

# CSB63CR202C Datasheet

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DiGi Electronics Part Number	CSB63CR202C-DG
Manufacturer	<a href="#">ChromeLED</a>
Manufacturer Product Number	CSB63CR202C
Description	LED RED/ORG CLEAR 0603 CHIP SMD
Detailed Description	Orange, Red 600nm Orange, 625nm Red LED Indication - Discrete 2V 0603 (1608 Metric)

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## Purchase and inquiry

Manufacturer Product Number:

CSB63CR202C

Series:

-

Color:

Orange, Red

Lens Color:

Colorless

Millicandela Rating:

500mcd Orange, 350mcd Red

Lens Size:

1.00mm x 0.80mm

Current - Test:

20mA

Mounting Type:

Surface Mount

Wavelength - Peak:

-

Package / Case:

0603 (1608 Metric)

Size / Dimension:

1.60mm L x 0.80mm W

Manufacturer:

ChromeLED

Product Status:

Active

Configuration:

Standard

Lens Transparency:

Clear

Lens Style:

Rectangle with Flat Top

Voltage - Forward (Vf) (Typ):

2V

Viewing Angle:

120°

Wavelength - Dominant:

600nm Orange, 625nm Red

Features:

-

Supplier Device Package:

Chip LED

Height (Max):

0.40mm

## Environmental & Export classification

RoHS Status:

ROHS3 Compliant

ECCN:

EAR99

Moisture Sensitivity Level (MSL):

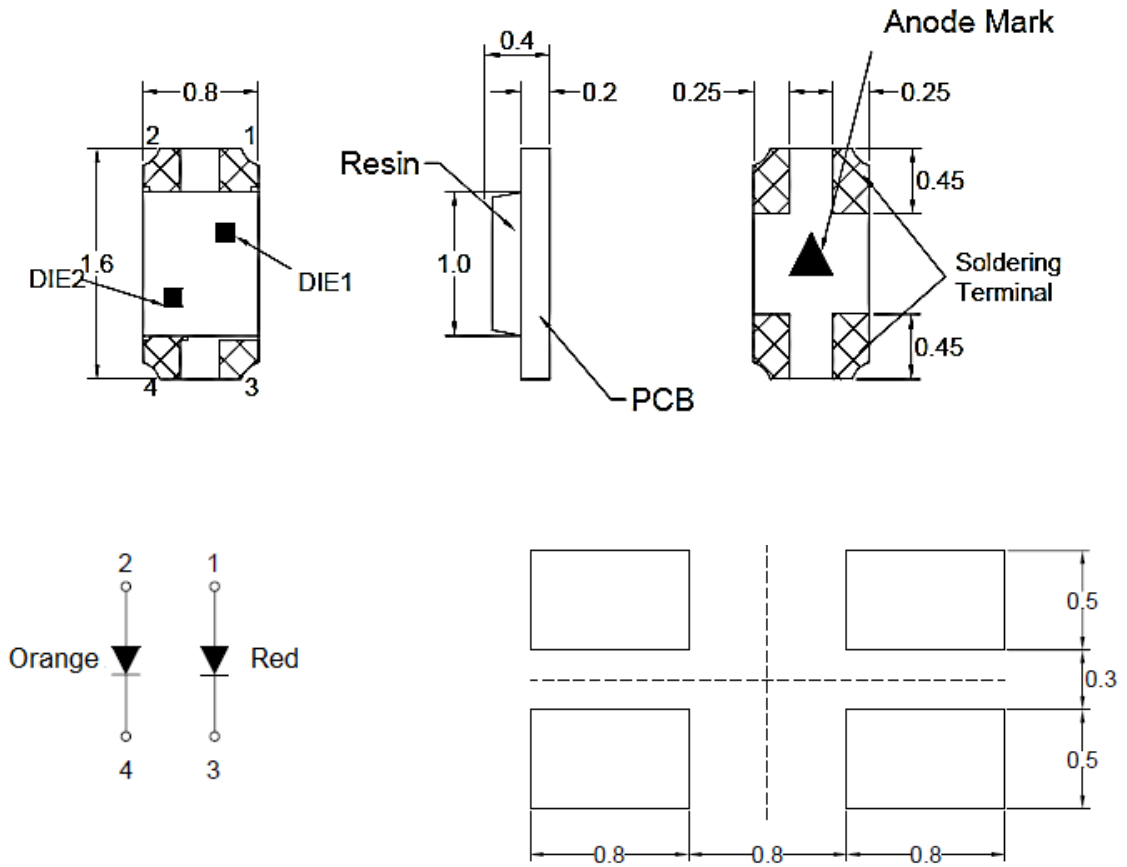
2 (1 Year)

