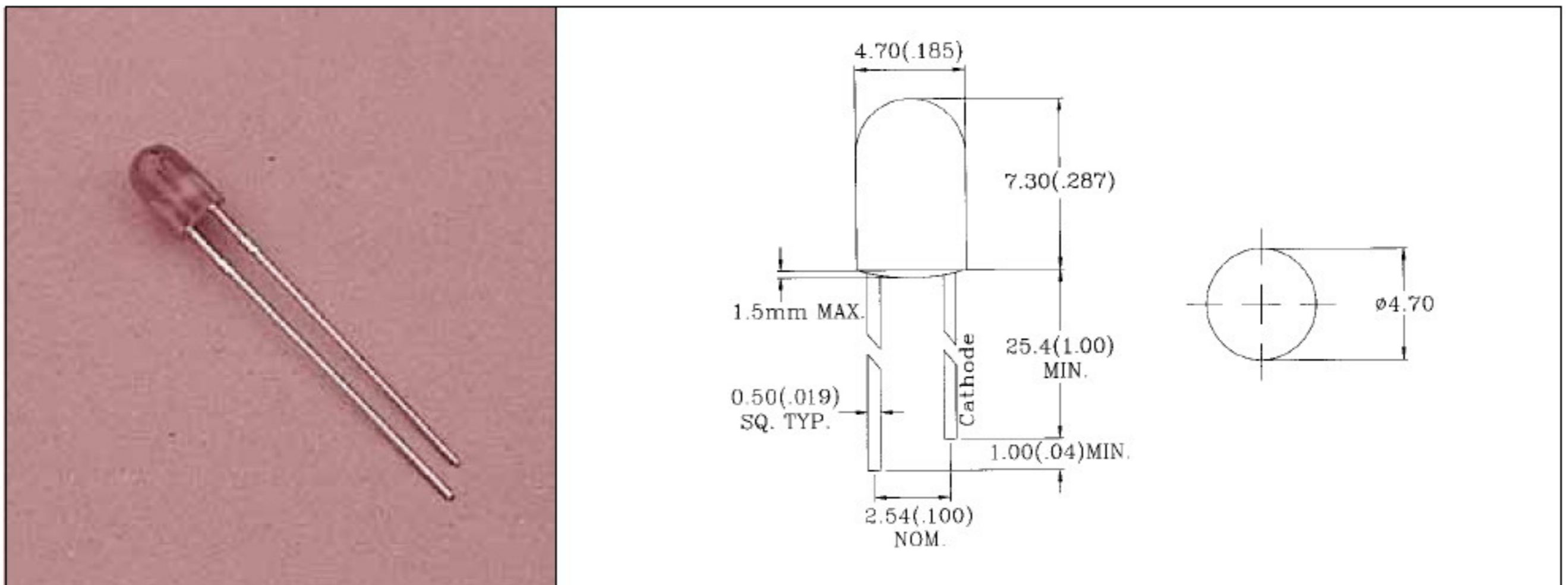
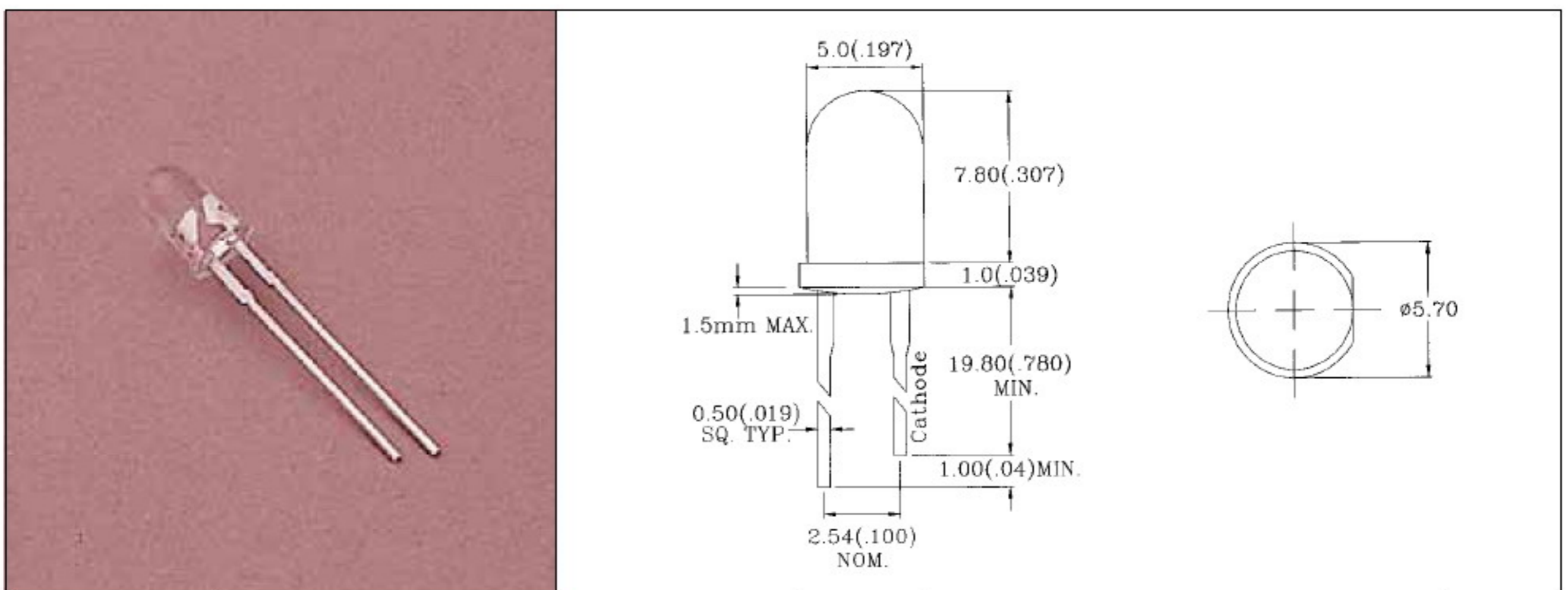


