

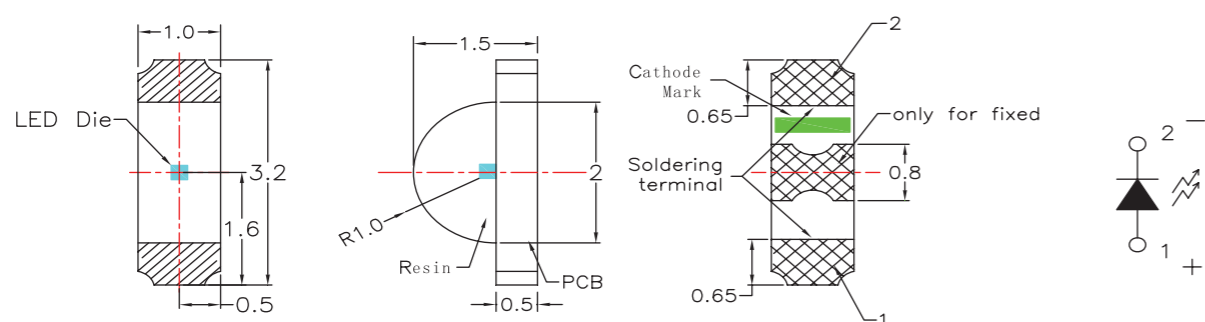
BW-110 Series

Electro-Optical Characteristics

Code for Parts BW-XXXXX	Lighting Color	Material	V _F (V)		λ(nm)			I _V (mcd)	Internal Circuit
			Typ.	Max.	λ _D	λ _P	Δλ	Typ.	
BW-110URO	Red	AlGaInP	2.00	2.30	633	640	19	72	
BW-110USD	Red	AlGaInP	2.00	2.30	625	632	18	71	
BW-110UD	Amber	AlGaInP	2.00	2.30	605	610	17	81	
BW-110UY	Yellow	AlGaInP	2.00	2.30	591	592	15	77	
BW-110UYG	Green	AlGaInP	2.00	2.30	572	570	18	37	
BW-110GR	Green	InGaN	3.20	3.60	527	525	37	170	
BW-110WT	White	InGaN	3.30	3.60	(x,y)=(0.29,0.31)		-	250	
BW-110BL	Blue	GaN	3.20	3.60	470	468	25	46	
BW-110CBS	Blue	GaN/ SiC	3.80	4.00	465	430	60	8	

Dimensions /Taping and Package Spec.

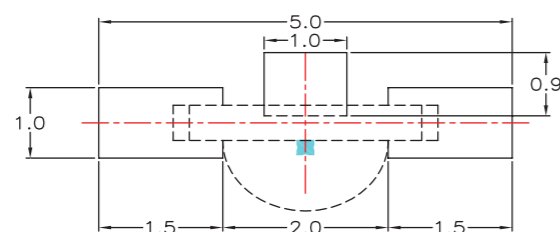
Package Dimensions of Device(110 Series)



1. Soldering terminal may shift in x, y direction.

Unit: mm
Tolerance: ± 0.1

Package Dimensions of Device(110 Series)



Absolute Maximum Rating

Series	I _F (mA)	I _{FP} (mA)	V _R (V)	T _{OP} (°C)	T _{ST} (°C)
BW-110 Series	30	100	5	-30~+80	-40~+85

*Condition for I_{FP} is pulse of 1/10 duty and 0.1 msec width

7 inch Anti-Static Reel
3000 pcs / reel

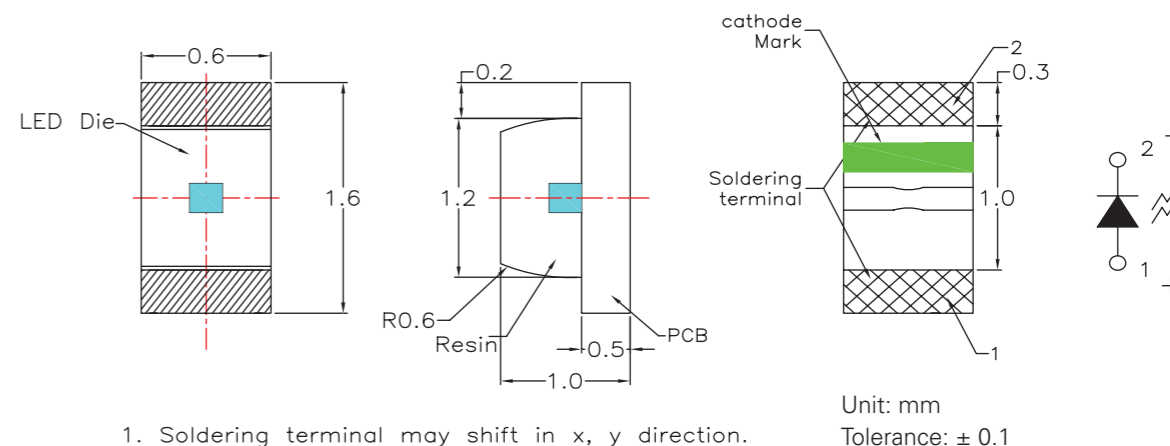
BW-R190UD-CT

Initial Electrical/Optical Characteristics (T_a= 25°C)

