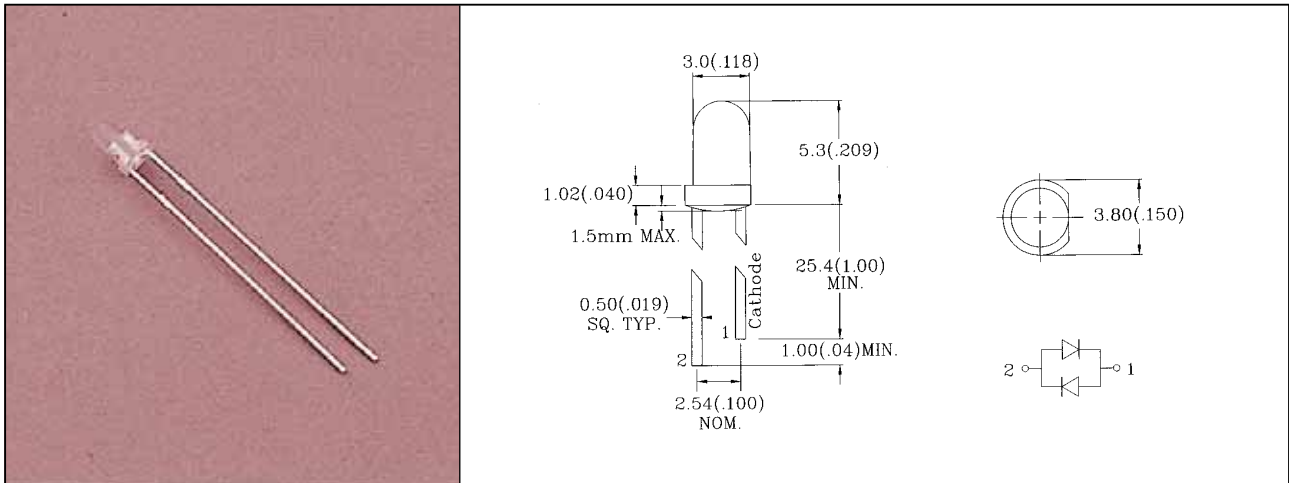
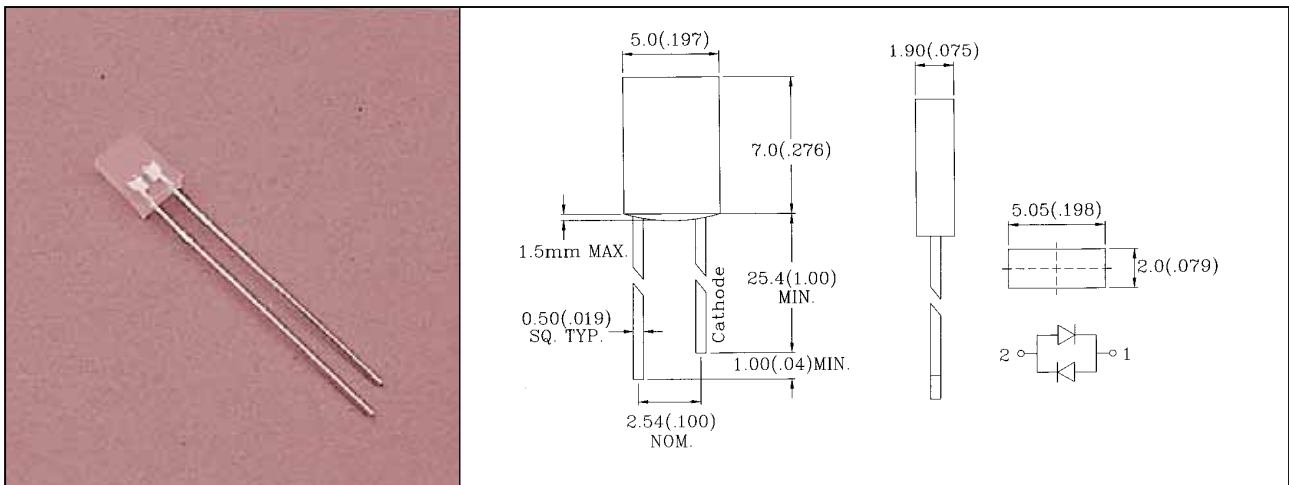


L-317XX 3.0 mm Dia LED LAMP DUAL CHIP (BI POLAR)