L-503XX 5.0 mm Dia FLANGELESS LED LAMP



Part No.	Chip		Lens Color	Wave Length λ_p (nm)	Electro-Optical Characteristics			View Angle (deg)
	Raw Material	Emitted Color			Vf(V)20mA		Iv(mcd)20mA	
					Typ.	Max.	Typ.	
L-503HD	GaP	Red	Red Diffused	700	2.3	2.8	8.0	110
L-503GD	GaP	Green	Green Diffused	565	2.2	2.8	20.0	110
L-503YD	GaAsP/GaP	Yellow	Yellow Diffused	585	2.1	2.8	15.0	110
L-503ED	GaAsP/GaP	Hi. effi Red	Red Diffused	635	2.1	2.8	25.0	110
L-503SRD	GaAlAs	Super Red	Red Diffused	660	1.8	2.2	40.0	110

L-511XX 5.0 mm Dia LED LAMP

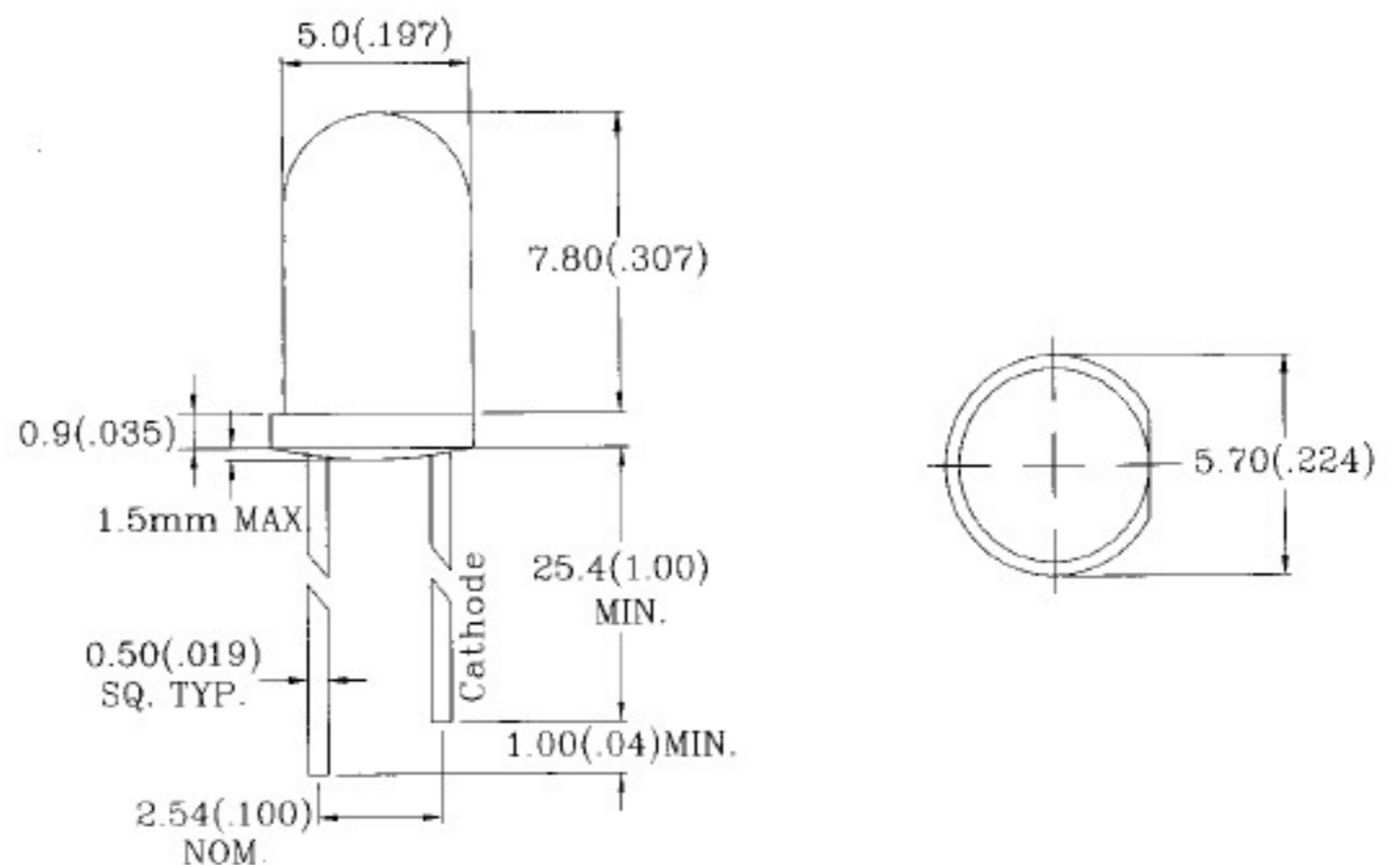


Part No.	Chip		Lens Color	Wave Length λ_p (nm)	Electro-Optical Characteristics			View Angle (deg)
	Raw Material	Emitted Color			Vf(V)20mA		Iv(mcd)20mA	
					Typ.	Max.	Typ.	
L-511HD	GaP	Red	Red Diffused	700	2.3	2.8	1.5	135
L-511GD	GaP	Green	Green Diffused	565	2.2	2.8	4.0	135
L-511YD	GaAsP/GaP	Yellow	Yellow Diffused	585	2.1	2.8	3.0	135
L-511ED	GaAsP/GaP	Hi. effi Red	Red Diffused	635	2.1	2.8	6.0	135
L-511SRD	GaAlAs	Super Red	Red Diffused	660	1.8	2.2	15.0	135