HTSUS:

8541.41.0000

## SPECIFICATIONS CSB63CR202C

### OUTLINES DIMENSIONS



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

Part Number	Chip Material	Color of Emission	Lens Type	Viewing Angle
CSB63CR202C	InGaAlP	Red/Orange	Water Clear	130°



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**ABSOLUTE MAXIMUM RATINGS****(TA=25°C)**

Parameter	Symbol	Color	Max Rating	Unit
Power Dissipation	P <sub>D</sub>	Red	78	mW
		Orange		
Pulse Current Forward Current	I <sub>FP</sub>	Red	60	mA
		Orange		
Continuous Forward Current	I <sub>F</sub>	Red	30	mA
		Orange		
Reverse Voltage	V <sub>R</sub>	5		V
Operating Temperature Range	T <sub>OPR</sub>	-40~+85		°C
Storage Temperature Range	T <sub>STG</sub>	-40~+100		°C

I<sub>FP</sub> = Pulse Width ≤ 10 ms, Duty Ratio ≤ 1/8. Soldering Condition: 260 °C/ 5sec

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

Parameter	Symbol	Test Con- dition	Color	Value			Unit
				Min	Typ	Max	
Luminous Intensity	I <sub>V</sub>	I <sub>F</sub> = 20mA	Red	200	350	-	mcd
			Orange	320	500	-	
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 20mA	Red	-	2.0	2.6	V
			Orange	-	2.0	2.6	
Reverse Leakage Current	I <sub>R</sub>	V <sub>R</sub> = 5V	Red	-	-	10	μA
			Orange	-	-	10	
Viewing Angle	2θ <sub>1/2</sub>	I <sub>F</sub> = 10mA	Red	-	120	-	deg
			Orange	-	120	-	
Dominant Wavelength	λ <sub>D</sub>	I <sub>F</sub> = 20mA	Red	618	-	630	nm
			Orange	598	-	606	

\*Tolerance of viewing angle: -10 / +5 deg.



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# OPTICAL CHARACTERISTIC CURVES (RED)