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V _F	I _F =20mA	1.7	2.0	2.4	V
Reverse Current	I _R	V _R =5V	0.0	1.0	50.0	μA
Peak Wavelength	λ _P	I _F =20mA		610		nm
Dominant Wavelength	λ _D	I _F =20mA	600	605	612	nm
Spectral Line Half-width	Δλ	I _F =20mA		17		nm
Luminous Intensity	I _V	I _F =20mA	56	68		mcd
Viewing Angle	2 1/2	I _F =20mA		130		deg

Dimensions/Taping and Package Spec.

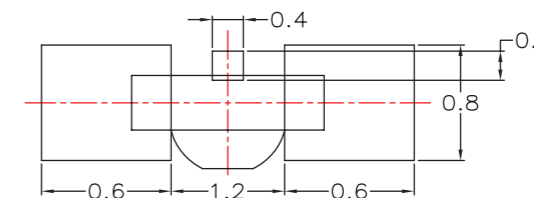
Package Dimensions of Device(R190 Series)



1. Soldering terminal may shift in x, y direction.

Unit: mm
Tolerance: ± 0.1

Recommended Soldering Pad Dimensions



Absolute Maximum Rating (T_d= 25°C)

Series	I _F (mA)	I _{FP} (mA)	V _R (V)	T _{OP} (°C)	T _{ST} (°C)
BW-R190UD-CT	30	100	5	-40~+85	-40~+85

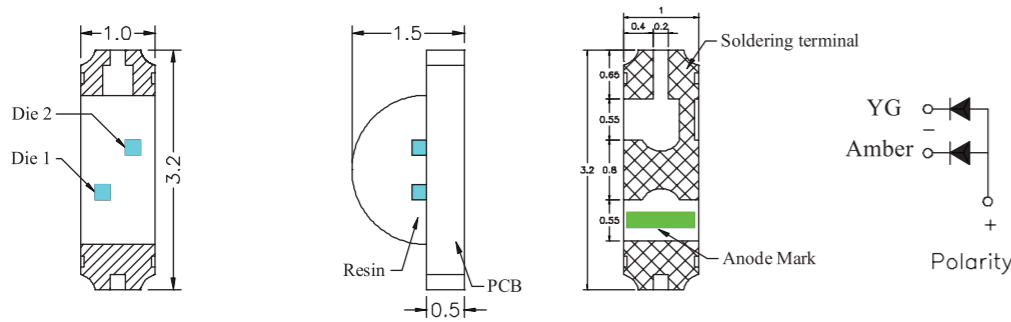
7 inch Anti-Static Reel
4000 pcs / reel

BW-210 Series

Electro-Optical Characteristics

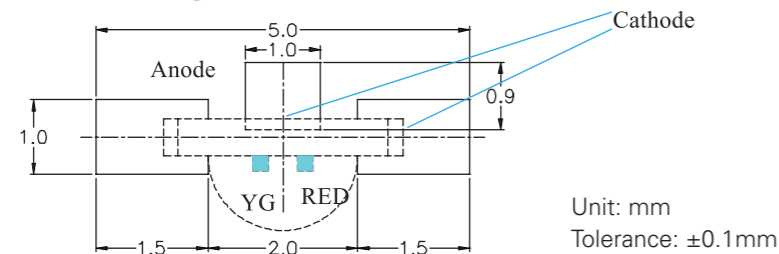
Code for Parts BW-XXXXX	Lighting Color	Material	V _F (V)		λ(nm)			I _V (mcd)	Internal Circuit
			Typ.	Max.	λ _D	λ _P	Δλ	Typ.	
BW-210URO/YG	Red	AlGaInP	2.00	2.30	633	640	19		
	Green	AlGaInP	2.00	2.30	572	570	18		
BW-210UD/YG	Amber	AlGaInP	2.00	2.30	605	610	17		
	Green	AlGaInP	2.00	2.30	572	570	17		
BW-210UY/YG	Yellow	AlGaInP	2.00	2.30	591	592	32		
	Green	AlGaInP	2.00	2.30	572	570	17		
BW-210GR/BL	Green	InGaN	3.30	3.60	527	525	37		
	Blue	InGaN	3.23	3.60	470	468	25		

Package Dimension of Device (BW210 Common Anode Series)



