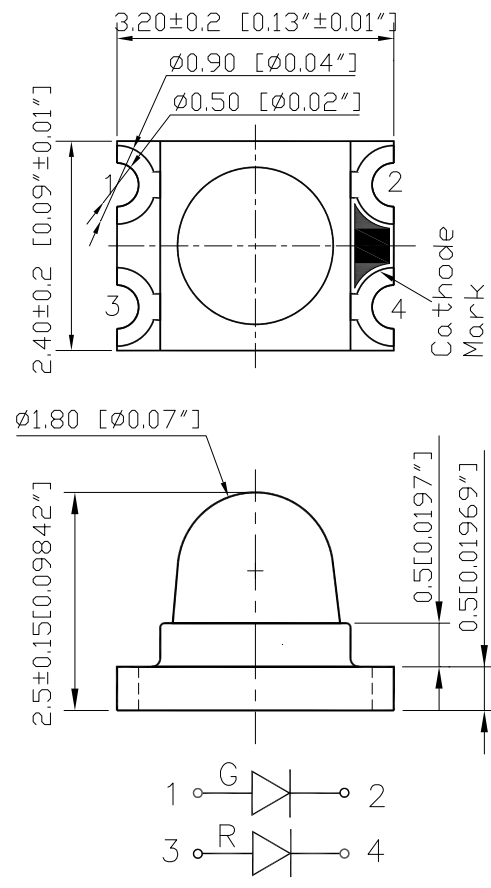
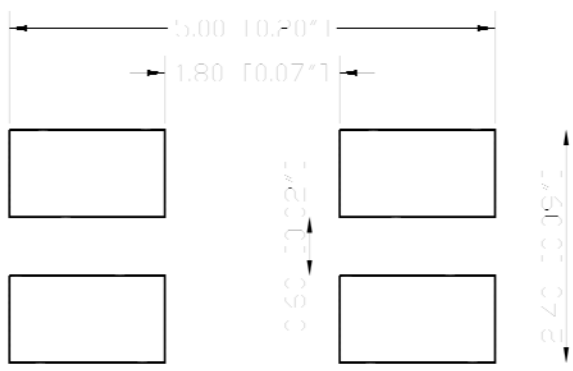


SPECIFICATIONS **CSDB131R2G2C**
OUTLINES DIMENSIONS

RECOMMEND PAD LAYOUT


ITEM	MATERIALS	
Resin (mold)	Epoxy	
Lens color	Water transparent	
Dice	Red	AlGaInP/GaAs
	Green	AllnGaP

- 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
CSDB131R2G2C	InGaAIP	Red	Water Clear	60°
	InGaAIP	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	500	900	-	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	-	630	-	nm
Dominant Wavelength	λ _D	I _F = 20mA	-	620	-	nm
Spectral Radiation Bandwidth	Δλ	I _F = 20mA	-	20	-	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)

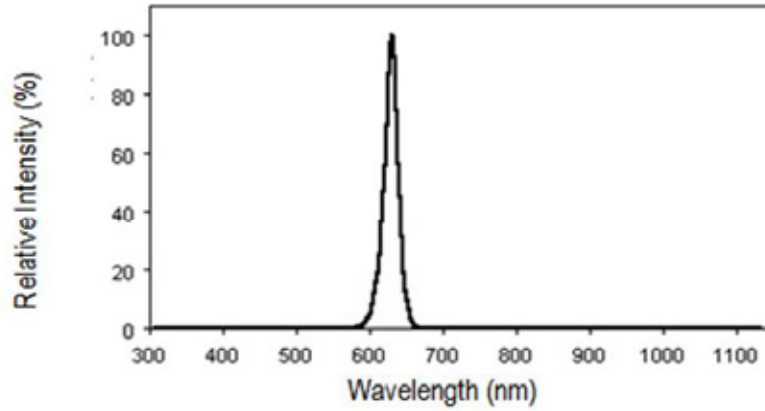
Parameter	Symbol	Test Condition	Value			Unit
			Min	Typ	Max	
Luminous Intensity	I _V	I _F = 20mA	80	200	-	mcd
Forward Voltage	V _F	I _F = 20mA	-	2.0	2.5	V
Reverse Leakage Current	I _R	V _R = 40V	-	-	10	μA
Peak Wavelength	λ _P	I _F = 20mA	-	575	-	nm
Dominant Wavelength	λ _D	I _F = 20mA	-	570	-	nm
Spectral Radiation Bandwidth	Δλ	I _F = 20mA	-	20	-	nm