1. All dimension are in millimeters (inches).

2. Tolerance is ± 0.25 mm (0.01") unless otherwise specified.

L-513XX 5.0 mm Dia LED LAMP

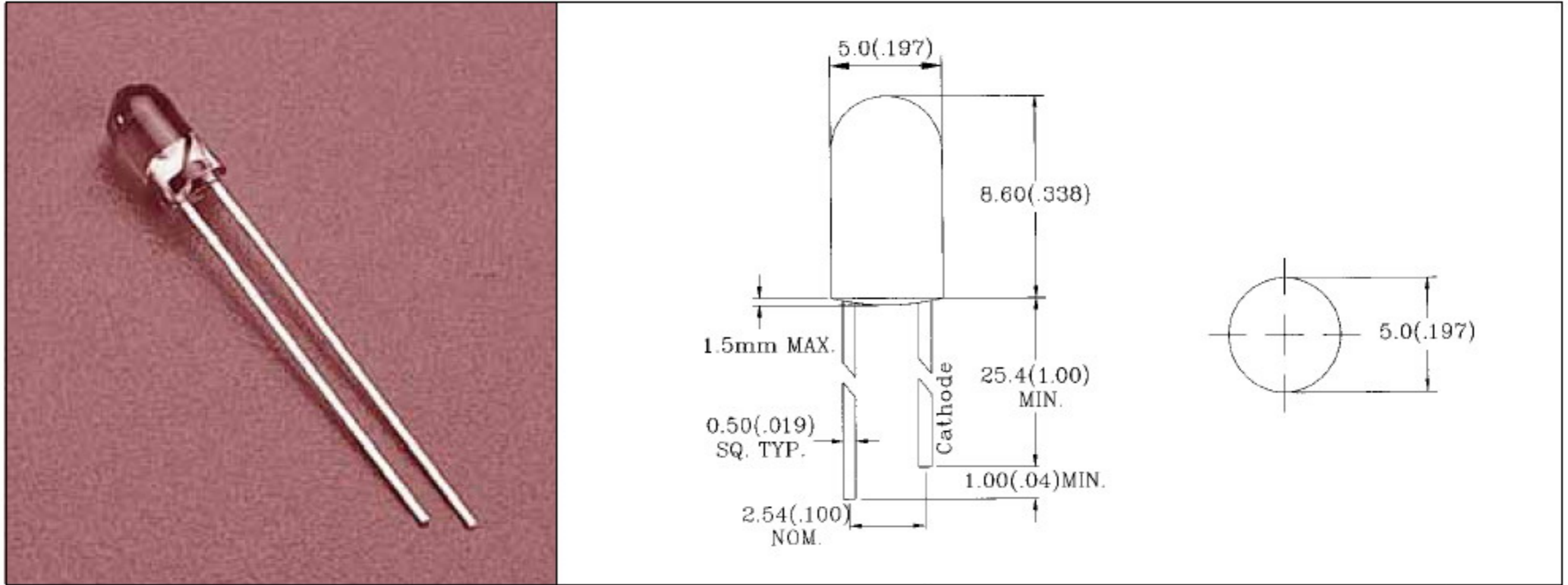


Part No.	Chip		Lens Color	Wave Length λ_p (nm)	Electro-Optical Characteristics			View Angle (deg)
	Raw Material	Emitted Color			Vf(V)20mA		Iv(mcd)20mA	
					Typ.	Max.	Typ.	
L-513HD	GaP	Red	Red Diffused	700	2.3	2.8	8.0	110
L-513GD	GaP	Green	Green Diffused	565	2.2	2.8	20.0	110
L-513YD	GaAsP/GaP	Yellow	Yellow Diffused	585	2.1	2.8	15.0	110
L-513ED	GaAsP/GaP	Hi.effi Red	Red Diffused	635	2.1	2.8	30.0	110
L-513SRD	GaAlAs	Super Red	Red Diffused	660	1.8	2.2	45.0	110
L-513LRD	GaAlAs	Super Red	Red Diffused	660	1.8	2.2	80.0	110
L-513HURD	GaInP	Hi.effi Red	Red Diffused	628	2.0	2.5	180	110
L-513GT	GaP	Green	G.Transparent	565	2.2	2.8	20	15
L-513YT	GaAsP/GaP	Yellow	Y.Transparent	585	2.1	2.8	15	15
