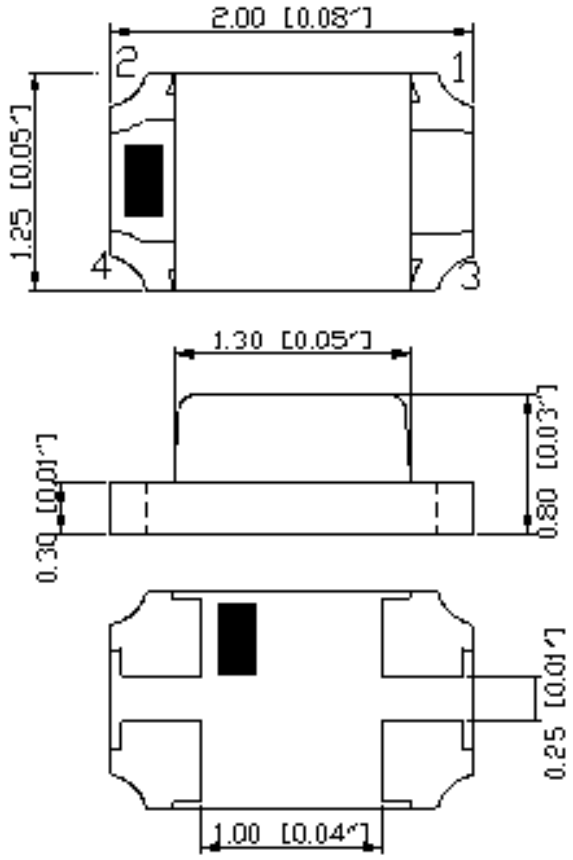
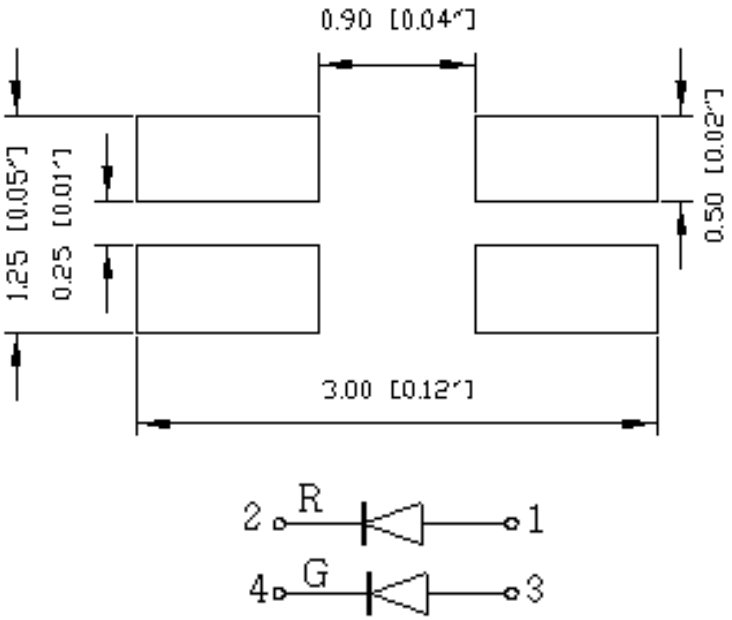
SPECIFICATIONS CSB85BR2G2C

OUTLINES DIMENSIONS





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

Notes:
1. All Dimensions are in millimeters (inches).
2. Tolerance is ± 0.25mm (0.01") unless otherwise noted.
3. 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	P_D	75	mW
Pulse Forward Current	I_{FP}	125	mA
Continuous Forward Current	I_F	30	mA
Reverse Voltage	V_R	5	V
Operating Temperature Range	T_{OPR}	-40~+80	°C
Storage Temperature Range	T_{STG}	-40~+85	°C
I_{FP} = 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	I_V	I_F = 20mA	40	70	-	mcd
Forward Voltage	V_F	I_F = 20mA	-	2.0	2.5	V
Reverse Leakage Current	I_R	V_R = 40V	-	-	10	μA
Peak Wavelength	λ_P	I_F = 20mA	-	640	-	nm
Dominant Wavelength	λ_D	I_F = 20mA	-	630	-	nm
Spectral Radiation Bandwidth	$\Delta\lambda$	I_F = 20mA	-	18	-	nm

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

Parameter	Symbol	Max Rating	Unit
Power Dissipation	P_D	75	mW
Pulse Forward Current	I_{FP}	125	mA
Continuous Forward Current	I_F	30	mA
Reverse Voltage	V_R	5	V
Operating Temperature Range	T_{OPR}	-40~+80	°C
Storage Temperature Range	T_{STG}	-40~+85	°C
I_{FP} = Pulse Width ≤ 10 ms, Duty Ratio ≤1/10. Soldering Condition: 260 °C/ 5sec			

