SPECIFICATION CB29BR1G1W

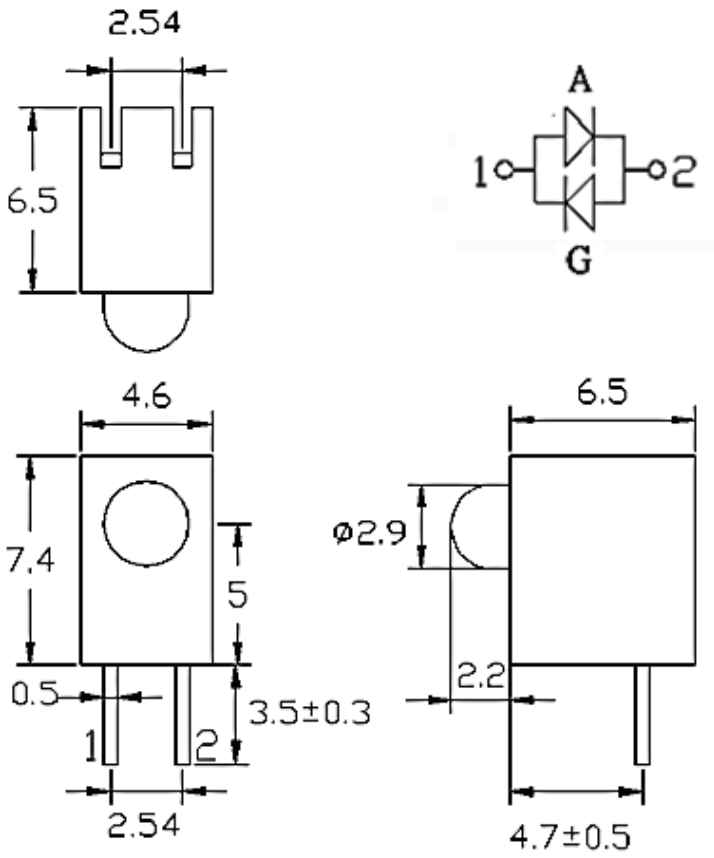
PACKAGE OUTLINES

DESCRIPTION

- Round Type
- 2.9mm Diameter
- Lens Color: White Diffused
- With Housing

FEATURES

- Emitted Color: Red/ Green
- Technology: GaAsP on GaP/GaP
- Viewing Angle: 45°



Notes:
1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.25mm (0.01”) unless otherwised noted.
3. Specifications are subject to change without notice.

Part Number	Chip Material	Color of Emission	Lens Type	Viewing Angle
CB29BR1G1W	GaP	Red	White Diffused	45°
	GaP	Green	White Diffused	45°

ABSOLUTE MAXIMUM RATINGS (TA=25°C)

Parameter	Symbol	Max Rating	Unit
Forward Current	I_F	100	mA
Reverse Current @ 5V	I_R	10	μA
Power Dissipation	Pd	85	mW
Operating Temperature Range	T_{OP}	-40~+85	°C
Storage Temperature Range	T_{STG}	-40~+100	°C
Peak Pulsing Current (1/10 duty f = 10KHz)	I_{FP}	100	mA
Soldering Temperature	T_{SOL}	Max 260°C for 5 sec Max	

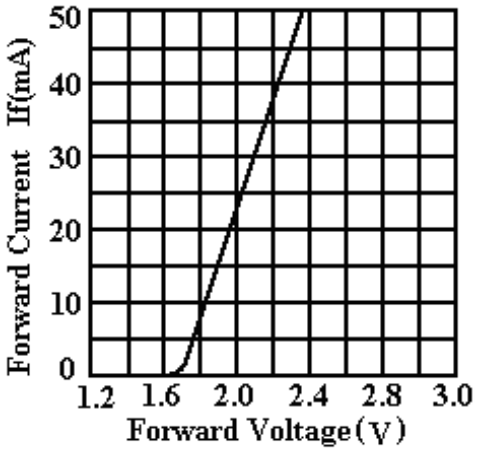
OPTICAL-ELECTRICAL CHARACTERISTICS (TA=25°C)

