



BGRP321015-PCSC2

Multi-Wavelength SMD Type

Features

- Side view 1204 package
- Wide viewing angle
- BGR individual control
- High reliability
- RoHS compliance

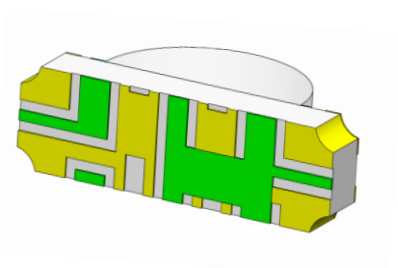
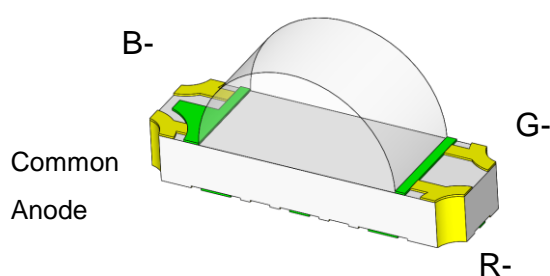
Applications

- General lighting
- Indoor signage display applications
- Switch light
- Decorative and Entertainment lighting

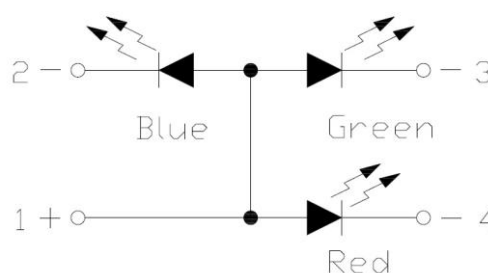
Description

The BGRP321015-PCSC2 is a high brightness device designed for demanding applications in efficiency and reduced space. An ideal device in emphasizing visual effects, advertisement, decoration as well as general backlighting needs.

Package Outline



Schematic





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Absolute Maximum Rating at 25°C

Symbol	Parameters		Ratings	Units	Notes
I _F	Continuous Forward Current	B	25	mA	
		G	25		
		R	25		
I _{FP}	Peak Forward Current	B	60	mA	1
		G	60		
		R	60		
V _R	Reverse Voltage		5	V	
T _{opr}	Operating Temperature		-40 ~ +85	°C	
T _{stg}	Storage Temperature		-40 ~ +100	°C	
T _{sol}	Soldering Temperature		260	°C	2
P _D	Power Dissipation at(or below) 25°C Free Air Temperature	B	95	mW	
		G	95		
		R	60		

Electro-Optical Characteristics *TA = 25°C (unless otherwise specified)*

Optical Characteristics (Blue)

Symbol	Parameters	Test Conditions	Min	Typ	Max	Units	Notes
I _v	Luminous Intensity	I _F =5mA	28.5	-	72.0	mcd	3
λ _D	Dominant Wavelength	I _F =5mA	465	470	475	nm	4
θ _{1/2}	Angle of Half Intensity	I _F =5mA	-	±60	-	deg	

Electrical Characteristics (Blue)

Symbol	Parameters	Test Conditions	Min	Typ	Max	Units	Notes
V _F	Forward Voltage	I _F =5mA	2.4	-	3.1	V	
I _R	Reverse Current	V _R =5V	-	-	1	μA	



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Optical Characteristics (Green)

Symbol	Parameters	Test Conditions	Min	Typ	Max	Units	Notes
I _V	Luminous Intensity	I _F =5mA	180	-	450	mcd	3
λ _D	Dominant Wavelength	I _F =5mA	520	527	535	nm	4
θ _{1/2}	Angle of Half Intensity	I _F =5mA	-	±60	-	deg	

Electrical Characteristics (Green)

Symbol	Parameters	Test Conditions	Min	Typ	Max	Units	Notes
V _F	Forward Voltage	I _F =5mA	2.4	-	3.1	V	
I _R	Reverse Current	V _R =5V	-	-	1	μA	

Optical Characteristics (Red)