Fig.1 Forward current vs. Forward Voltage

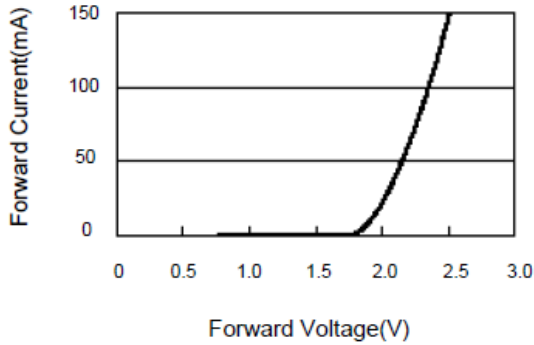


Fig.2 Luminous Intensity vs. Forward Current

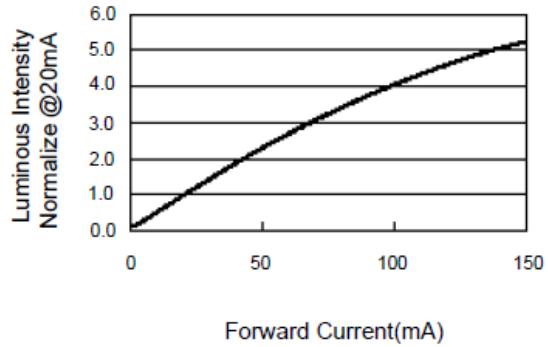


Fig.3 Forward Voltage vs. Temperature

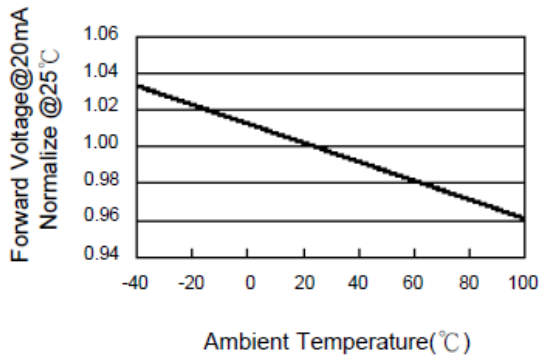


Fig.4 Luminous Intensity vs. Temperature

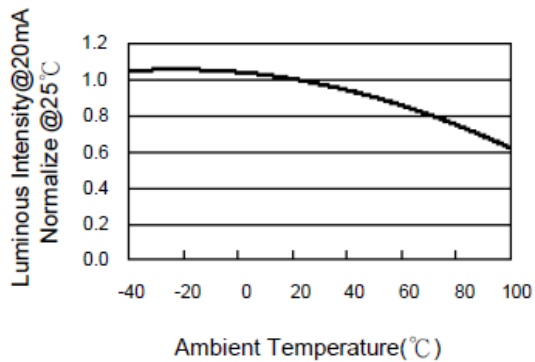


Fig.5 Relative Intensity vs. Wavelength

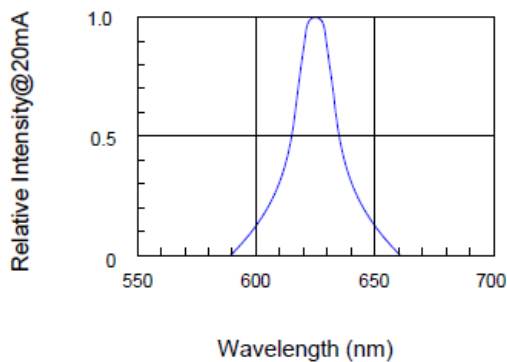
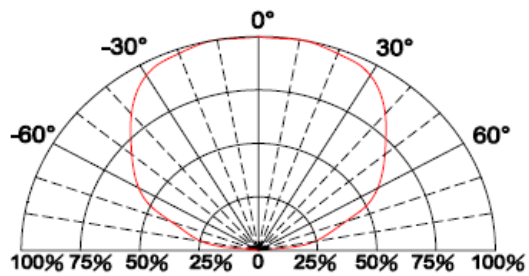


Fig.6 Directive Radiation



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## OPTICAL CHARACTERISTIC CURVES (ORANGE)