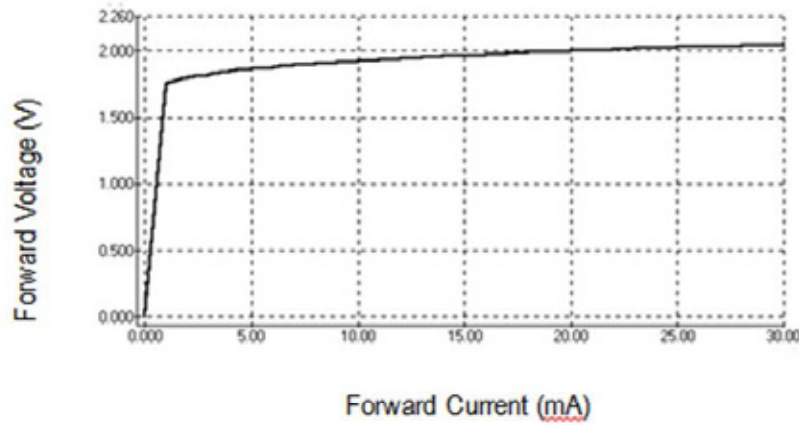
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OPTICAL CHARACTERISTIC CURVES - RED

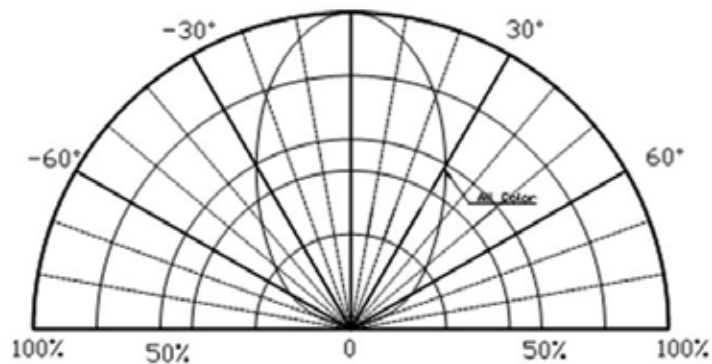
Relative Intensity vs. Wavelength



Forward Current vs. Forward Voltage

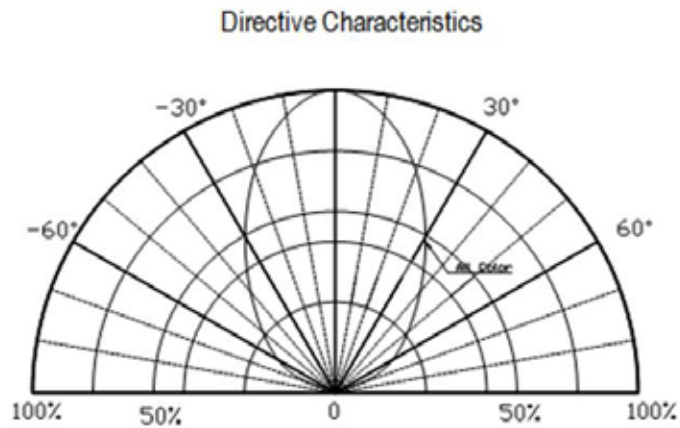
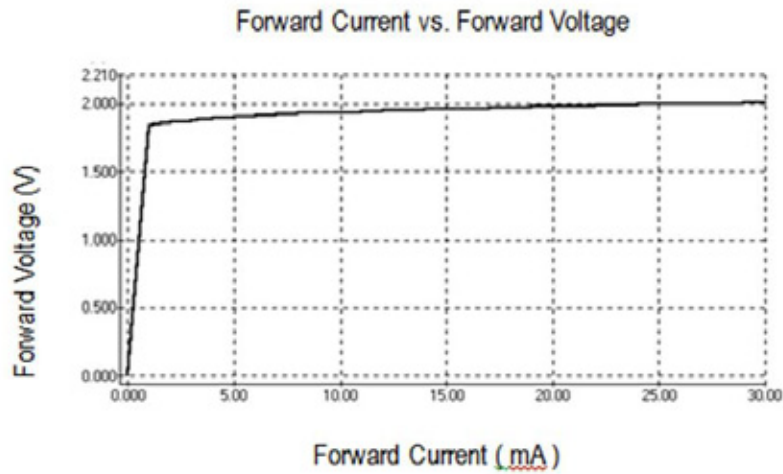
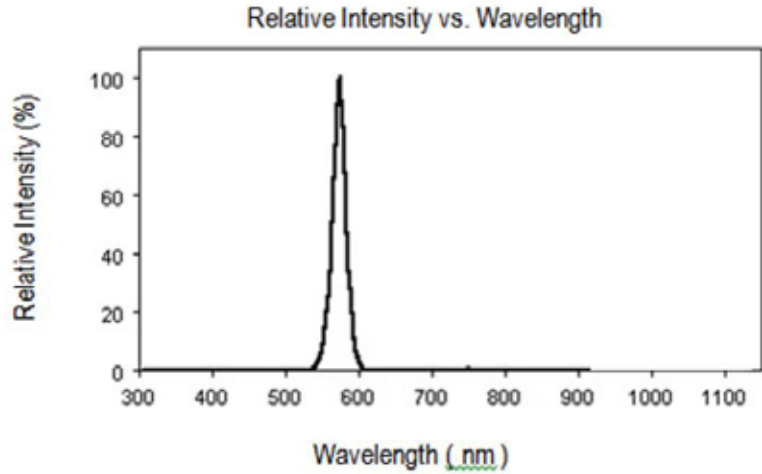


Directive Characteristics



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OPTICAL CHARACTERISTIC CURVES - GREEN

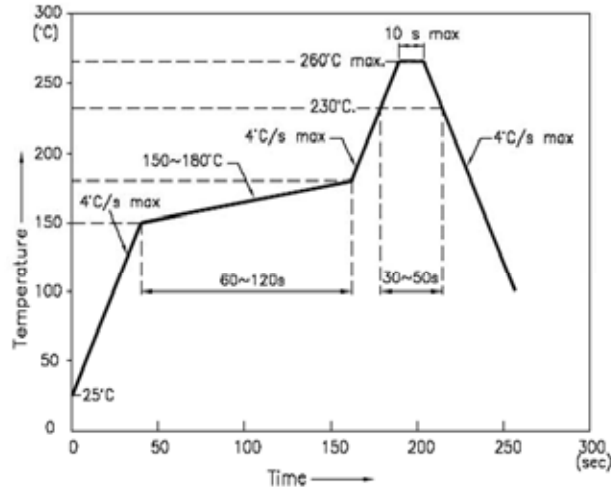


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RECOMMENDED SOLDERING PROFILE

REFLOW PROFILE

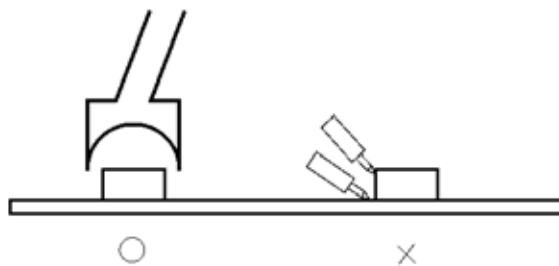
- Reflow Temp/Time



Notes:

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 ≤ 5 sec when 260°C. If temperature is higher, time should be shorter (+10°C → -1 sec). Power dissipation of iron should be smaller than 20W and temperature should be controllable. Surface temperature of 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.



AVOID RUBBING OR SCRAPING THE RESIN BY ANY OBJECT DURING HIGH TEMPERATURE SUCH AS REFLOW AND/OR SOLDER etc.



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