



# Product Guide

## 1211C Series Bi-Color Ultra Compact SMT LED



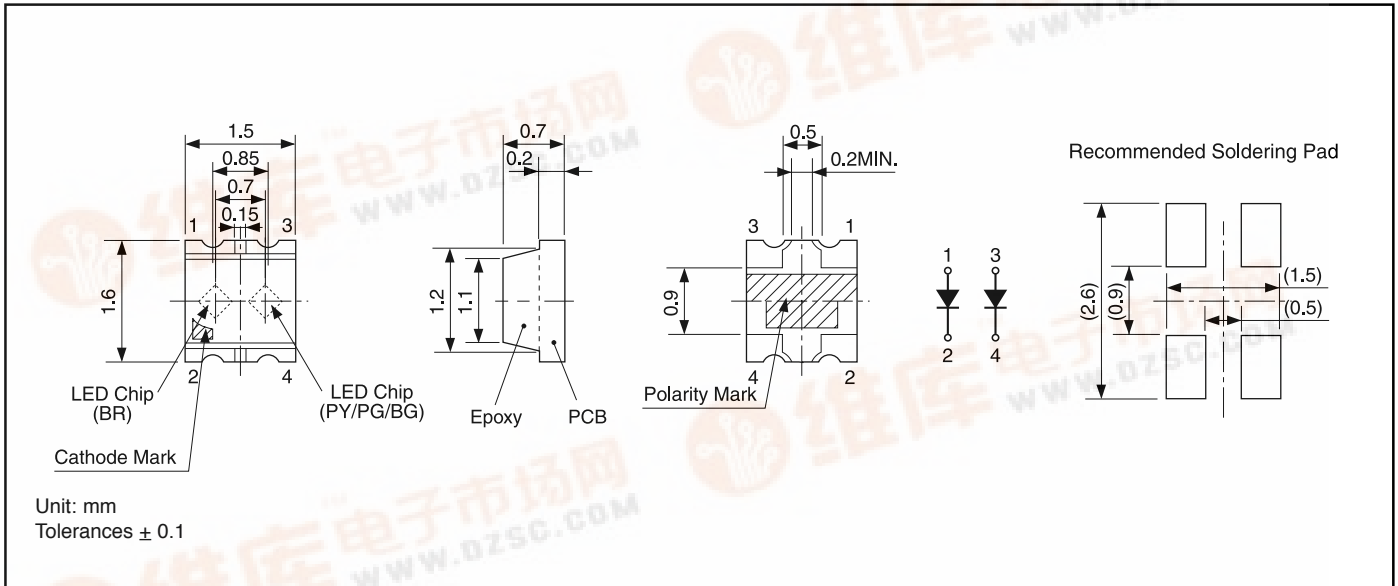
### Features

- Superbright, compact bicolor package
- 1.6mm (L) x 1.5mm (W) x 0.7mm (H)

### Applications

- Mobile devices (cellular telephone, PDAs, pagers)
- Telecommunications

### Outline Dimensions



### Electro-Optical Characteristics

( $T_a=25^\circ\text{C}$ )

Part No.	Material	Emitted Color	Lens Color	Luminous Intensity $I_v$			Wavelength				Forward Voltage $V_f$			Reverse Current $I_R$		Viewing Angle ( $2\theta$ 1/2)
				MIN.	TYP.	$I_f$	Peak $\lambda_p$ TYP.	Dominant $\lambda_d$ TYP.	Spectral Line Half Width $\Delta\lambda$ TYP.	$I_f$	TYP.	MAX.	$I_f$	MAX.	$V_R$	
BRPY1211C	GaAlAs	Red (BR)	Milky White	7.0	11.7	20	660	647	30	20	1.7	2.3	20	100	4	170°
	GaP	Yellow-Green (PY)		7.0	11.7	20	570	572	30	20	2.1	2.8	20	100	4	150°
BRPG1211C	GaAlAs	Red (BR)		7.0	11.7	20	660	647	30	20	1.7	2.3	20	100	4	170°
	GaP	Green (PG)		4.5	6.4	20	560	567	30	20	2.1	2.8	20	100	4	150°
BRBG1211C	GaAlAs	Red (BR)		7.0	11.7	20	660	647	30	20	1.7	2.3	20	100	4	170°
	GaP	Pure Green (BG)		1.7	2.4	20	555	558	30	20	2.1	2.8	20	100	4	150°
Units				mcd	mA		nm			mA	V	mA	$\mu\text{A}$	V	Deg.	