Fig.1 Forward current vs. Forward Voltage

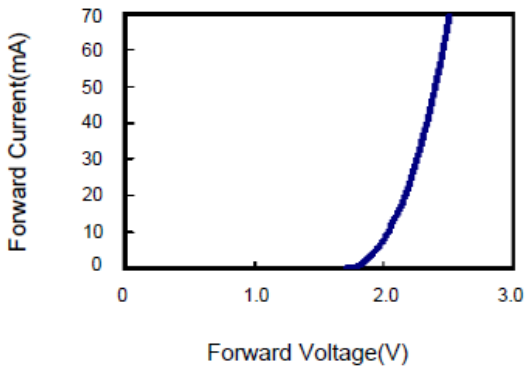


Fig.2 Relative Intensity vs. Forward Current

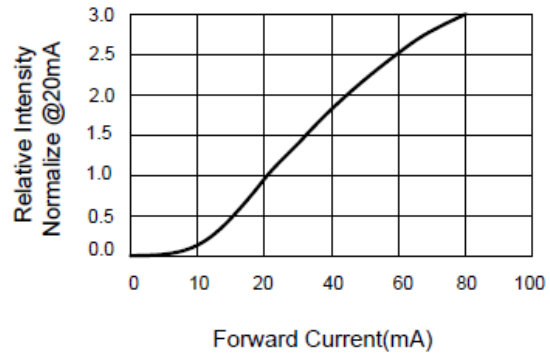


Fig.3 Forward Voltage vs. Temperature

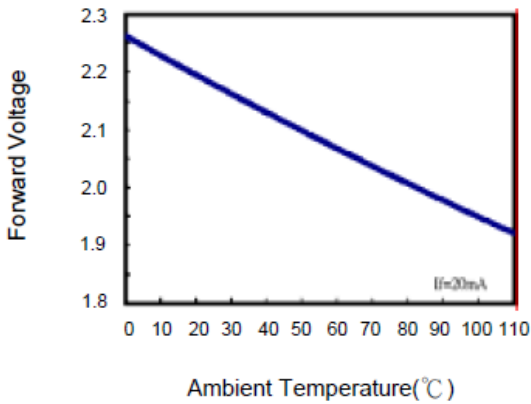


Fig.4 Relative Intensity vs. Temperature

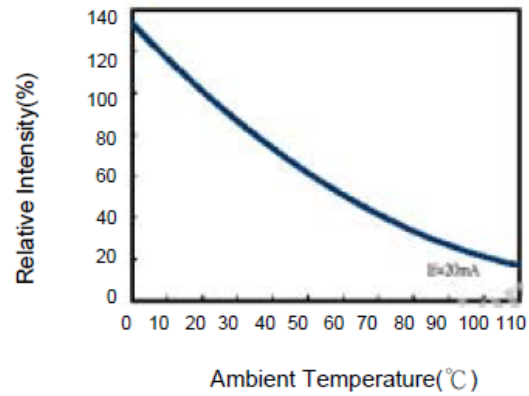


Fig.5 Relative Intensity vs. Wavelength

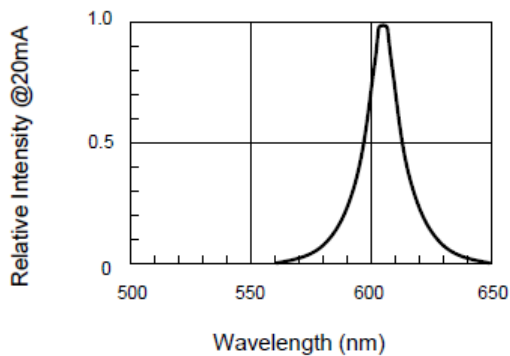
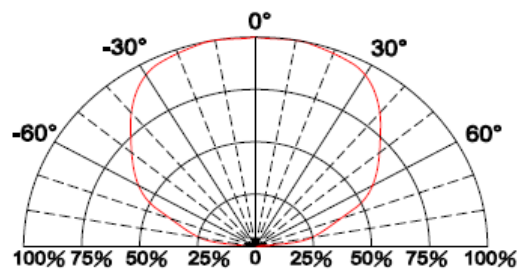


Fig.6 Directive Radiation



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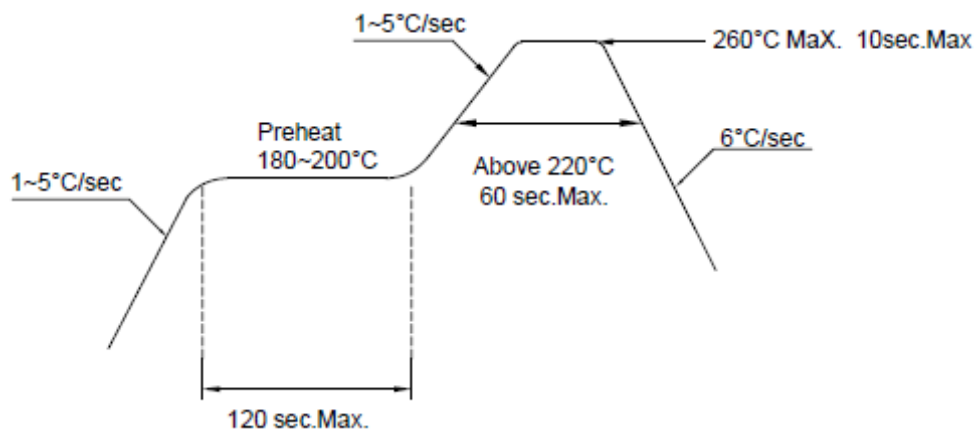
## SOLDERING CONDITIONS

### RECOMMENDED SOLDERING CONDITIONS

#### 1. Hand Solder

Basic spec is  $\leq 280^{\circ}\text{C}$  3 sec one time only.