Symbol	Parameters	Test Conditions	Min	Typ	Max	Units	Notes
I _V	Luminous Intensity	I _F =5mA	72	-	180	mcd	3
λ _D	Dominant Wavelength	I _F =5mA	617	622	627	nm	
θ _{1/2}	Angle of Half Intensity	I _F =5mA	-	±60	-	deg	

Electrical Characteristics (Red)

Symbol	Parameters	Test Conditions	Min	Typ	Max	Units	Notes
V _F	Forward Voltage	I _F =5mA	1.6	-	2.3	V	
I _R	Reverse Current	V _R =5V	-	-	1	μA	

Notes:

1. I_{FP} Conditions--Pulse Width ≤ 100μs and Duty ≤ 10%.
2. Soldering time ≤ 10 seconds.



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3. Bin Range of Luminous Intensity

Blue				
Bin Code	Min	Max	Unit	Condition
N	28.5	45.0	mcd	I _F =5mA
P	45.0	72.0		
Green				
Bin Code	Min	Max	Unit	Condition
S	180	285	mcd	I _F =5mA
T	285	450		

Red				
Bin Code	Min	Max	Unit	Condition
Q	72	112	mcd	I _F =5mA
R	112	180		

Tolerance of Luminous Intensity $\pm 10\%$

4. Bin Range of Dominant Wavelength

Blue				
Bin Code	Min	Max	Unit	Condition
A6	465	470	nm	I _F =5mA
A7	470	475		
Green				
Bin Code	Min	Max	Unit	Condition
A5	520	525	nm	I _F =5mA
A6	525	530		
A7	530	535		

Tolerance of Dominant Wavelength: $\pm 1\text{nm}$.

Tolerance of Forward Voltage: $\pm 0.1\text{V}$.