Parameter	Symbol	Test Condition	Color	Value			Unit
				Min	Typ	Max	
Luminous Intensity	Iv	I_F = 20mA	Red	9	16	-	mcd
			Green	7	14		
Forward Voltage	V_F	I_F = 20mA	Red	-	2.1	2.6	V
			Green	-	2.2	2.6	
Viewing Angle at 50% Iv	2θ1/2	I_F = 20mA	-	-	45	-	Deg
Peak Wavelength	λ_P	I_F = 20mA	Red	-	635	-	nm
			Green		568		
Dominant Wavelength	λ_D	I_F = 20mA	Red	-	625	-	nm
			Green		570		

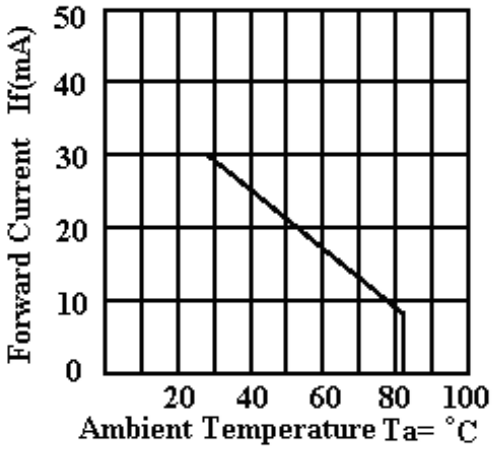
*Tolerance of viewing angle: -10 / +5 deg.