Part No.	Chip		Lens Color	Wave Length λ p(nm)	Electro-Optical Characteristics			View Angle (deg)
	Raw Material	Emitted Color			Vf(V)20mA		lv(mcd)20mA	
					Typ.	Max.	Typ.	
L-317GYW	GaP	Green	White Diffused	565	2.2	2.8	6.0	50
	GaAsP/GaP	Yellow		585	2.1	2.8	5.0	
L-317EGW	GaAsP/GaP	Hi.effi Red	White Diffused	635	2.1	2.8	8.0	50
	GaP	Green		565	2.2	2.8	6.0	

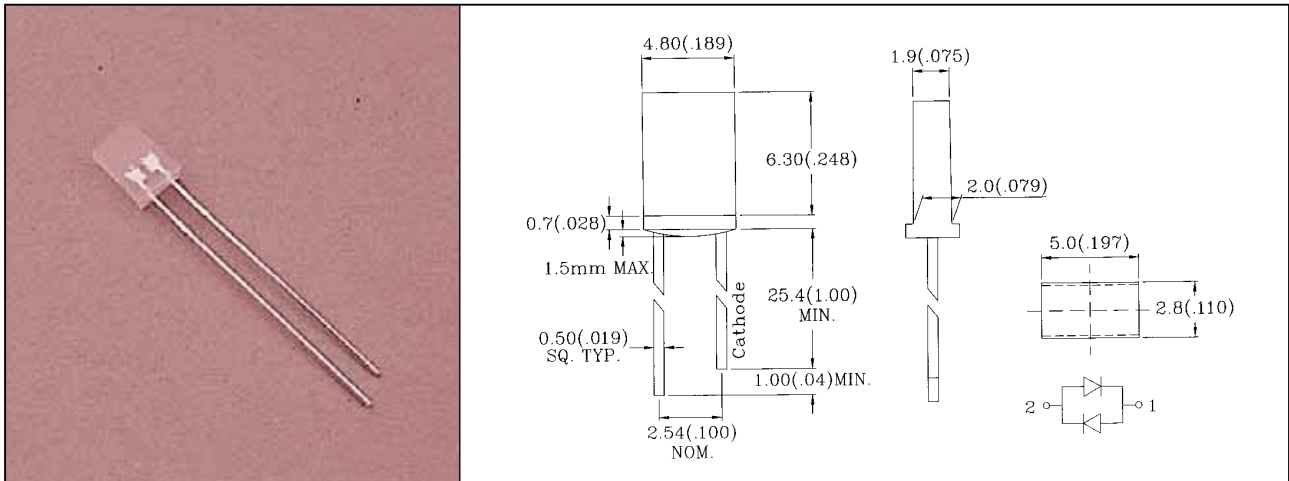
L-407XX 2.0x5.0x7.0 mm FLANGELESS RECTANGULAR LED LAMP DUAL CHIP (BI POLAR)



Part No.	Chip		Lens Color	Wave Length λ p(nm)	Electro-Optical Characteristics			View Angle (deg)
	Raw Material	Emitted Color			Vf(V)20mA		lv(mcd)20mA	
					Typ.	Max.	Typ.	
L-407GYW	GaP	Green	White Diffused	565	2.1	2.8	3.5	120
	GaAsP/GaP	Yellow		585	2.1	2.8	3.5	
L-407EGW	GaAsP/GaP	Hi.effi Red	White Diffused	635	2.1	2.8	5.0	120
	GaP	Green		565	2.2	2.8	3.5	