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Multi-Wavelength SMD Type

Typical Characteristic Curves

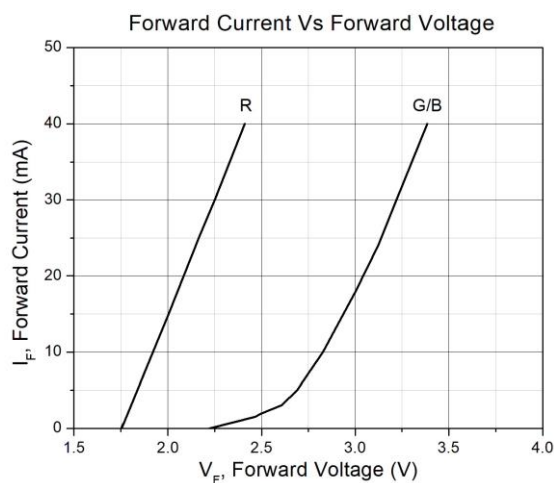


Figure 1

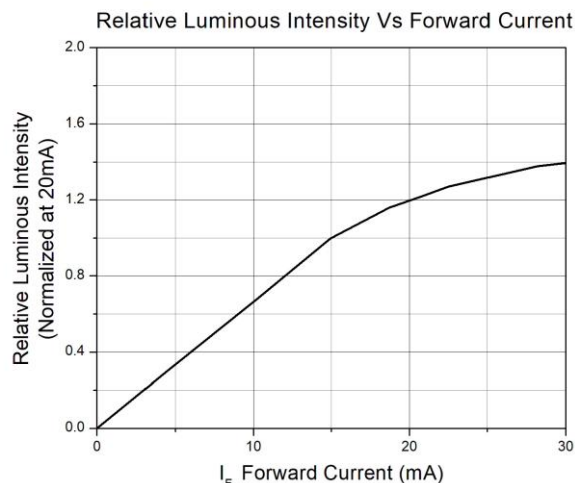


Figure 2

