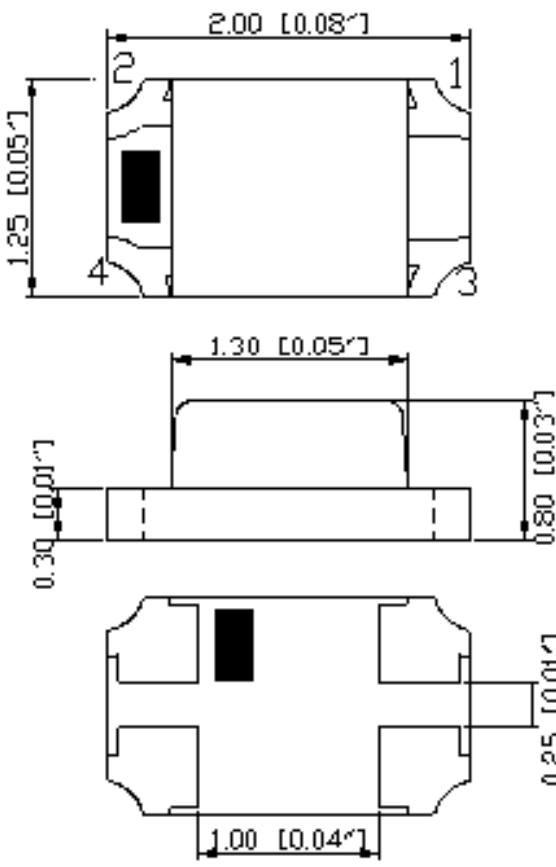
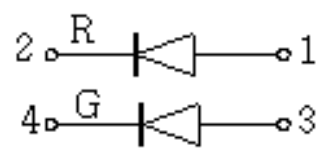


**SPECIFICATIONS** **CSB85BR2G2C**

### OUTLINES DIMENSIONS





ITEM	MATERIALS	
Resin (mold)	Epoxy	
Lens Color	Water Transparent	
Dice	Red	AlGaInP/GaAs
	Green	AlGaInP/GaAs

Notes:

- All Dimensions are in millimeters (inches).
- Tolerance is  $\pm 0.25\text{mm}$  (0.01") unless otherwise noted.
- Specifications are subject to change without notice.

Part Number	Chip Material	Color of Emission	Lens Type	Viewing Angle
CSB85BR2G2C	InGaAlP	Red	Water Clear	140°
	InGaAlP	Green		



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**ABSOLUTE MAXIMUM RATINGS - RED (InGaAlP)**
**(TA=25°C)**

Parameter	Symbol	Max Rating	Unit
Power Dissipation	PD	75	mW
Pulse Forward Current	IFP	125	mA
Continuous Forward Current	IF	30	mA
Reverse Voltage	VR	5	V
Operating Temperature Range	TOPR	-40~+80	°C
Storage Temperature Range	TSTG	-40~+85	°C
IFP = Pulse Width ≤ 10 ms, Duty Ratio ≤ 1/10. Soldering Condition: 260 °C/ 5sec			

**OPTICAL-ELECTRICAL CHARACTERISTICS - RED (InGaAlP)**
**(TA=25°C)**

Parameter	Symbol	Test Condition	Value			Unit
			Min	Typ	Max	
Luminous Intensity	IV	IF = 20mA	40	70	-	mcd
Forward Voltage	VF	IF = 20mA	-	2.0	2.5	V
Reverse Leakage Current	IR	VR = 40V	-	-	10	µA
Peak Wavelength	λP	IF = 20mA	-	640	-	nm
Dominant Wavelength	λD	IF = 20mA	-	630	-	nm
Spectral Radiation Bandwidth	Δλ	IF = 20mA	-	18	-	nm



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**ABSOLUTE MAXIMUM RATINGS - GREEN (InGaAlP)**
**(TA=25°C)**

Parameter	Symbol	Max Rating	Unit
Power Dissipation	PD	75	mW
Pulse Forward Current	IFP	125	mA
Continuous Forward Current	IF	30	mA
Reverse Voltage	VR	5	V
Operating Temperature Range	TOPR	-40~+80	°C
Storage Temperature Range	TSTG	-40~+85	°C
IFP = Pulse Width ≤ 10 ms, Duty Ratio ≤ 1/10. Soldering Condition: 260 °C/ 5sec			