1. Soldering terminal may shift in x, y direction.

Recommended Soldering Pad Dimensions



Absolute Maximum Rating

Series	I _F (mA)	I _{FP} (mA)	V _R (V)	T _{OP} (°C)	T _{ST} (°C)
BW-210 Series	30	100	5	-30~+80	-40~+85

*Condition for I_{FP} is pulse of 1/10 duty and 0.1 msec width

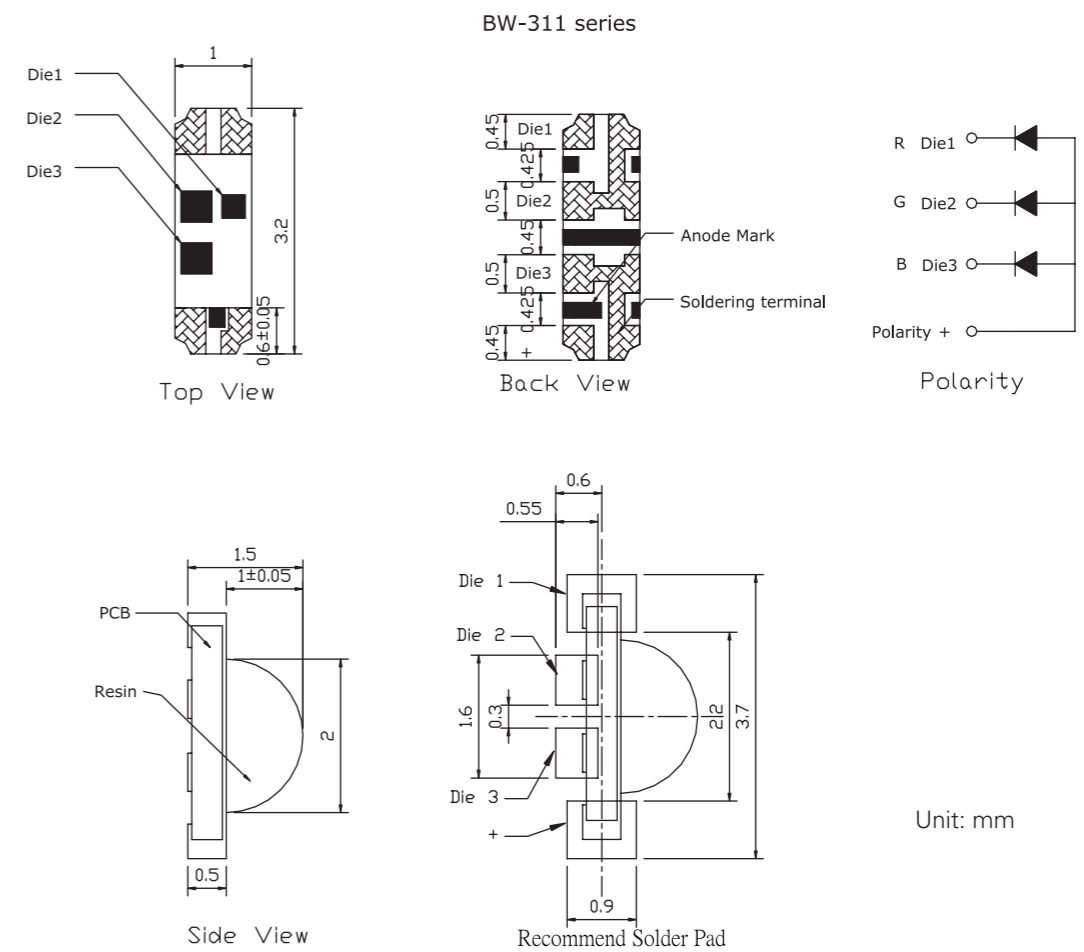
7 inch Anti-Static Reel
3000 pcs / reel

BW-311 RGB-CT

Electro-Optical Characteristics (@20mA)

Code for Parts BW-XXXXX	Lighting Color	Material	V _F (V)		λ(nm)			I _V (mcd)	Internal Circuit
			Typ.	Max.	λ _D	λ _P	Δλ	Typ.	
BW-311RCGB	Red	AlGaInP	1.90	2.20	624	630	18		
	Green	InGaN	3.20	3.60	527	525	37		
	Blue	GaN	3.30	3.60	472	470	25		

Dimension and Recommend Solder Pattern



Absolute Maximum Rating

Series	I _F (mA)	I _{FP} (mA)	V _R (V)	T _{OP} (°C)	T _{ST} (°C)
BW-311 Series	30	100	5	-40~+80	-40~+85

*Condition for I_{FP} is pulse of 1/10 duty and 0.1 msec width

7 inch Anti-Static Reel
3000 pcs / reel