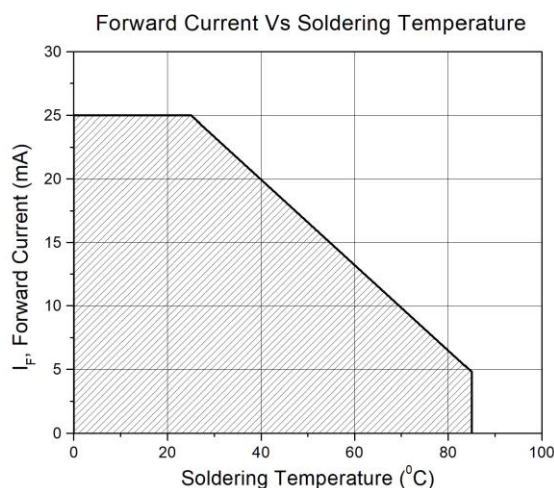


Figure 3

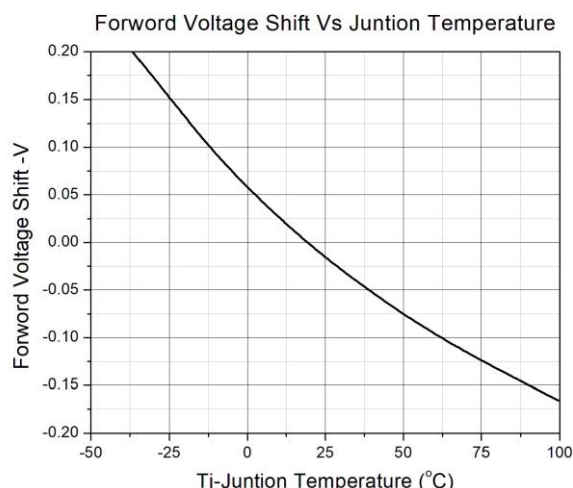


Figure 4

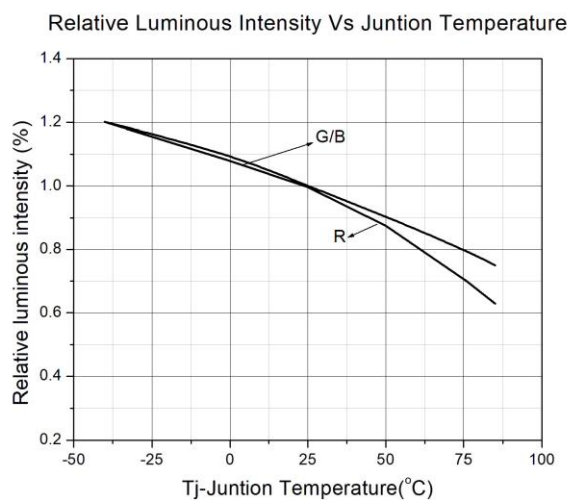


Figure 5

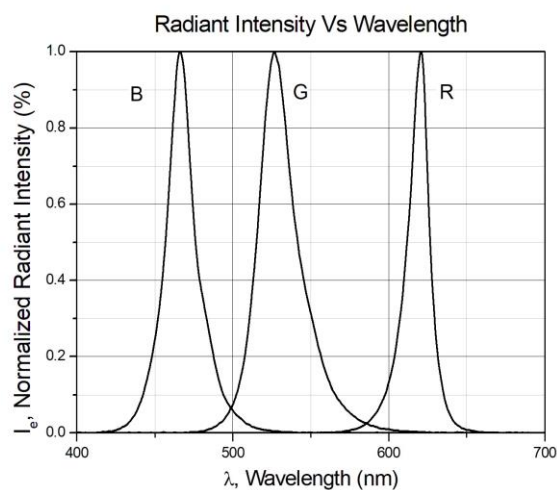
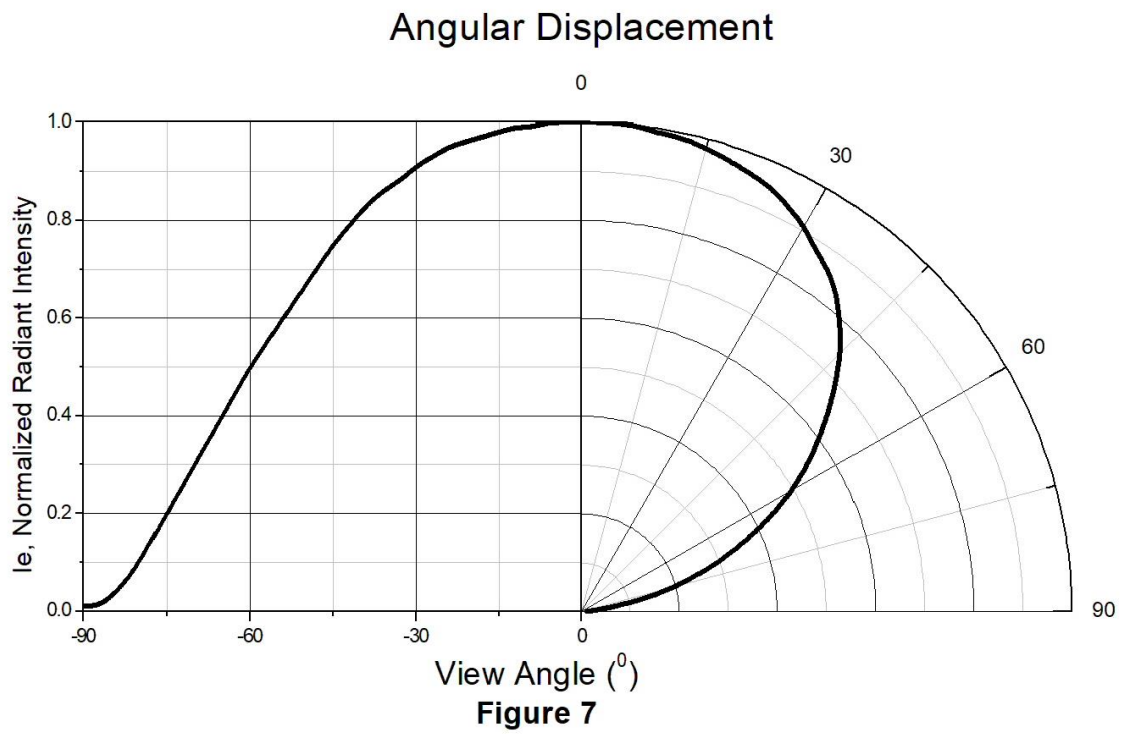