#### 3. PB-Free Reflow Solder



#### Notes:

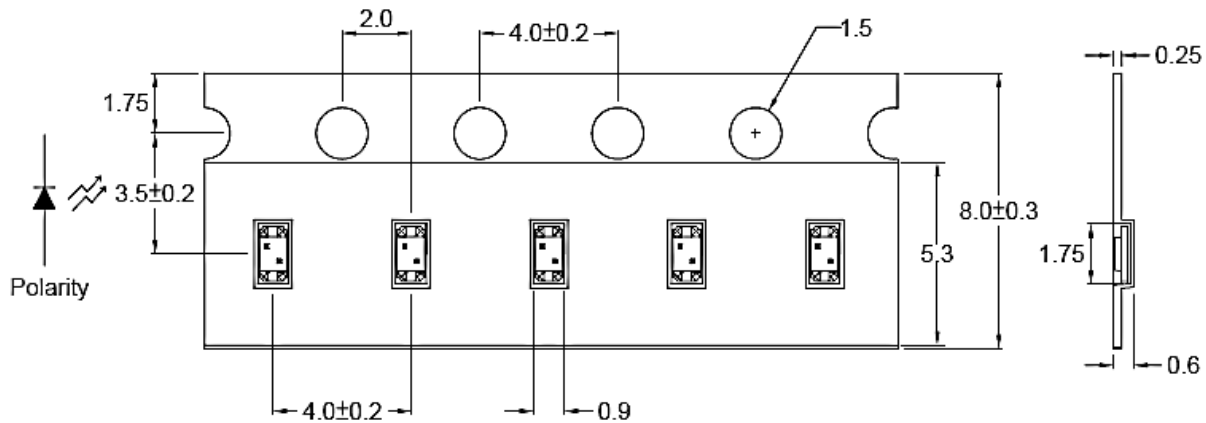
1. Reflow soldering should not be done more than two times.
2. When soldering, do not put stress on the LEDs during heating.
3. After soldering, do not warp the circuit board.



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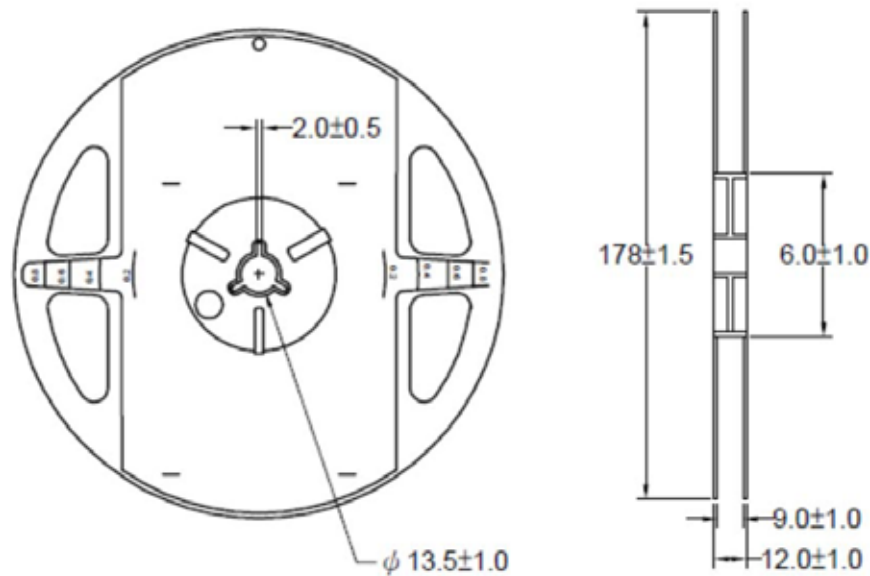
## PACKAGING SPECIFICATIONS

### CARRIER TAPE DIMENSION



Note: The tolerances unless mentioned are  $\pm 0.1$ mm, Angle  $\pm 0.5$ ; Unit=mm

### REEL DIMENSIONS



#### Notes:

1. 4,000 pieces per reel.
2. 8.0mm tape, 7" reel



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