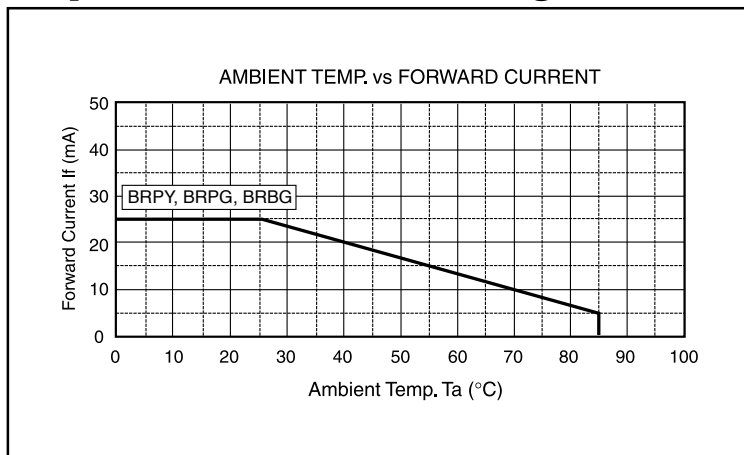
## Absolute Maximum Ratings

(Ta=25°C)

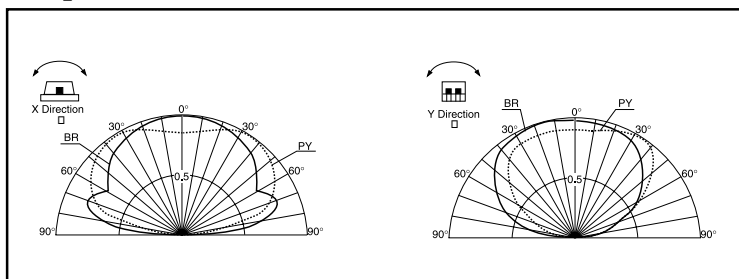
Item	Symbol	Red (BR)	Yellow-Green (PY)	Red (BR)	Green (PG)	Red (BR)	Pure Green (BG)	Units
		BRPY		BRPG		BRBG		
Power Dissipation	Pd	70		70		70		mW
Forward Current	I <sub>F</sub>	25		25		25		mA
Peak Forward Current	I <sub>FM</sub>	60		60		60		mA
Reverse Voltage	V <sub>R</sub>	4		4		4		V
Operating Temperature	Topr	-30 to +85						°C
Storage Temperature	Tstg	-40 to +100						°C
Derating*	ΔI <sub>F</sub>	0.36 (DC) 0.86 (Pulse)						mA/°C

\* Ta=25°C, I<sub>FM</sub> applies for the pulse width ≤ 1msec. and duty cycle ≤ 1/20.

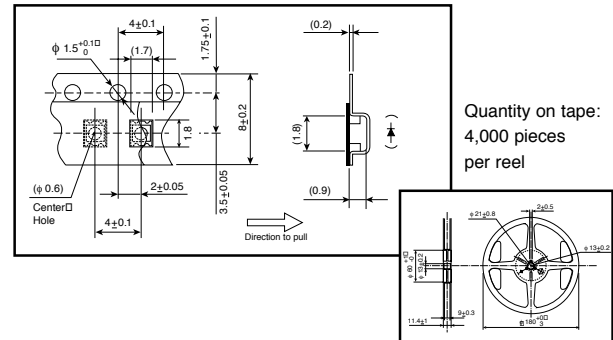
## Operation Current Derating Chart (DC)



## Spatial Distribution



## Taping Specifications

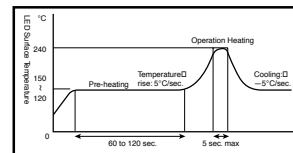


## Precautions

Please follow these handling precautions to prevent damage to the chip and ensure its reliability.

### 1. Soldering conditions:

- **Soldering iron:** Temperature at tip of iron: 280°C max. (30W max.)  
Soldering time: 3 sec. max.
- **Dip soldering:** Preheating: 120 ~ 150°C max. (resin surface temp.)  
60 ~ 120 sec. max. Bath temperature: 260°C max. Dipping Time: 5 sec. max.
- **Reflow Soldering:**



### 2. Cleaning:

- If cleaning is required, use the following solutions for less than 1 minute, at less than 40°C.
- Appropriate chemicals: Ethyl alcohol and isopropyl alcohol.
- Effect of ultrasonic cleaning on the LED resin body differs depending on such factors as the oscillator output, size of PCB and LED mounting method. The use of ultrasonic cleaning should be enforced at proper output after confirming there is no problem.

Product specifications subject to change without notice. PG1211C-0301