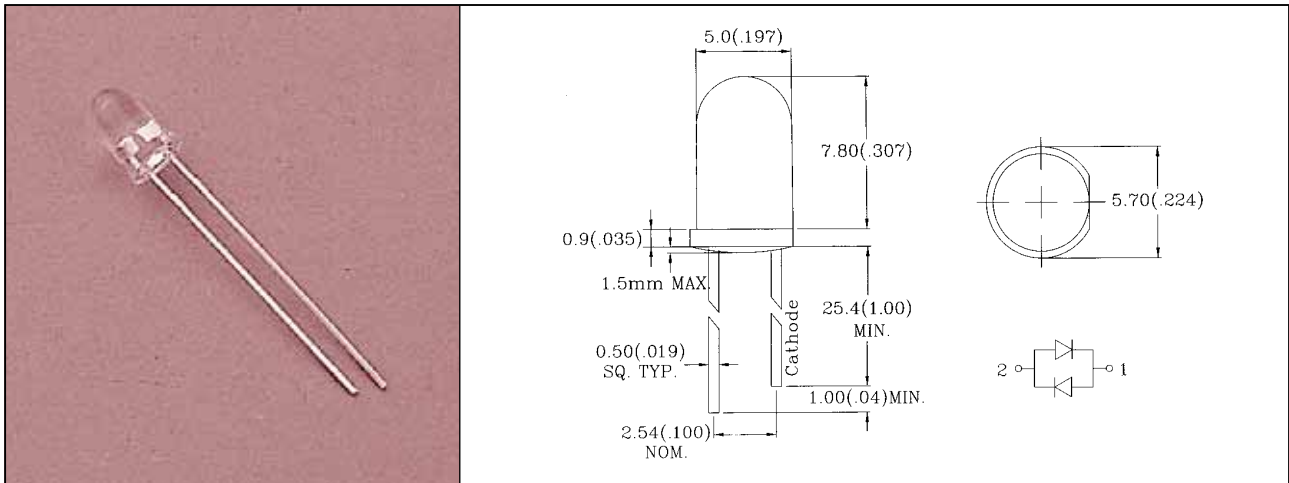
1.All dimension are in millimeters (inches).
2.Tolerance is ± 0.25 mm (0.01") unless otherwise specified.

L-417XX 2.0x5.0x7.0 mm RECTANGULAR LED LAMP, DUAL CHIP (BI POLAR)



Part No.	Chip		Lens Color	Wave Length λ p(nm)	Electro-Optical Characteristics			View Angle (deg)
	Raw Material	Emitted Color			Vf(V)20mA		lv(mcd)20mA	
					Typ.	Max.	Typ.	
L-417GYW	GaP	Green	White Diffused	565	2.2	2.8	3.5	120
	GaAsP/GaP	Yellow		585	2.1	2.8	3.5	
L-417EGW	GaAsP/GaP	Hi.effi Red	White Diffused	635	2.1	2.8	5.0	120
	GaP	Green		565	2.2	2.8	3.5	

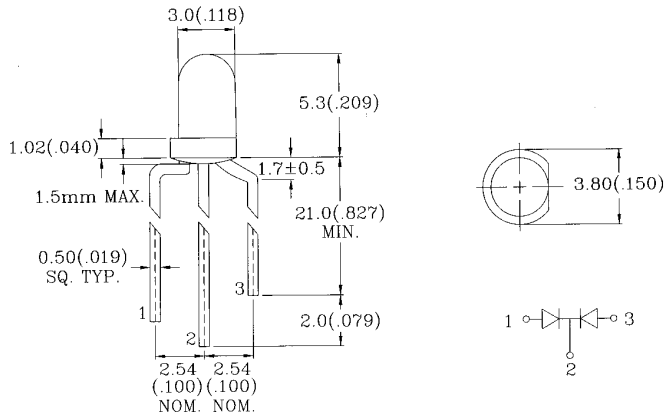
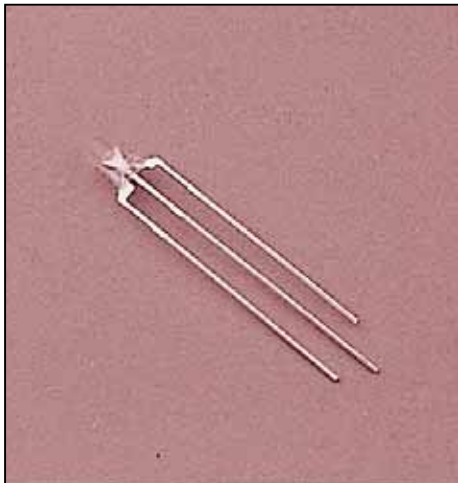
L-517XX 5.0 mm Dia LED LAMP, DUAL CHIP (BI POLAR)



Part No.	Chip		Lens Color	Wave Length λ p(nm)	Electro-Optical Characteristics			View Angle (deg)
	Raw Material	Emitted Color			Vf(V)20mA		lv(mcd)20mA	
					Typ.	Max.	Typ.	
L-517GYW	GaP	Green	White Diffused	565	2.2	2.8	7.0	120
	GaAsP/GaP	Yellow		585	2.1	2.8	12.0	
L-517EGW	GaAsP/GaP	Hi.effi Red	White Diffused	635	2.1	2.8	10.0	120
	GaP	Green		565	2.2	2.8	7.0	