L-513ET	GaAsP/GaP	Hi.effi Red	R.Transparent	635	2.1	2.8	30	15
L-513SRT	GaAlAs	Super Red	R.Transparent	660	1.8	2.2	400	15
L-513LRT	GaAlAs	Super Red	R.Transparent	660	1.8	2.4	750	15
L-513HURT	GaInP	Hi.effi Red	R.Transparent	628	2.0	2.5	1800	15
L-513GC	GaP	Green	Water Clear	565	2.2	2.8	200	15
L-513LGC	GaP	Green	Water Clear	565	2.1	2.8	250	15
L-513VG3C	AlInGaP	Green	Water Clear	565	2.1	2.8	400	15
L-513YC	GaAsP/GaP	Yellow	Water Clear	585	2.1	2.8	150	15
L-513EC	GaAsP/GaP	Hi.effi Red	Water Clear	635	2.1	2.8	300	15
L-513SRC	GaAlAs	Super Red	Water Clear	660	1.8	2.2	400	15
L-513LRC	GaAlAs	Super Red	Water Clear	660	1.8	2.2	800	15
L-513HURC	GaInP	Hi.effi Red	Water Clear	628	2.0	2.5	1800	15

1. All dimension are in millimeters (inches).

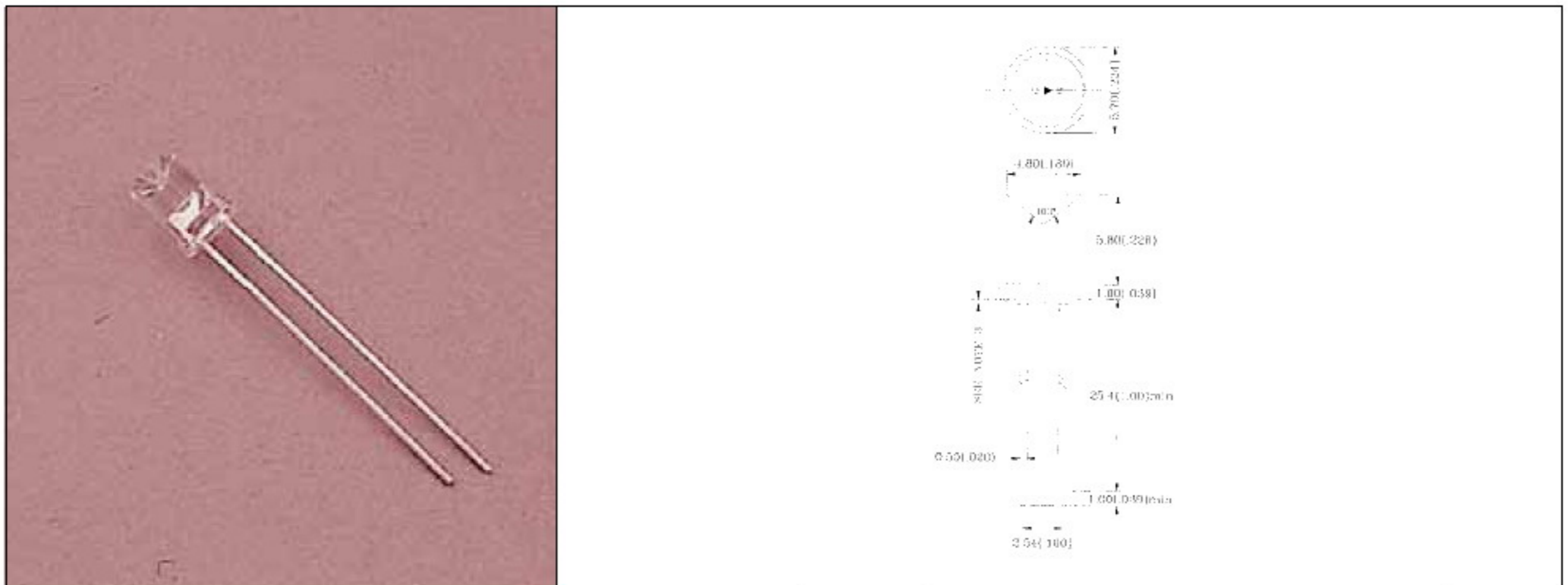
2. Tolerance is ± 0.25 mm (0.01") unless otherwise specified.

