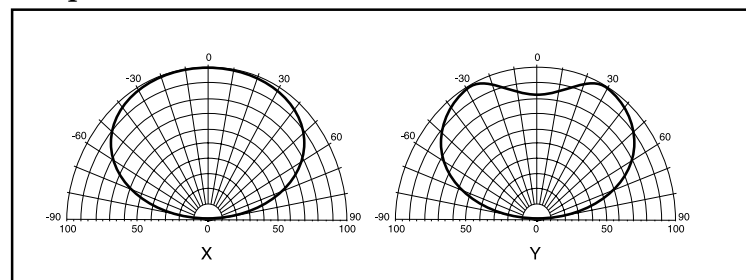
Item	Symbol	Green	Bluish-Green	Blue	Units
		DG	DC	DB	
Power Dissipation	Pd	76	76	76	mW
Forward Current	I _F	20	20	20	mA
Peak Forward Current	I _{FM}	48	48	48	mA
Reverse Voltage	V _R	5	5	5	V
Operating Temperature	Topr	-40 to +85			°C
Storage Temperature	Tstg	-40 to +100			°C
Derating*	ΔI _F	0.28 (DC)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

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

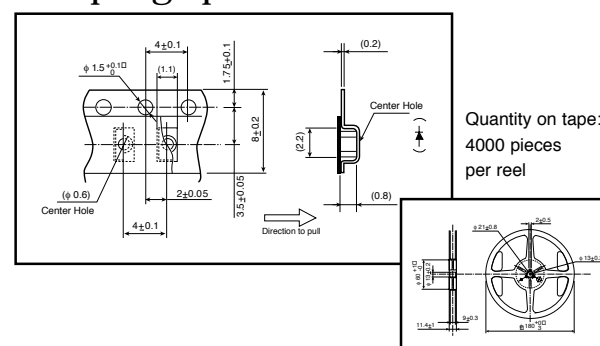
Operation Current Derating Chart (DC)



Spatial Distribution



Taping Specifications

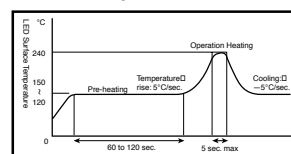


Precautions

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. PGD1113F-0301

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