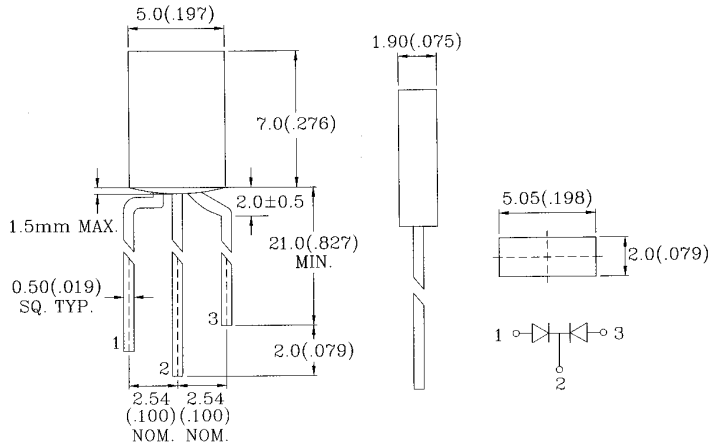
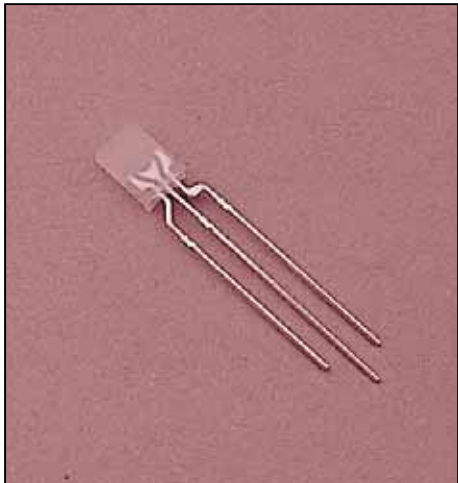
- 1.All dimension are in millimeters (inches).
- 2.Tolerance is ± 0.25 mm (0.01") unless otherwise specified.

L-319XX 3.0mm Dia LED LAMP, MULTI-COLOR



Part No.	Chip		Lens Color	Wave Length λ p(nm)	Electro-Optical Characteristics			View Angle (deg)
	Raw Material	Emitted Color			Vf(V)20mA		lv(mcd)20mA	
					Typ.	Max.	Typ.	
L-319HGW	GaP	Red	White Diffused	700	2.3	2.8	8.0	60
	GaP	Green		565	2.2	2.8	18.0	
L-319EGW	GaAsP/GaP	Hi. effi Red	White Diffused	635	2.1	2.8	30.0	60
	GaP	Green		565	2.2	2.8	18.0	
L-319GYW	GaP	Green	White Diffused	565	2.2	2.8	18.0	60
	GaAsP/GaP	Yellow		585	2.1	2.8	15.0	
L-319LESGW	GaAlInP	Super Red	White Diffused	625	2.0	2.4	100	60
	GaP	Green		565	2.2	2.8	20.0	