Figure 6



Typical Characteristic Curves

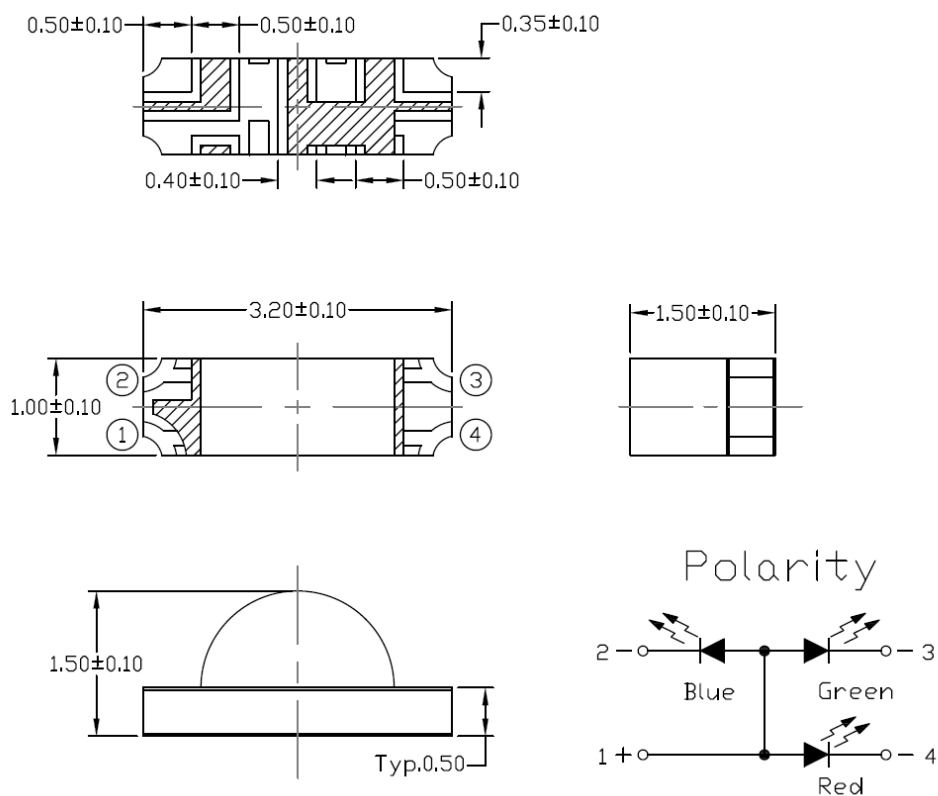




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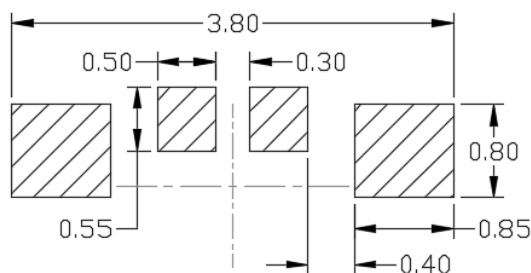
Multi-Wavelength SMD Type

Package Dimension *All dimensions are in mm, unless otherwise stated*



Note: Tolerance unless mentioned is ± 0.1 mm

Recommended Soldering Mask *All dimensions are in mm, unless otherwise stated*



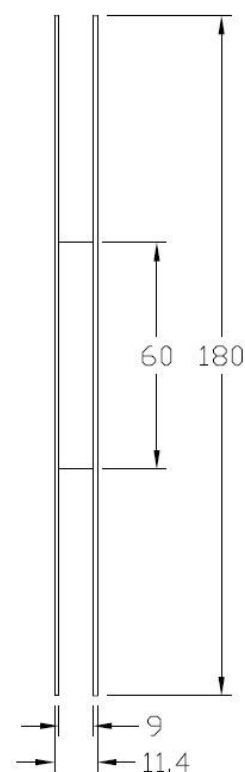
Note: Tolerance unless mentioned is ± 0.1 mm

Ordering Information

Part Number	Description	Quantity
BGRP321015-PCSC2	Tape & Reel	2000 pcs



The diagram shows a circular disk with a central hub. The hub has three spokes and a small circle at its center. Four wedge-shaped segments are arranged around the hub. A rectangular label with the word "Label" is positioned at the top of the disk.



Input Direction

4.00 2.00 $\varnothing 1.50$

1.75 3.45 8.00

4.00 $\varnothing 1.00$

Red 4 Green 3

2+ Blue 1- 3

Polarity

0.23 3.50 1.20

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Jan, 2021



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Label Form Specification

CT Micro
International Corporation

MSL-X
MADE IN CHINA

CPN: XXXXXXXXXXXXXXXXXX
|||||

Part no: XXXXXXXXXXXXXXXX
|||||

Serial no: XXXXXXXX
|||||

Lot no: XXXXXXXX
|||||

Qty: XXXXXX Date Code: YWWJ
||||| |||||

IV: XX WD:XX VF:XX
||||| ||||| |||||

QR Code

Pb
RoHS

CPN : Customer Part Number
Part no: CTM Production Number
Serial no: Production Number
Lot no: Lot number
Q'ty: Packing Quantity
Date Code: Manufacture Date
IV : Bin Code of Luminous Intensity
WD : Bin Code of Dominant Wavelength
VF : Bin Code of Forward Voltage
MADE IN CHINA: Production Place