L-523XX 5.0 mm Dia FLANGELESS LED LAMP



Part No.	Chip		Lens Color	Wave Length λ_p (nm)	Electro-Optical Characteristics			View Angle (deg)
	Raw Material	Emitted Color			Vf(V)20mA		Iv(mcd)20mA	
					Typ.	Max.	Typ.	
L-523HD	GaP	Red	Red Diffused	700	2.3	2.8	8.0	110
L-523GD	GaP	Green	Green Diffused	565	2.2	2.8	20.0	110
L-523YD	GaAsP/GaP	Yellow	Yellow Diffused	585	2.1	2.8	15.0	110
L-523ED	GaAsP/GaP	Hi.effi Red	Red Diffused	635	2.1	2.8	25.0	110
L-523SRD	GaAlAs	Super Red	Red Diffused	660	1.8	2.2	40.0	110

L-553XX 4.8 mm Dia CYLINDRICAL BACKLIGHTING LED LAMP

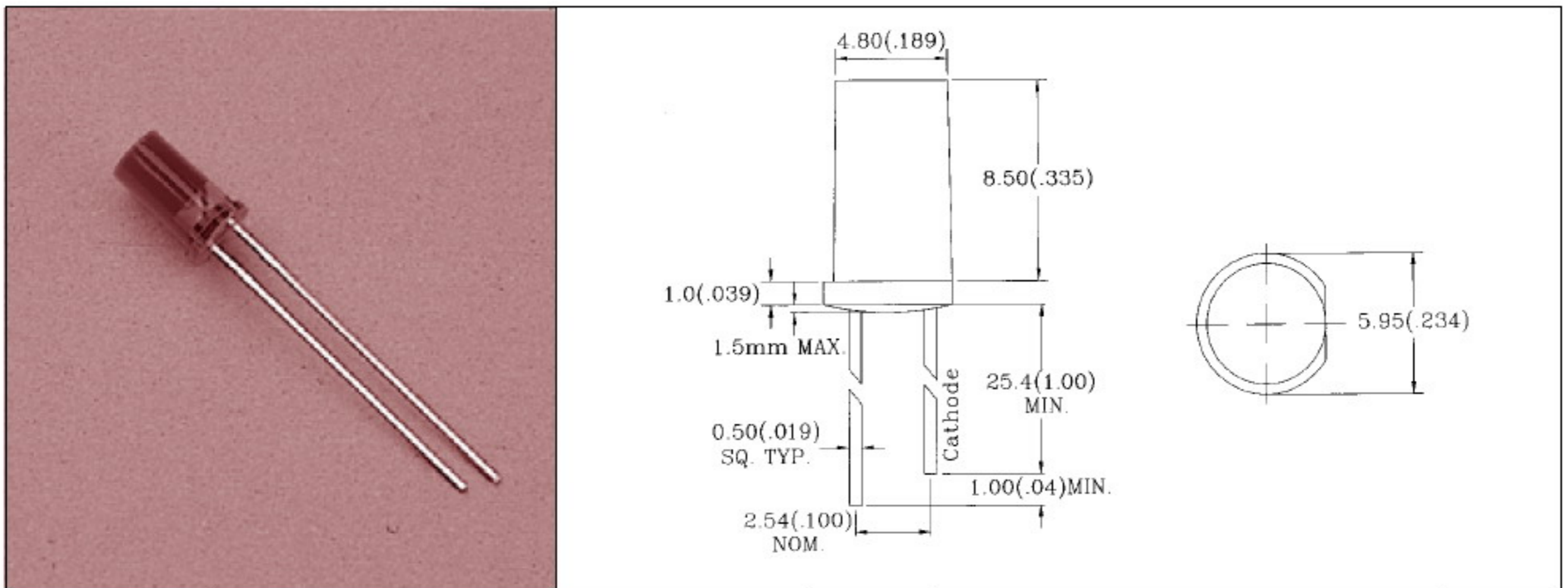