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

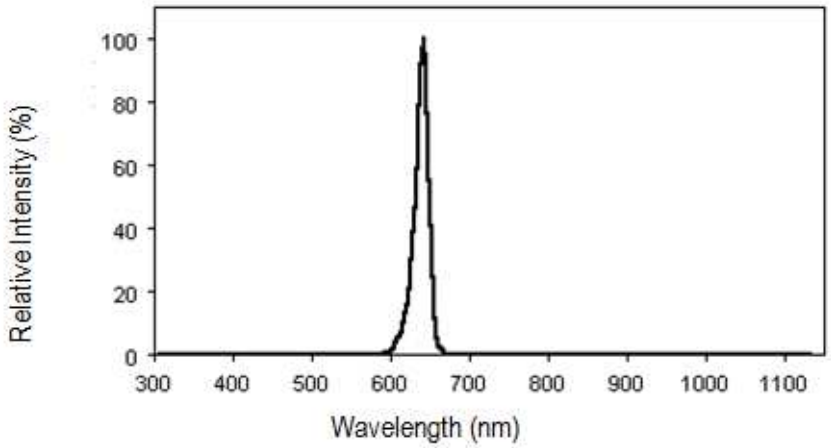
Parameter	Symbol	Test Condition	Value			Unit
			Min	Typ	Max	
Luminous Intensity	I_V	I_F = 20mA	25	40	-	mcd
Forward Voltage	V_F	I_F = 20mA	-	2.0	2.5	V
Reverse Leakage Current	I_R	V_R = 40V	-	-	10	μA
Peak Wavelength	λ_P	I_F = 20mA	-	572	-	nm
Dominant Wavelength	λ_D	I_F = 20mA	-	570	-	nm
Spectral Radiation Bandwidth	$\Delta\lambda$	I_F = 20mA	-	16	-	nm

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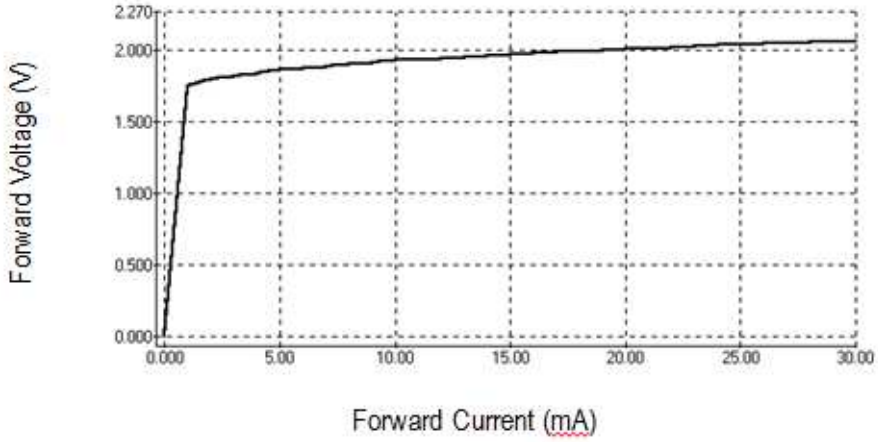
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OPTICAL CHARACTERISTIC CURVES - RED