Storage Condition

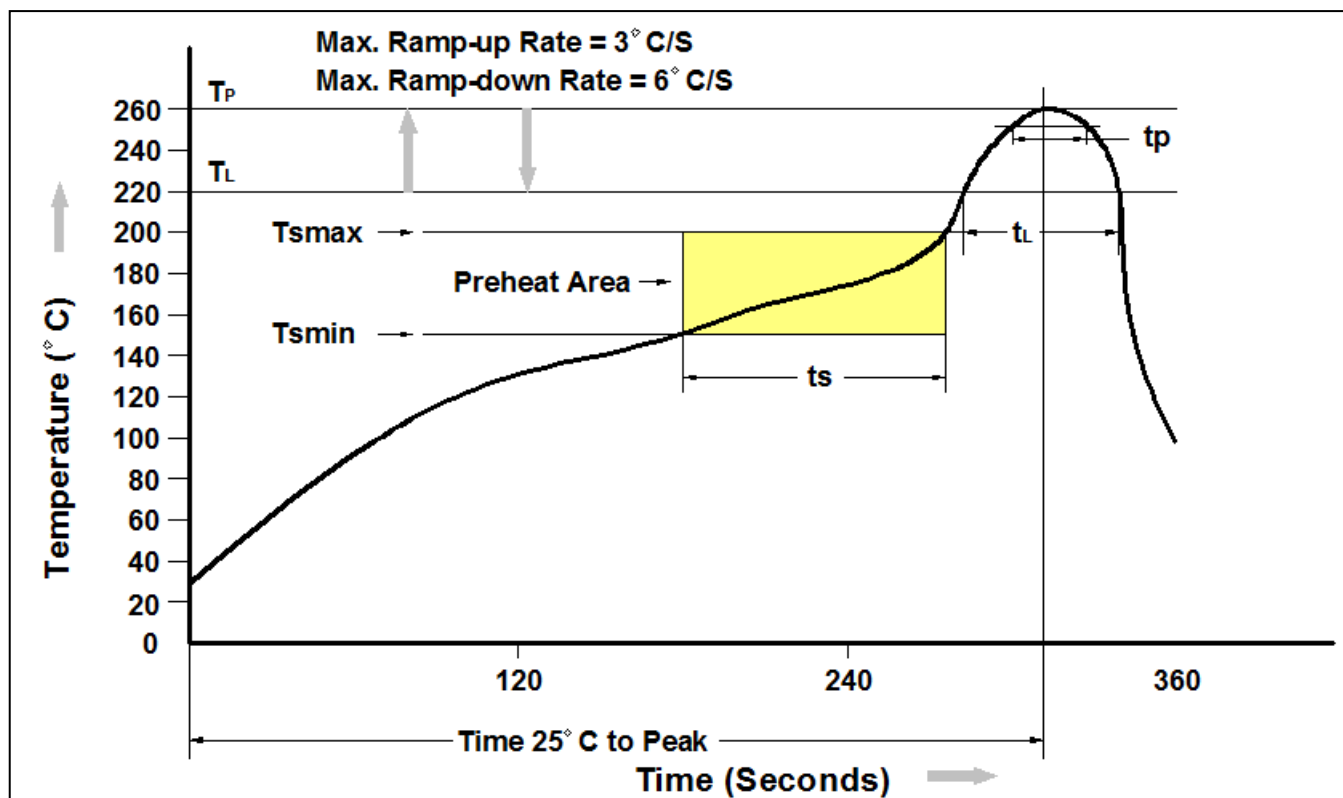
1. Do not open moisture proof bag before the products are ready to use.
2. The moisture barrier bag should be stored at 30°C and 90%R.H. max. before opening.
Shelf life of non-opened bag is 12 months after the bag sealing date.
3. After opening the moisture barrier bag floor life is 1 year at 30°C/60%RH. max. Unused LEDs should be resealed into moisture barrier bag. (Refer to J-STD-020 Standard)
4. If the moisture absorbent material has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the J-STD-033 Standard conditions.



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Reflow Profile



Profile Feature	Pb-Free Assembly Profile
Temperature Min. (Tsmin)	150°C
Temperature Max. (Tsmax)	200°C
Time (ts) from (Tsmin to Tsmax)	60-120 seconds
Ramp-up Rate (tL to tP)	3°C/second max.
Liquidous Temperature (TL)	217°C
Time (tL) Maintained Above (TL)	60 – 150 seconds
Peak Body Package Temperature	260°C +0°C / -5°C
Time (tP) within 5°C of 260°C	30 seconds
Ramp-down Rate (TP to TL)	6°C/second max
Time 25°C to Peak Temperature	8 minutes max.



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