

**RoHS
Compliant**

Features

- Reflow Solderable
- High Luminous Intensity and Low Power Dissipation
- Good Reliability and Long Life
- Lead Free

Applications

- Optical indicator
- Indoor display
- Backlighting in dashboard and switch
- Flat backlighting for LCD, symbol and display
- General use

Specifications

Dice material	: AlGaInP
Emmiting Colour	: Green
Lens colour	: Water Clear

Electrical and Optical Characteristics at Ta=25°C

Parameter	Symbol	Min.	Typ	Max	Units	Test conditions
Forward voltage	VF	1.7	-	2.3	V	IF=20mA
Reverse Current	IR	-	-	10	uA	VR=5V
Dominant wavelength	λ_d	567	-	577	nm	IF=20mA

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Rating	Units
Power Dissipation	Pd	46	mW
DC Forward Current	IF	20	mA
Peak Forward Current [1]	IFP	75	mA
Reverse Voltage	VR	5	V
Electrostatic Discharge (HBM)	ESD	2000	V
Operating Temperature	Topr	-40 to +85	°C
Storage Temperature	Tstg	-40 to +100	°C

Notes:

1. 1/10 Duty cycle, 0.1ms pulse width.
2. Measurement Errors: Forward Voltage: $\pm 0.1V$
3. The tolerance of wave length $\pm 1nm$

Selection Guide

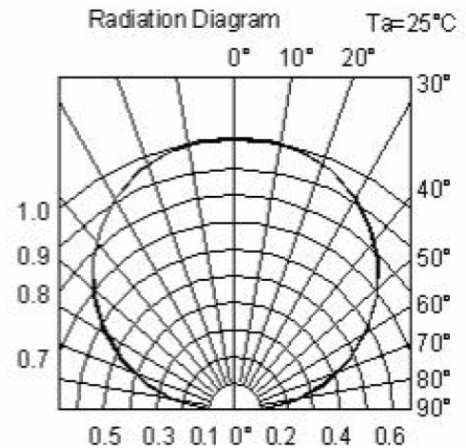
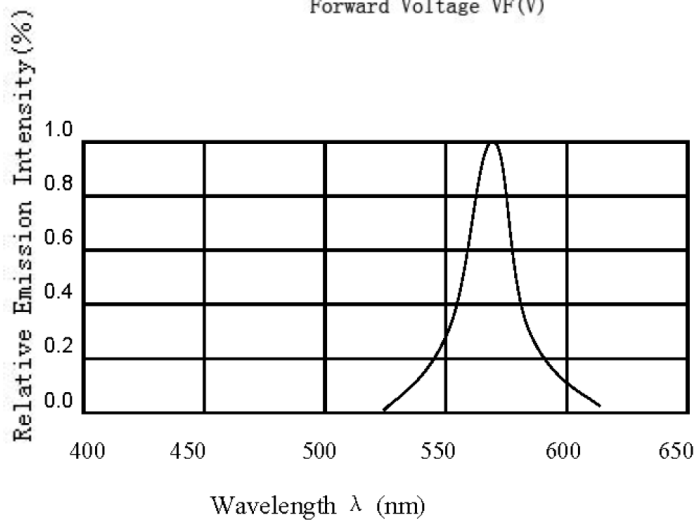
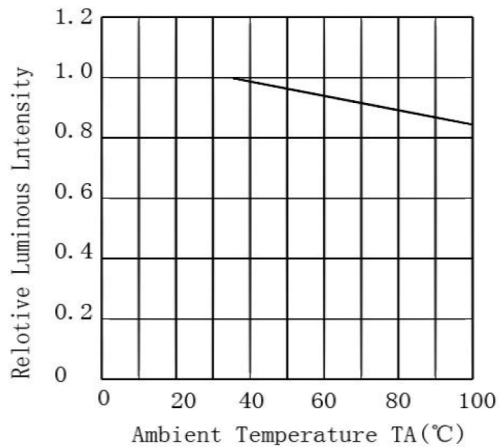
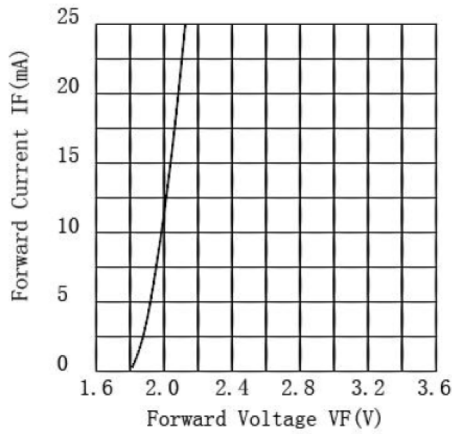
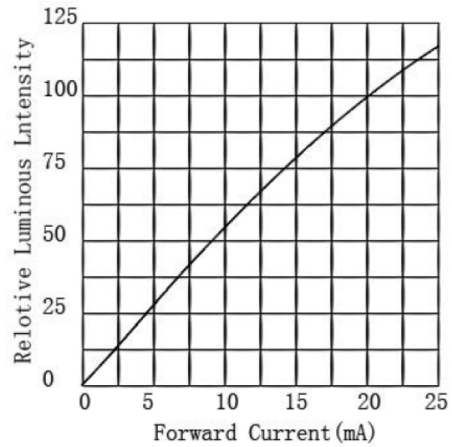
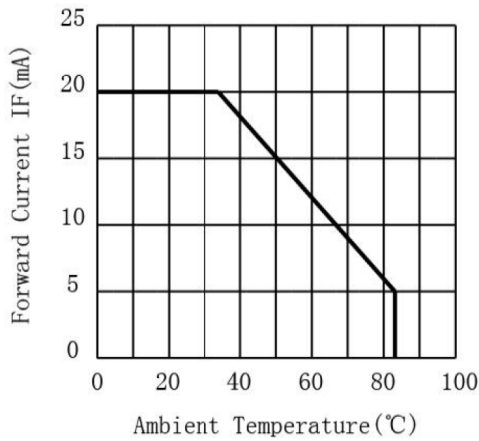
Part Number	Chip materials	Lens Type	Luminous intensity (mcd) @ 20mA			Viewing Angle
			Min	Typ	Max	
MP008286	Green (AlGaInP)	Water Clear	30	-	90	120

