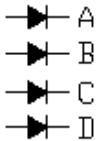
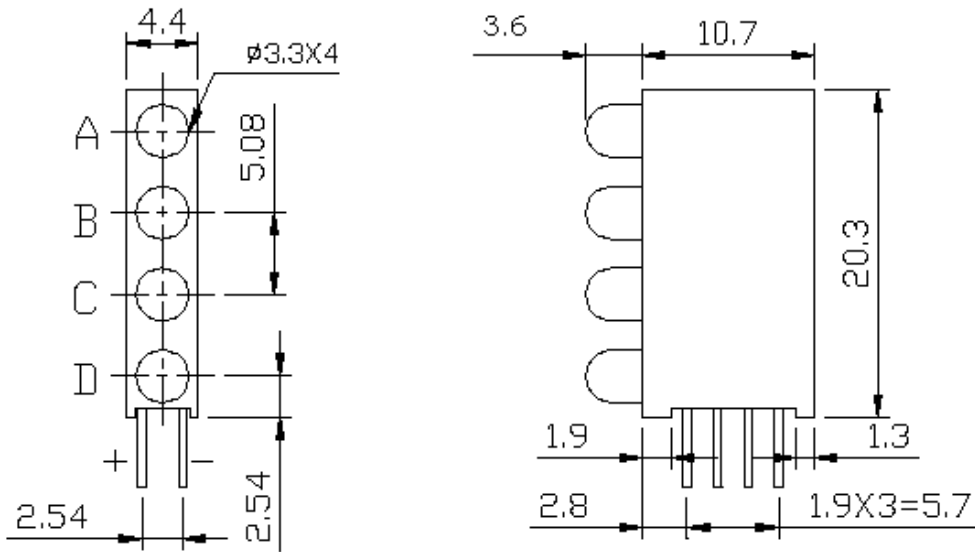


SPECIFICATIONS **CBQ33RRRR1D**
PACKAGE OUTLINES


(STANDARD TYPE UT LEAD)

Notes:

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

Part Number	Chip Material	Color of Emission	Lens Type	Viewing Angle
CBQ33RRRR1D	GaAlAs	Red	Red Diffused	60°



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ABSOLUTE MAXIMUM RATINGS
(TA=25°C)

Parameter	Symbol	Max Rating	Unit
Forward current	I _f	20	mA
Reverse current @ 5V	I _r	10	μA
Power dissipation	P _d	60	mW
Operating temperature range	T _{opr}	-40~+80	°C
Storage temperature range	T _{stg}	-40~+100	°C
Peak pulsing current (1/10 duty f= 10KHz)	I _{fp}	160	mA
Soldering Temperature	T _{SOL}	Max 260°C for 5 sec Max	

OPTICAL-ELECTRICAL CHARACTERISTICS
(TA=25°C)

Parameter	Symbol	Test Condition	Value			Unit
			Min	Typ	Max	
Wavelength at peak emission	λ _{peak}	I _F = 20mA	-	660	-	nm
Spectral half bandwidth	Δλ	I _F = 20mA	-	20	-	nm
Dominant wavelength	λ _D	I _F = 20mA	-	640	-	nm
Forward Voltage	V _f	I _F = 20mA	1.6	1.8	2.1	V
Luminous intensity	I _v	I _F = 20mA	20	100	-	mcd
Viewing angle at 50% I _v	2Θ ½	I _F = 20mA	-	60	-	Deg

*NOTE: 1. The forward voltage data did not including ±0.1V tolerance 2. The luminous intensity data did not including ±15% tolerance



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