Part No.	Chip		Lens Color	Wave Length λ_p (nm)	Electro-Optical Characteristics			View Angle (deg)
	Raw Material	Emitted Color			Vf(V)20mA		Iv(mcd)20mA	
					Typ.	Max.	Typ.	
L-553HD	GaP	Red	Red Diffused	700	2.3	2.8	0.5	150
L-553GD	GaP	Green	Green Diffused	565	2.2	2.8	1.2	150
L-553YD	GaAsP/GaP	Yellow	Yellow Diffused	585	2.1	2.8	0.8	150
L-553ED	GaAsP/GaP	Hi.effi Red	Red Diffused	635	2.1	2.8	3.0	150
L-553SRD	GaAlAs	Super Red	Red Diffused	660	1.8	2.2	3.0	150

1. All dimension are in millimeters (inches).

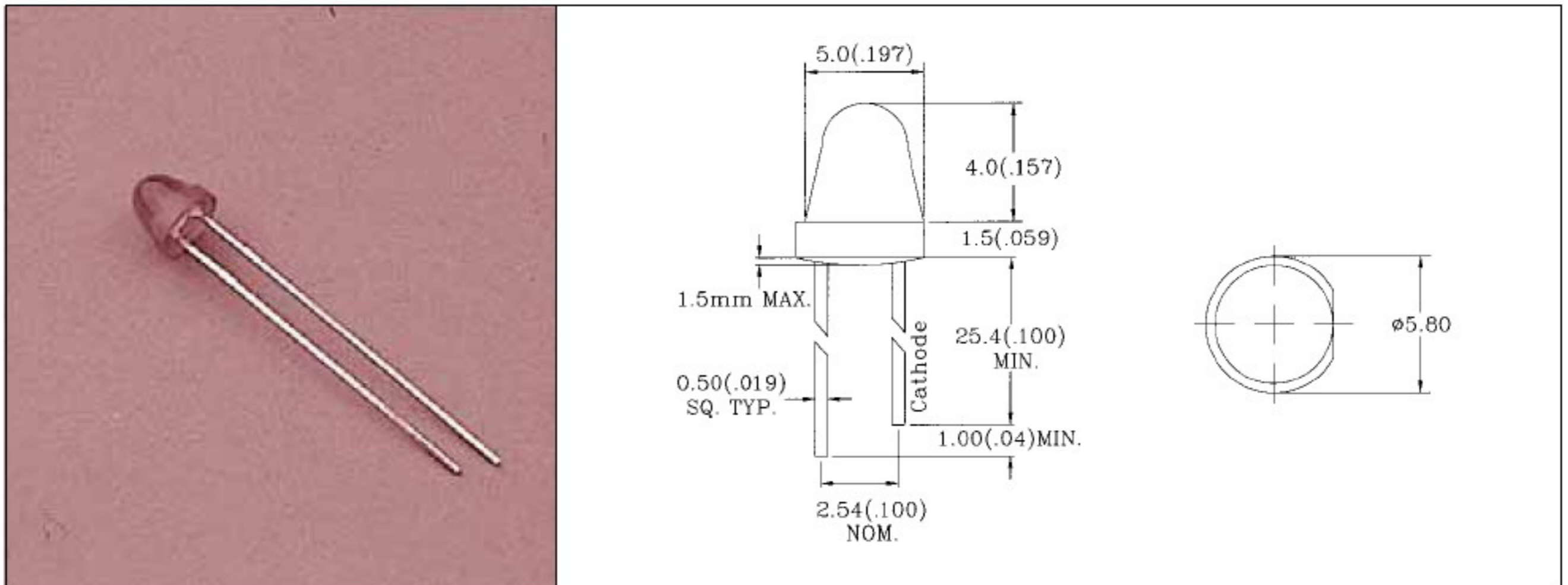
2. Tolerance is ± 0.25 mm (0.01") unless otherwise specified.