RoHS Compliant Lead Free

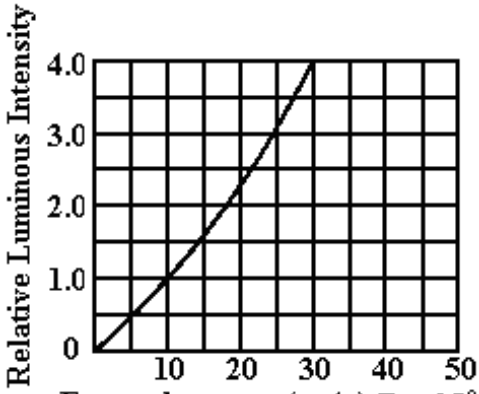
OPTICAL CHARACTERISTIC CURVES - RED



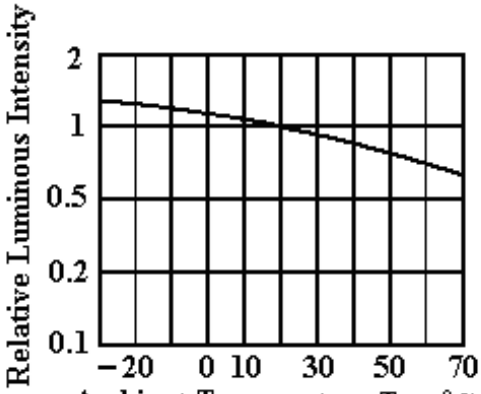
Forward current vs. Forward Voltage



Forward current Derating curve

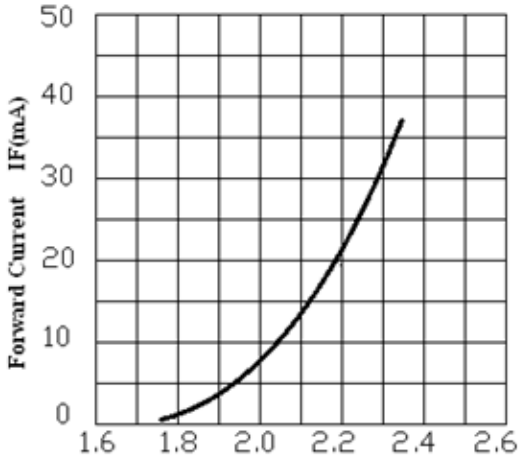


Luminous Intensity vs. Forward current

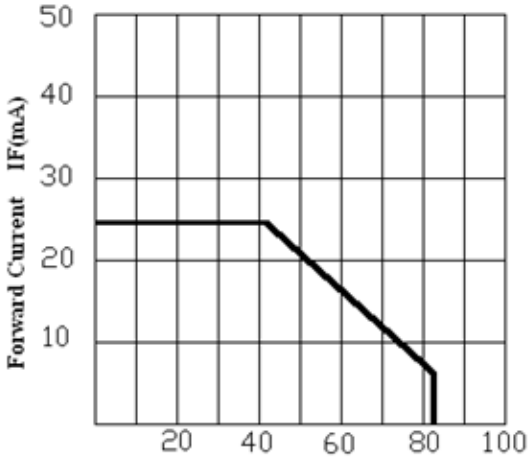


Luminous Intensity vs. Ambient Temperature

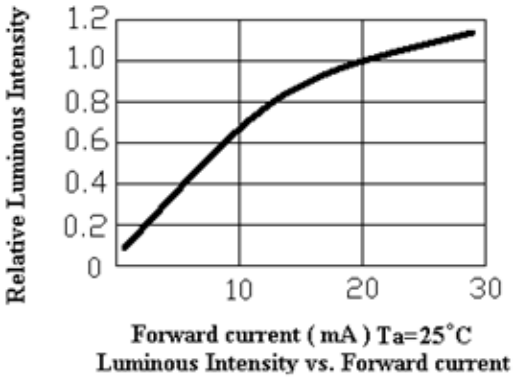
OPTICAL CHARACTERISTIC CURVES - GREEN



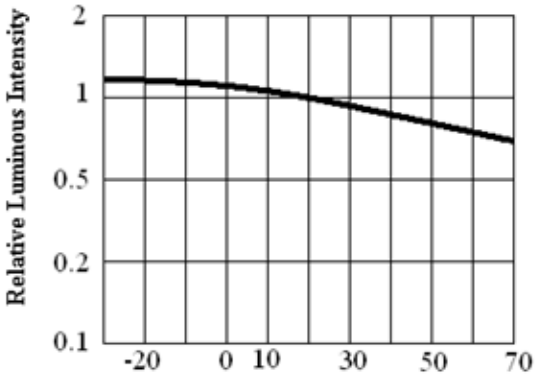
Forward Current vs. Forward Voltage



Forward Current Derating Curve



Luminous Intensity vs. Forward current



Luminous Intensity vs. Ambient Temperature

SOLDERING CONDITIONS – LAMP TYPE LED

- Solder the LED no closer than 3mm from the base of the epoxy bulb. Soldering beyond the base of the tie bar is recommended.
- Recommended soldering conditions.

Dip Soldering	
Pre-Heat	100℃ Max.
Pre-Heat Time	60 sec. Max.
Solder Bath Temperature	260℃ Max.
Dipping Time	5 sec. Max.
Dipping Position	No lower than 3mm from the base of the epoxy bulb.

Hand Soldering		
	3Ø Series	**Others (Including Lead-Free Solder)**
Temperature	300℃ Max.	350℃ Max.
Soldering time	3 sec. Max.	3 sec. Max.
Position	No closer than 3mm from the base of the epoxy bulb.	No closer than 3mm from the base of the epoxy bulb.

- Do not apply any stress to the lead, particularly when heated
- The LEDs must not be repositioned after soldering
- After soldering the LEDs, the epoxy bulb should be protected from mechanical shock or vibration until the LEDs return to room temperature.
- Direct soldering onto a PC board should be avoided. Mechanical stress to the resin may be caused by the PC board warping or from the clinching and cutting of the leadframes. When it is absolutely necessary, the LEDs may be mounted in this fashion, but the User will assume responsibility for any problems. Direct soldering should only be done after testing has confirmed that no damage, such as wire bond failure or resin deterioration, will occur. AOP's LEDs should not be soldered directly to double sided PC boards because the heat will deteriorate the epoxy resin.
- When it is necessary to clamp the LEDs to prevent soldering failure, it is important to minimize the mechanical stress on the LEDs.
- Cut the LED leadframes at room temperature. Cutting the leadframes at high temperatures may cause LED failure.