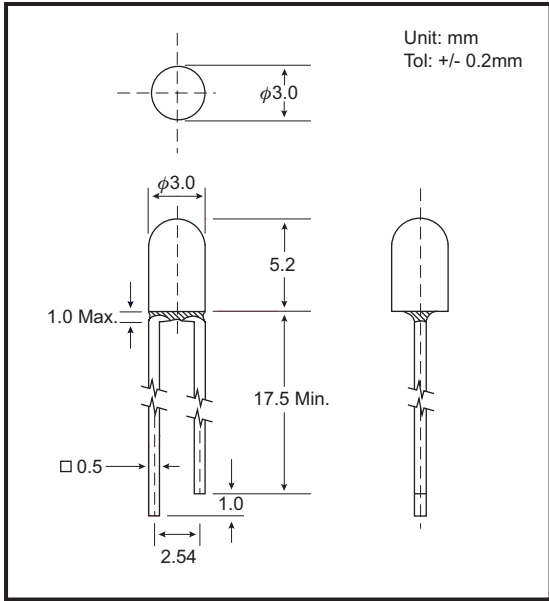


GB-232 SERIES
Round Type, Flangeless
Short Lead
LED Lamps (3mm)

DESCRIPTION:

The 232 series is widely used in general purpose indicator applications. It is in popular 3mm diameter package, without flange and short lead frame. The semi-conductor materials used are:
GaP for (232HD/HT, 232GC/GD/GT)
GaAsP/GaP for (232RHC/RHD/RHT, 232YC/YD/YT and 232SD)

PACKAGE DIMENSIONS



ABSOLUTE MAXIMUM RATINGS: (Ta=25°C)

Reverse Voltage	5 Volt
Reverse Current (Vr =5V)	100µA
Operating Temperature Range	-40°C To 85°C
Storage Temperature Range	-40°C To 100°C
Lead Soldering Temperature (1.6mm (1/16)From Body)	260°C For 5 Seconds

NOTES : 1. All dimensions are in millimeters.
2. Lead spacing is measured where the leads emerge from the package.
3. Protuded resin under flange is 1.5 mm (0.059") Max.

PART NO. SELECTION AND APPLICATION INFORMATION (RATINGS AT 25°C AMBIENT)

Part No.	Emitted Color	Lens Color	Peak Wavelength λp (nm)	Vf (v)		Rec. If (mA).	Iv (mcd)		View Angle 2θ1/2(Deg)
				Min	Max		Min	Typ.	
GB-232HD	Red	Red Diffused	697	1.7	2.6	10-20	5.0	7.0	30
GB-232RHD	Bright Red	Red Diffused	660	1.7	2.6	10-20	30.0	40.0	30
GB-232GD	Green	Green Diffused	565	1.7	2.6	10-20	20.0	30.0	30
GB-232YD	Yellow	Yellow Diffused	585	1.7	2.6	10-20	15.0	20.0	30
GB-232SD	Orange	Orange Diffused	610	1.7	2.6	10-20	15.0	20.0	30
GB-232HT	Red	Red Trans.	697	1.7	2.6	10-20	7.0	9.0	20
GB-232RHT	Bright Red	Red Trans.	660	1.7	2.6	10-20	35.0	50.0	20
GB-232GT	Green	Green Trans.	565	1.7	2.6	10-20	35.0	50.0	20
GB-232YT	Yellow	Yellow Trans.	585	1.7	2.6	10-20	30.0	40.0	20
GB-232RHC	Bright Red	Water Clear	660	1.7	2.6	10-20	40.0	60.0	20
GB-232GC	Green	Water Clear	565	1.7	2.6	10-20	50.0	70.0	20
GB-232YC	Yellow	Water Clear	585	1.7	2.6	10-20	40.0	60.0	20

TESTING CONDITION FOR EACH PARAMETER :

PARAMETER:	SYMBOL	UNIT	TEST CONDITION
REVERSE VOLTAGE	Vr	VOLT	Vr = 5.0 Volt
REVERSE CURRENT	Ir	µA	If = 20mA
FORWARD VOLTAGE	Vf	VOLT	If = 20mA
LUMINOUS INTENSITY	Iv	MCD	If = 20mA
VIEWING ANGLE	2θ1/2	DEGREE	
RECOMMENDED OPERATING CURRENT	If (Rec)	mA	