L-573XX 5.0 mm Dia CYLINDRICAL LED LAMP



Part No.	Chip		Lens Color	Wave Length λ_p (nm)	Electro-Optical Characteristics			View Angle (deg)
	Raw Material	Emitted Color			Vf(V)20mA		Iv(mcd)20mA	
					Typ.	Max.	Typ.	
L-573HD	GaP	Red	Red Diffused	700	2.3	2.8	2.0	150
L-573GD	GaP	Green	Green Diffused	565	2.2	2.8	5.0	150
L-573YD	GaAsP/GaP	Yellow	Yellow Diffused	585	2.1	2.8	4.0	150
L-573ED	GaAsP/GaP	Hi.effi Red	Red Diffused	635	2.1	2.8	8.0	150
L-573SRD	GaAlAs	Super Red	Red Diffused	660	1.8	2.2	12.0	150

L-593XX 5.0 mm Dia LOW PROFILE LED LAMP

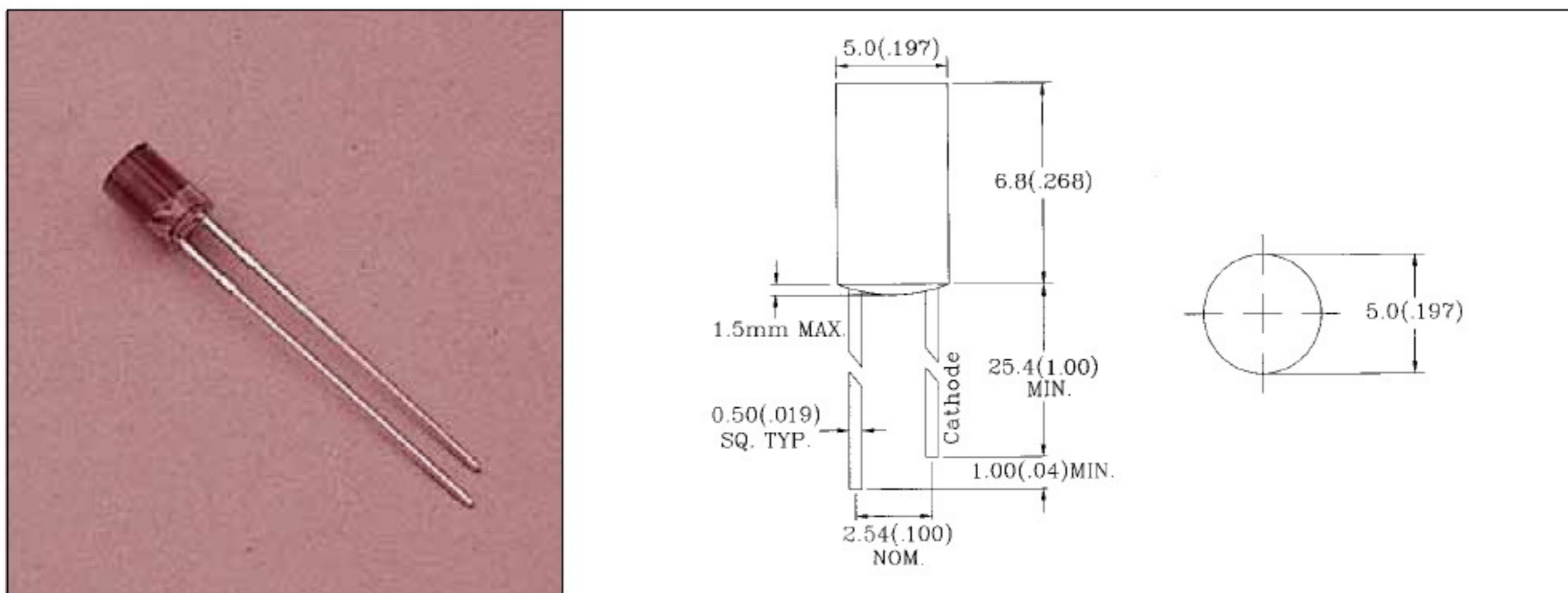


Part No.	Chip		Lens Color	Wave Length λ_p (nm)	Electro-Optical Characteristics			View Angle (deg)
	Raw Material	Emitted Color			Vf(V)20mA		Iv(mcd)20mA	
					Typ.	Max.	Typ.	
L-593HD	GaP	Red	Red Diffused	700	2.3	2.8	3.0	100
L-593GD	GaP	Green	Green Diffused	565	2.1	2.8	8.0	100
L-593YD	GaAsP/GaP	Yellow	Yellow Diffused	585	2.1	2.8	7.0	100
L-593ED	GaAsP/GaP	Hi.effi Red	Red Diffused	635	2.1	2.8	14.0	100
L-593SRD	GaAlAs	Super Red	Red Diffused	660	1.8	2.2	20.0	100