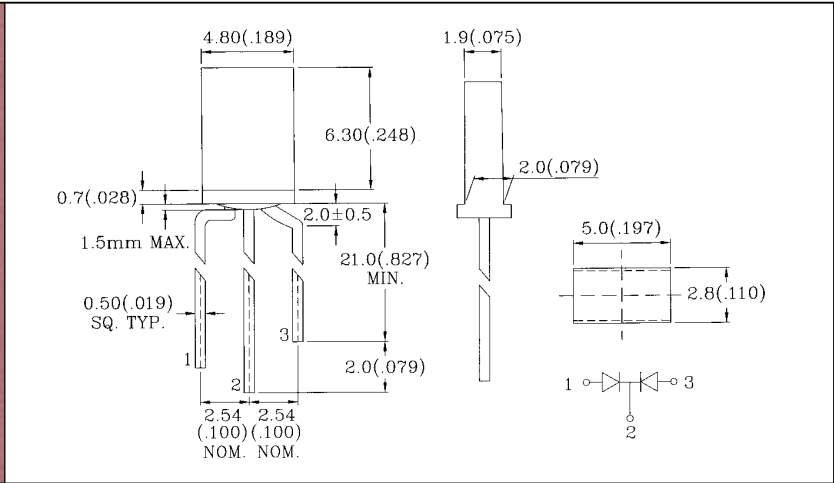
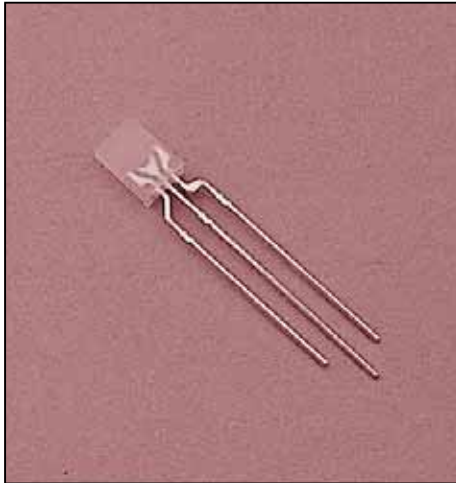
L-409XX 2.0x5.0x7.0 mm RECTANGULAR LED LAMP, MULTI-COLOR



Part No.	Chip		Lens Color	Wave Length λ p(nm)	Electro-Optical Characteristics			View Angle (deg)
	Raw Material	Emitted Color			Vf(V)20mA		lv(mcd)20mA	
					Typ.	Max.	Typ.	
L-409HGW	GaP	Red	White Diffused	700	2.3	2.8	1.5	120
	GaP	Green		565	2.1	2.8	3.0	
L-409EGW	GaAsP/GaP	Hi. effi Red	White Diffused	635	2.1	2.8	6.0	120
	GaP	Green		565	2.2	2.8	3.5	
L-409GYW	GaP	Green	White Diffused	565	2.1	2.8	3.5	120
	GaAsP/GaP	Yellow		585	2.1	2.8	3.5	
L-409LESGW	GaAlInP	Super Red	White Diffused	625	2.0	2.4	15.0	120
	GaP	Green		565	2.2	2.8	6.5	

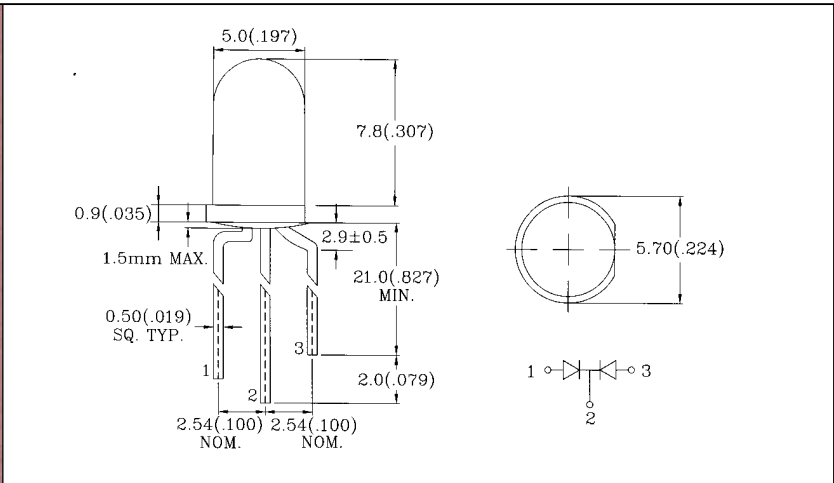
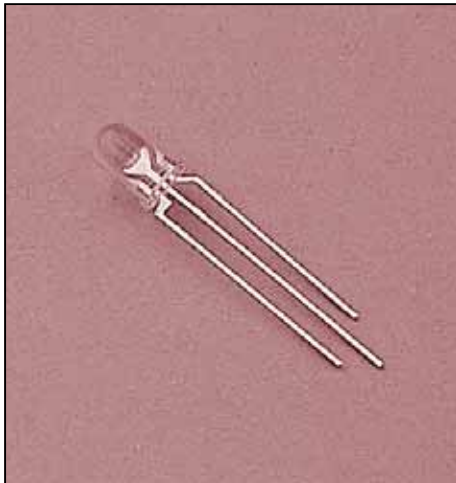
1. All dimension are in millimeters (inches).
2. Tolerance is ± 0.25 mm (0.01") unless otherwise specified.