**OPTICAL-ELECTRICAL CHARACTERISTICS - GREEN (InGaAlP)**
**(TA=25°C)**

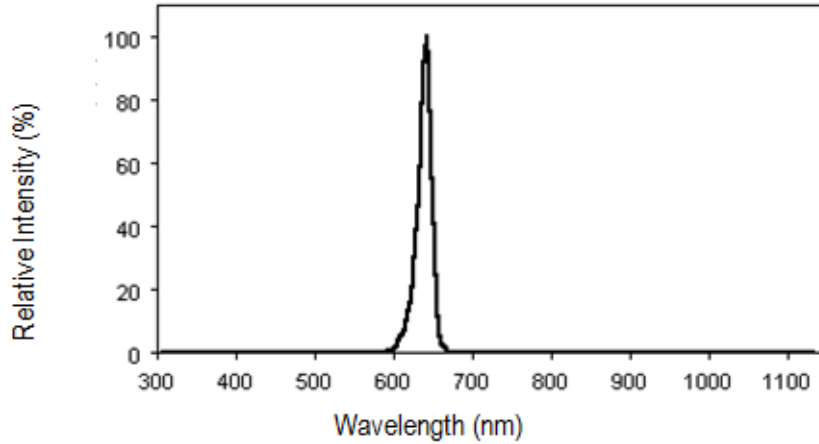
Parameter	Symbol	Test Condition	Value			Unit
			Min	Typ	Max	
Luminous Intensity	IV	IF = 20mA	25	40	-	mcd
Forward Voltage	VF	IF = 20mA	-	2.0	2.5	V
Reverse Leakage Current	IR	VR = 40V	-	-	10	µA
Peak Wavelength	λP	IF = 20mA	-	572	-	nm
Dominant Wavelength	λD	IF = 20mA	-	570	-	nm
Spectral Radiation Bandwidth	Δλ	IF = 20mA	-	16	-	nm



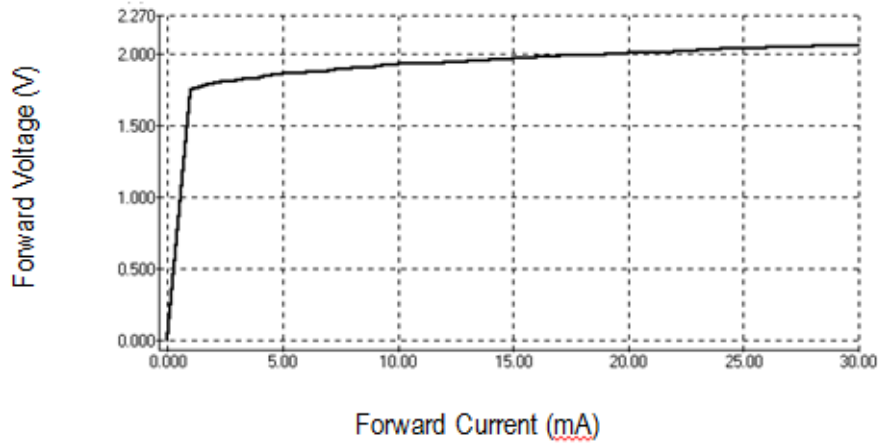
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**OPTICAL CHARACTERISTIC CURVES - RED**