1. All dimension are in millimeters (inches).

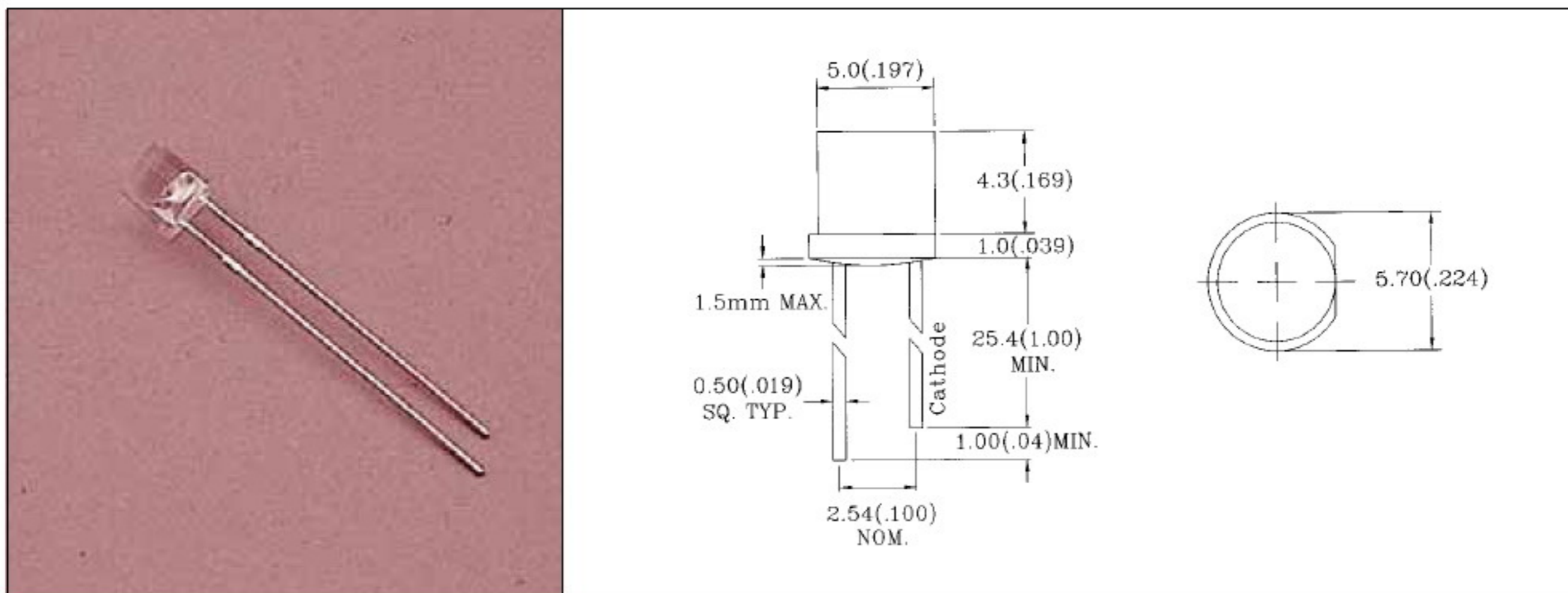
2. Tolerance is ± 0.25 mm (0.01") unless otherwise specified.

L-5C3XX 5.0 mm Dia CYLINDRICAL LED LAMP



Part No.	Chip		Lens Color	Wave Length λ_p (nm)	Electro-Optical Characteristics			View Angle (deg)
	Raw Material	Emitted Color			Vf(V)20mA		Iv(mcd)20mA	
					Typ.	Max.	Typ.	
L-5C3HD	GaP	Red	Red Diffused	700	2.3	2.8	2.0	150
L-5C3GD	GaP	Green	Green Diffused	565	2.1	2.8	5.0	150
L-5C3YD	GaAsP/GaP	Yellow	Yellow Diffused	585	2.1	2.8	4.0	150
L-5C3ED	GaAsP/GaP	Hi.effi Red	Red Diffused	635	2.1	2.8	6.0	150
L-5C3SRD	GaAlAs	Super Red	Red Diffused	660	1.8	2.2	10.0	150

L-5N3XX 5.0 mm Dia CYLINDRICAL LED LAMP



Part No.	Chip		Lens Color	Wave Length λ_p (nm)	Electro-Optical Characteristics			View Angle (deg)
	Raw Material	Emitted Color			Vf(V)20mA		Iv(mcd)20mA	
					Typ.	Max.	Typ.	
L-5N3HD	GaP	Red	Red Diffused	700	2.3	2.8	2.0	150
L-5N3GD	GaP	Green	Green Diffused	565	2.1	2.8	5.0	150
L-5N3YD	GaAsP/GaP	Yellow	Yellow Diffused	585	2.1	2.8	4.0	150
L-5N3ED	GaAsP/GaP	Hi.effi Red	Red Diffused	635	2.1	2.8	6.0	150
L-5N3SRD	GaAlAs	Super Red	Red Diffused	660	1.8	2.2	10.0	150

1. All dimension are in millimeters (inches).

2. Tolerance is ± 0.25 mm (0.01") unless otherwise specified.