

# PRODUCT GUIDE

## Blue LED Chip Type EB1112H



### FEATURES

- Bright blue LED based on GaN structure on SiC substrate
- Wide viewing angle – 140° typ.

### APPLICATIONS

- High-beam indicator for automotive use
- Cold side of the HVAC (Heat, Ventilation and A/C) control
- Indoor/outdoor full-color signboard
- Backlighting for automotive dashboard
- LCD backlighting

### ABSOLUTE MAXIMUM RATINGS

Ta=25°C

Item	Symbol	Maximum Rating	Units
Power Dissipation	Pd	90	mW
Forward Current	I <sub>F</sub>	20	mA
Peak Forward Current	I <sub>FM</sub>	48	mA
Reverse Voltage	V <sub>R</sub>	5	V
Operating Temperature	T <sub>opr</sub>	- 30 - +85	°C
Storage Temperature	T <sub>stg</sub>	- 40 - +100	°C

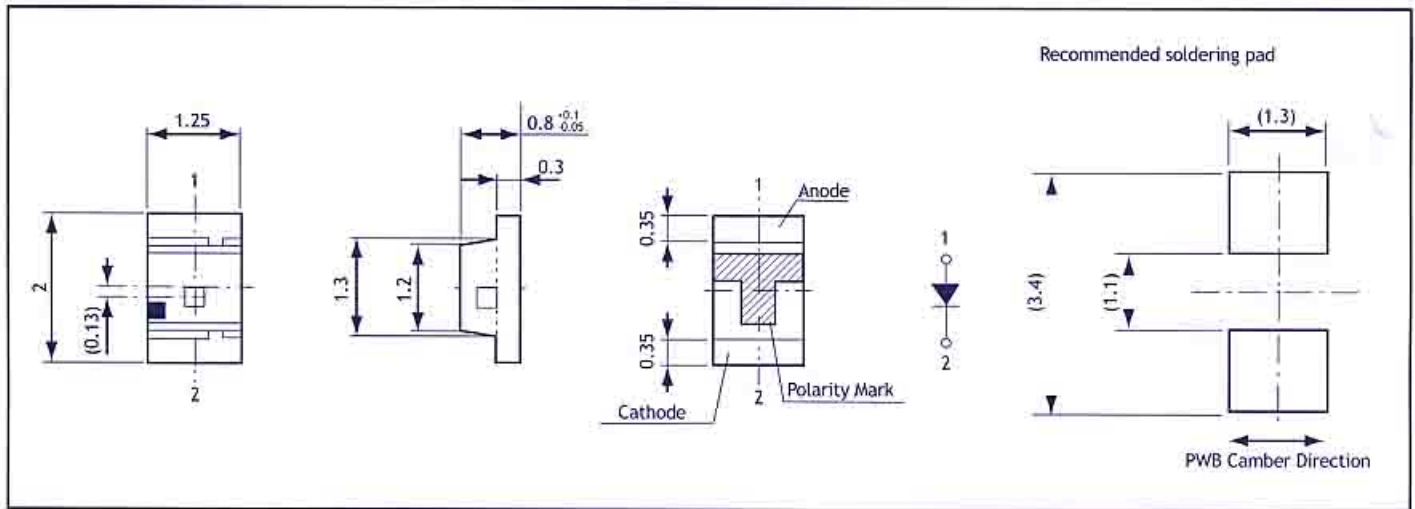
• The current derating for operating above 25°C is 0.28mA/°C (DC) drive and 0.69mA/°C for pulse drive.  
 • I<sub>FM</sub> applies for the condition : pulse width ≤ 1msec and duty cycle ≤ 1/20

### ELECTRO-OPTICAL CHARACTERISTICS

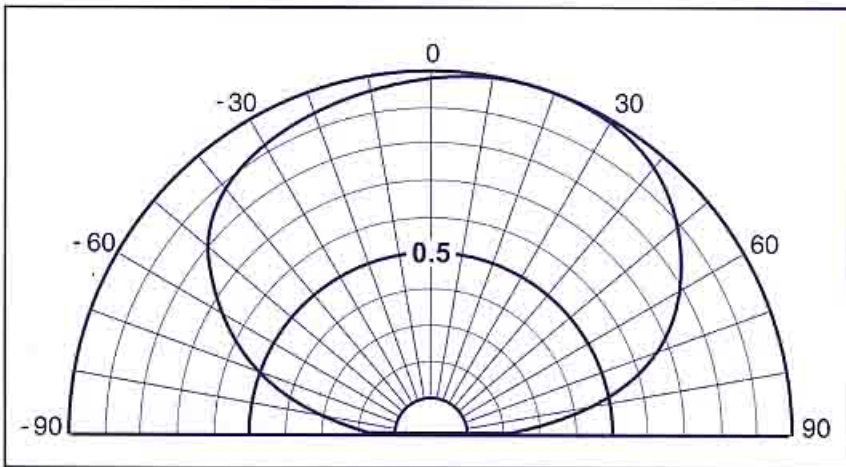
Ta=25°C

Shape (mm)	Type No.	Emitted Color	Lens Color	Forward Voltage V <sub>F</sub> (I <sub>F</sub> = 20mA)		Reverse Current I <sub>R</sub> (V <sub>R</sub> = 5V)	Luminous Intensity I <sub>v</sub> (I <sub>F</sub> = 20mA)		Wave Length (I <sub>F</sub> = 20mA)			Viewing Angle λ <sub>d</sub> (2θ1/2)
				Typ.	Max.		Min.	Typ.	Peak λ <sub>p</sub>	Dominant λ <sub>d</sub>	Spectral Line Half Width Δλ	
2.0 (L) x 1.25 (W) x 0.8 (H)	EB1112H	Blue	Clear Diffused	3.8	4.5	100	3.8	6.4	430	463	65	140
Units				V		μA	mcd		nm			degrees

# MODULE DIMENSIONS



# SPATIAL DISTRIBUTION



# PACKAGE

Type No.	Quantity
EB1112H	4000 pcs./reel

# PRECAUTIONS

The blue LED is sensitive to surge voltage produced when static electricity is discharged. Please follow these handling precautions to prevent damage to the chip and ensure its reliability.

## 1. Soldering conditions

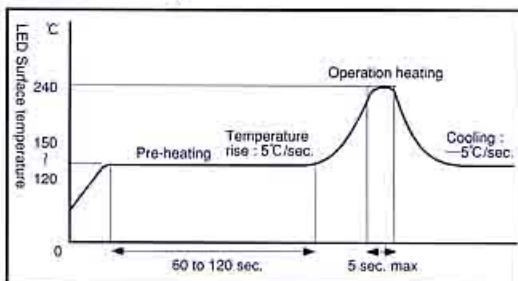
### • Soldering iron

Temperature at tip of iron: 280 °C max. (30W max.)  
Soldering time: 3 sec. max.

### • Dip soldering

Preheating : 100°C max. (resin surface temperature) 60 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 is strongly recommended after confirming there is no problem.
3. Do not let electrically charged material get close to the part (avoid contact with metal when the part is electrically charged).
  4. Be sure to ground all manufacturing machines and measuring instruments.
  5. Avoid any friction and provide an anti-static environment, such as using an electrically conductive mat (below 10<sup>9</sup>Ω)
  6. Persons handling the chip should wear an anti-static wrist strap (electrical resistance of 250K-1MΩ to avoid electric shock).
  7. A low voltage type soldering iron (below 24V) should be used and it should be grounded.

Product specifications subject to change without notice. LED1-0499

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