Note:

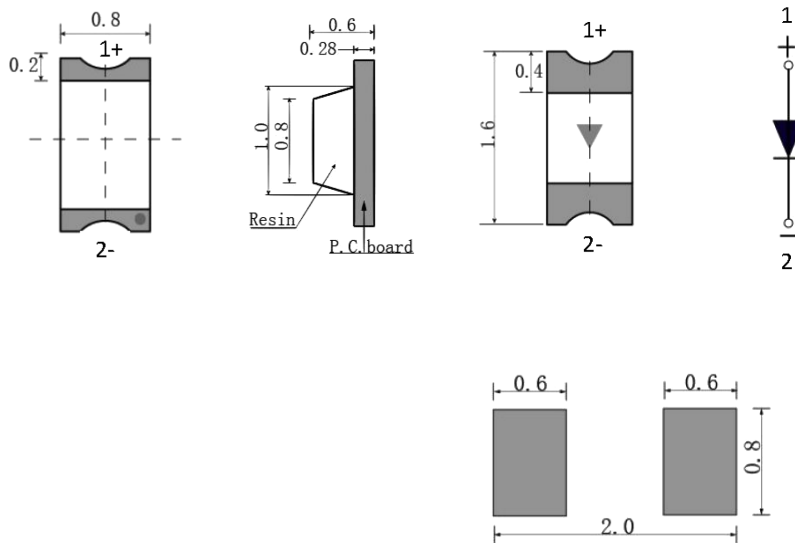
1. 2 θ 1/2 is the angle from optical centerline where the luminous intensity is 2 θ 1/2 the optical centerline value.
2. The above luminous intensity measurement allowance tolerance $\pm 10\%$

Typical optical characteristics curves

Ambient Temperature VS. Forward Current



Dimensions



Notes

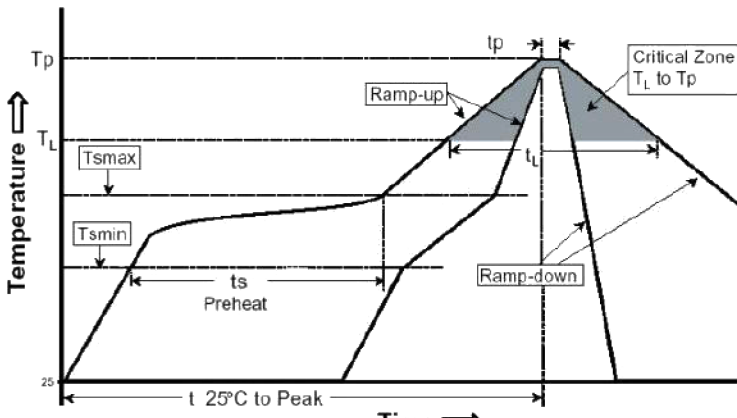
1. All dimension tolerance is $\pm 0.2\text{mm}$ unless otherwise noted.
2. All PCB and markings are subject to change without prior notice.
3. Polarity mark: \blacktriangledown or T

Dimensions : Millimetres

SMT Reflow Soldering Instructions

1. High temperature welding recommended no more than 2 times
2. When soldering , do not put stress on the LEDs during heating
3. Reflow temperature distribution (Acc.to J-STD-020D)

Profile feature	Sn-Pb Eutectic Assembly		Pb-Free Assembly	
	Large body	Small body	Large body	Small body
Average ramp-up rate (TL to Tp)	3°C / second max.			
Preheat	100°C		150°C	
-Temperature Min (TSmin)	150°C		200°C	
-Temperature Max (TSmax)	60 to 120 seconds		60 to 180 seconds	
-Time (min to max) (ts)				
Tsmax to TL	3°C / second max.			
-Ramp-up Rate				
Time maintained above	183°C		217°C	
-Temperature (TL)	60 to 150 seconds		60 to 150 seconds	
-Time (tL)				
Peak Temperature (Tp)	225 $\pm 0/-5^\circ\text{C}$	240 $\pm 0/-5^\circ\text{C}$	245 $\pm 0/-5^\circ\text{C}$	260 $\pm 0/-5^\circ\text{C}$
Time within 5°C of actual Peak Temperature (tp)	10 to 30 seconds		10 to 30 seconds	20 to 40 seconds
Ramp-down Rate	6°C / second max.			
Time 25°C to Peak Temperature	6 minutes max.		8 minutes max.	



Soldering iron

1. When hand soldering, the temperature of the iron must be less than 350°C for 3 seconds
2. The hand solder should be done only once

Part Number Table

Description	Part Number
Chip LED, Green, 577nm, 120°, 90mcd, Surface Mount	MP008286

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