L-419XX 2.0x5.0x7.0 mm RECTANGULAR LED LAMP, MULTI-COLOR



Part No.	Chip		Lens Color	Wave Length λ p(nm)	Electro-Optical Characteristics			View Angle (deg)
	Raw Material	Emitted Color			Vf(V)20mA		lv(mcd)20mA	
					Typ.	Max.	Typ.	
L-419HGW	GaP	Red	White Diffused	700	2.3	2.8	0.8	120
	GaP	Green		565	2.2	2.8	2.5	
L-419EGW	GaAsP/GaP	Hi. effi Red	White Diffused	635	2.1	2.8	6.0	120
	GaP	Green		565	2.2	2.8	3.5	
L-419GYW	GaP	Green	White Diffused	565	2.2	2.8	2.5	120
	GaAsP/GaP	Yellow		585	2.1	2.8	2.0	
L-419LESGW	GaAlInP	Super Red	White Diffused	625	2.0	2.4	15	120
	GaP	Green		565	2.2	2.8	6.5	

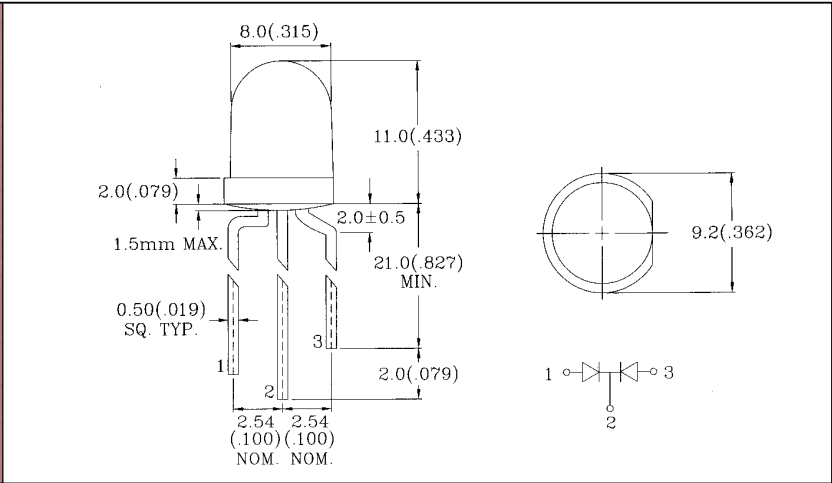
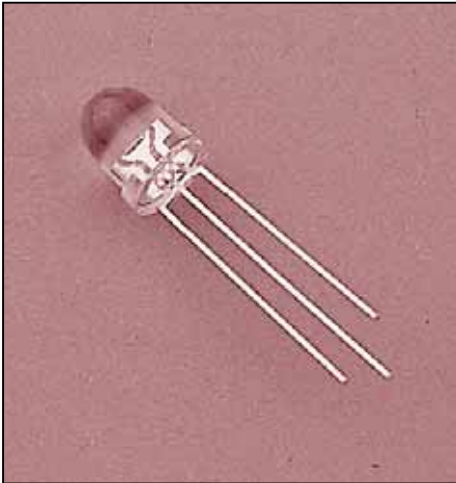
L-519XX 5.0mm Dia LED LAMP, MULTI-COLOR



Part No.	Chip		Lens Color	Wave Length λ p(nm)	Electro-Optical Characteristics			View Angle (deg)
	Raw Material	Emitted Color			Vf(V)20mA		lv(mcd)20mA	
					Typ.	Max.	Typ.	
L-519HGW	GaP	Red	White Diffused	700	2.3	2.8	8.0	120
	GaP	Green		565	2.2	2.8	18.0	
L-519EGW	GaAsP/GaP	Hi. effi Red	White Diffused	635	2.1	2.8	30.0	120
	GaP	Green		565	2.2	2.8	18.0	
L-519GYW	GaP	Green	White Diffused	565	2.2	2.8	18.0	120
	GaAsP/GaP	Yellow		585	2.1	2.8	15.0	
L-519LESGW	GaAlInP	Super Red	White Diffused	625	2.0	2.4	100	120
	GaP	Green		565	2.2	2.8	20.0	