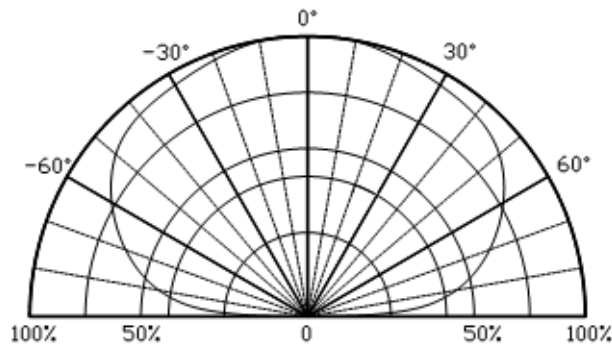
Relative Intensity vs. Wavelength



Forward Current vs. Forward Voltage

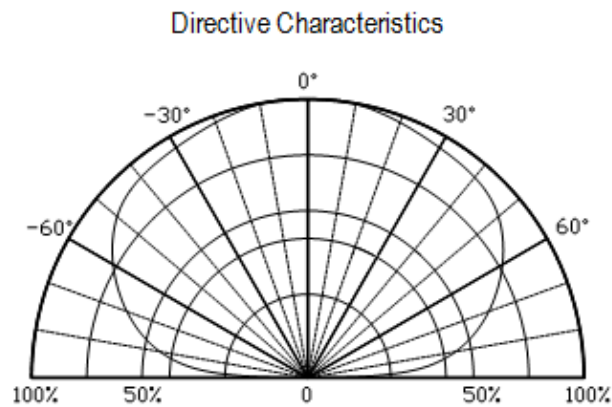
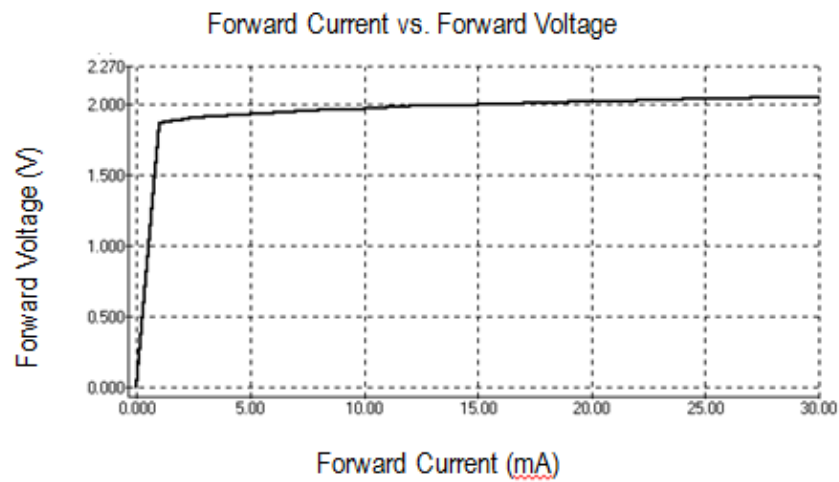
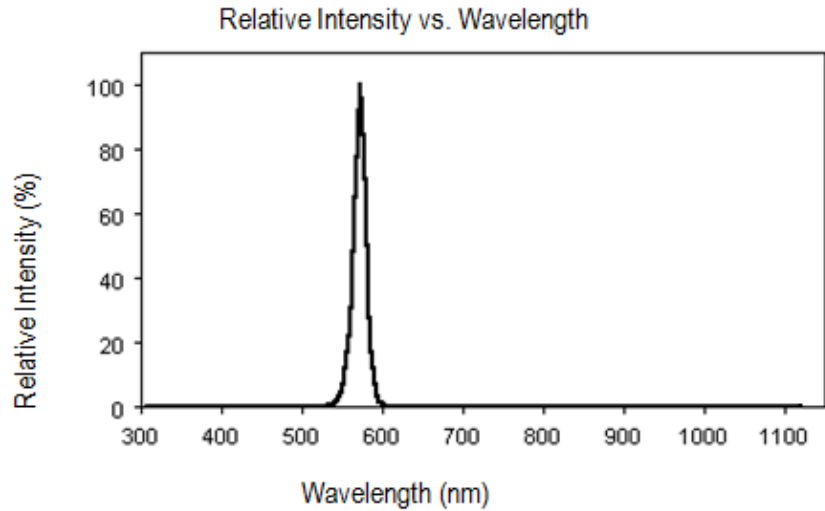


Directive Characteristics



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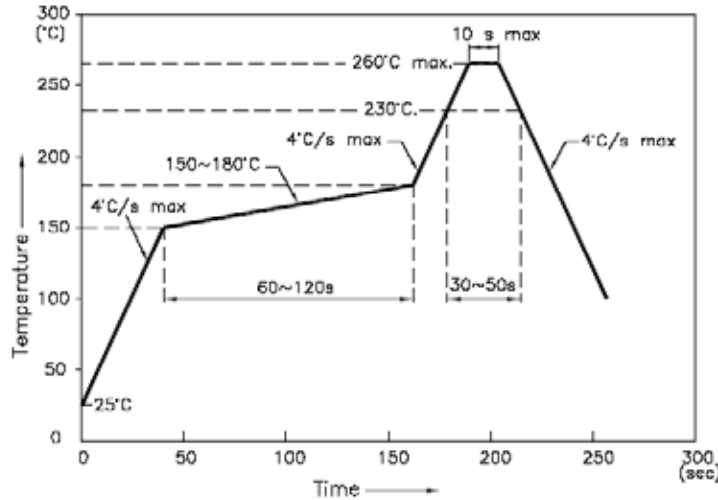
**OPTICAL CHARACTERISTIC CURVES - GREEN**



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## RECOMMENDED SOLDERING PROFILE

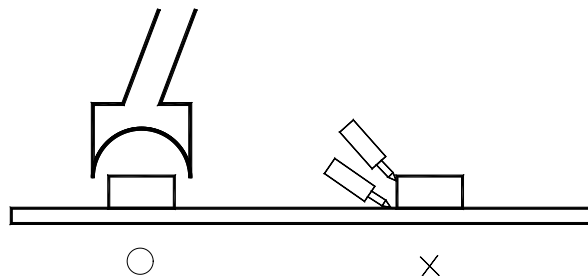
### REFLOW PROFILE



1. We recommend the reflow temperature 245°C (±5°C). The maximum soldering temperature should be limited to 260°C.
2. Do not cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.
  - Soldering iron
  - Basic spec is ≤ 5sec when 260°C. If temperature is higher, time should be shorter
  - (+10°C → -1sec). Power dissipation of iron should be smaller than 20W, and temperatures should be controllable. Surface temperature of the device should be under 230°C.

#### Rework

1. Customer must finish rework within 5 sec under 260°C.
2. The head of iron cannot touch copper foil
3. Twin-head type is preferred.



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