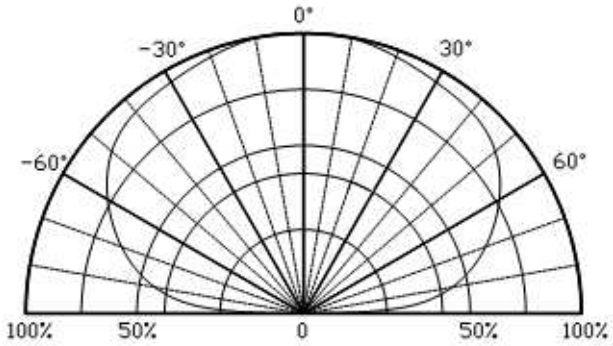
Relative Intensity vs. Wavelength



Forward Current vs. Forward Voltage



Directive Characteristics

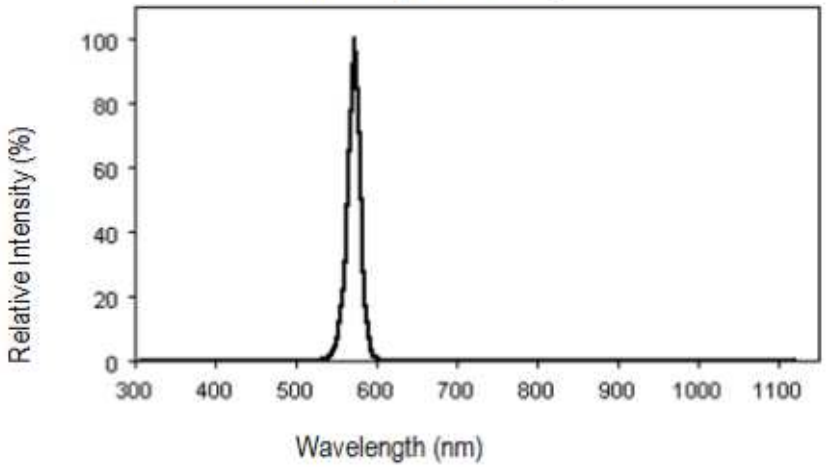


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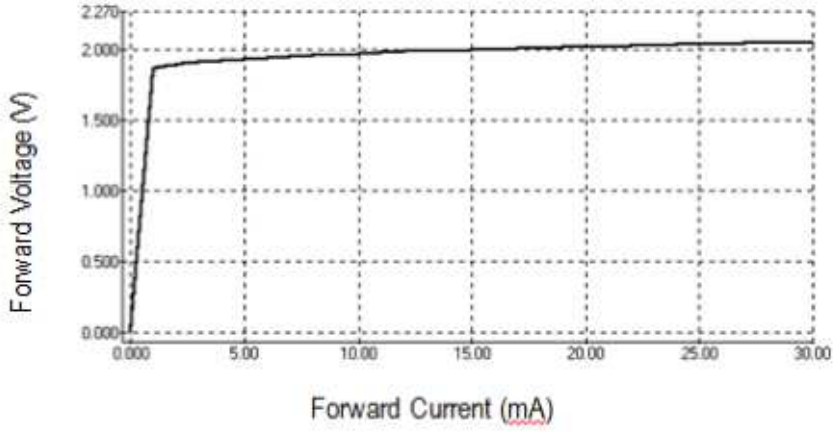
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OPTICAL CHARACTERISTIC CURVES - GREEN

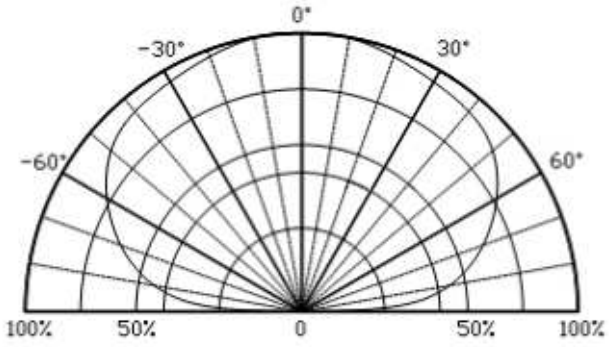
Relative Intensity vs. Wavelength



Forward Current vs. Forward Voltage



Directive Characteristics

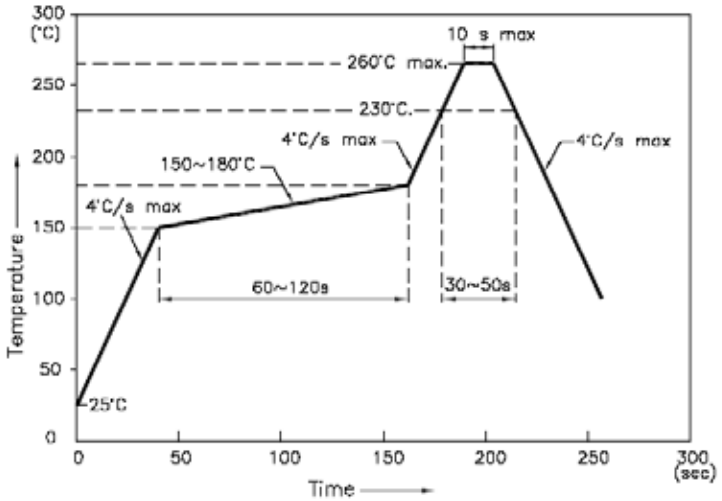


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RECOMMENDED SOLDERING PROFILE

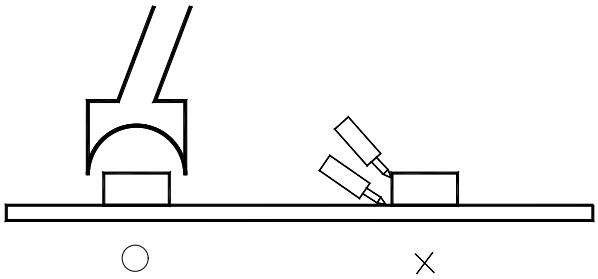
REFLOW PROFILE



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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