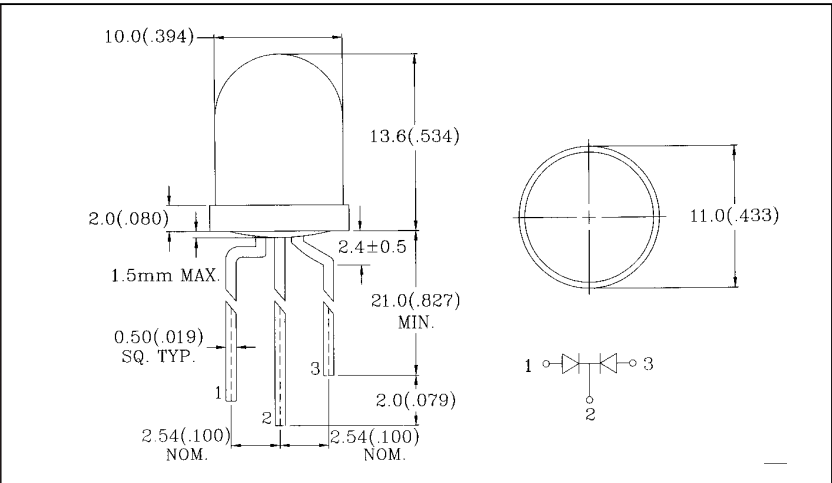
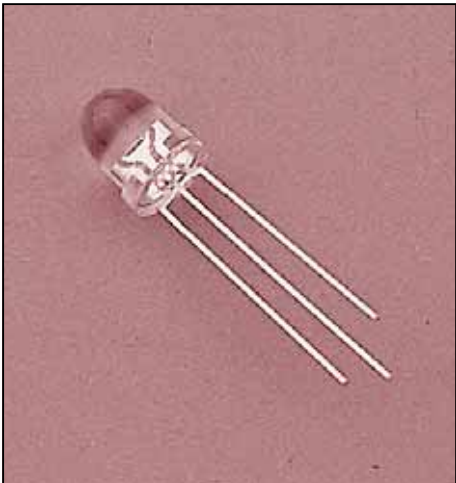
- 1.All dimension are in millimeters (inches).
- 2.Tolerance is ± 0.25 mm (0.01") unless otherwise specified.

L-819XX 8.0mm Dia LED LAMP, MULTI-COLOR



Part No.	Chip		Lens Color	Wave Length λ p(nm)	Electro-Optical Characteristics			View Angle (deg)
	Raw Material	Emitted Color			Vf(V)20mA		lv(mcd)20mA	
					Typ.	Max.	Typ.	
L-819EGW	GaAsP/GaP	Hi.effi Red	White Diffused	635	2.1	2.8	20.0	120
	GaP	Green		565	2.2	2.8	15.0	
L-819EYW	GaAsP/GaP	Hi.effi Red	White Diffused	635	2.1	2.8	20.0	120
	GaAsP/GaP	Yellow		585	2.1	2.8	12.0	
L-819GYW	GaP	Green	White Diffused	565	2.2	2.8	15.0	120
	GaAsP/GaP	Yellow		585	2.1	2.8	12.0	
L-819SRSGW	GaAlAs	Super Red	White Diffused	660	1.8	2.4	350	120
	GaP	Green		565	2.2	2.8	15.0	

L-839XX 10.0mm Dia LED LAMP, MULTI-COLOR



Part No.	Chip		Lens Color	Wave Length λ p(nm)	Electro-Optical Characteristics			View Angle (deg)
	Raw Material	Emitted Color			Vf(V)20mA		lv(mcd)20mA	
					Typ.	Max.	Typ.	
L-839EGW	GaAsP/GaP	Hi.effi Red	White Diffused	635	2.1	2.8	20.0	120
	GaP	Green		565	2.2	2.8	15.0	
L-839EYW	GaAsP/GaP	Hi.effi Red	White Diffused	635	2.1	2.8	20.0	120
	GaAsP/GaP	Yellow		585	2.1	2.8	12.0	
L-839GYW	GaP	Green	White Diffused	565	2.2	2.8	15.0	120
	GaAsP/GaP	Yellow		585	2.1	2.8	12.0	
L-839SRSGW	GaAlAs	Super Red	White Diffused	660	1.8	2.4	350	120
	GaP	Green		565	2.2	2.8	12.0	

1.All dimension are in millimeters (inches).
2.Tolerance is ± 0.25 mm (0.01") unless otherwise specified.