Designation system

Through-hole LEDs

BL - L 5 1 3 UB C - XXX / S0

BETLUX

L-Led lamp (Though Hole)

Dimension and module

189:1.8mm tower	2516: 2*5 rectangular
304: 3mm without flange	2506: 2*5 rectangular
312: 3mm with flange	55: 5*5 square
314: 3mm long lead	334: 3mm cylindrical
324: 3mm bullet type	333: 3mm cylindrical
413: 4mm round	342: 3mm cylindrical
48: 4.8mm round-helmet	344: 3mm cylindrical
512: 5mm short lead	542: 5mm cylindrical
513: 5mm long lead	543: 5mm cylindrical
522: 5mm round-helmet	532: 5mm cylindrical
523: 5mm round-helmet	2519: 2*5 bi-color
524: 5mm round-helmet	315: 3mm bi-color,3pin
813: 8mm round	317: 3mm bi-color,2pin
101: 10mm round	519: 5mm bi-color,3pin
102: 10mm round-helmet	517: 5mm bi-color,2pin
453: 4mm oval	345: 3mm elipitical bi-color
463: 4mm oval	809: 8mm bi-color
555: 5mm voal	109: 10mm bi-color
563: 5mm oval	515: 5mm rgb color
557: 5mm oval	
558: 5mm oval	

Lens Color:
D:Color Diffused
T: Color Tinted
C:Water Clear
W: Water Diffused
E: Orange diffused

BIN code

Special Device

Code	Color	Wavelength(nm)	Material
H	Red	700	GaP
S	Hi Red	660	AlGaAs,SH
SR	Hi Red	660	AlGaAs,SH
LR	Hi Red	660	AlGaAs,DH
UR	Ultra Red	660	AlgaAs,DDH
UHR	Ultra Red	640	AlGaInP
E	Red	635	GaAsP
UE	Ultra Red	630	AlGaInP
G	Green	570	GaP
UG	Ultra Green	574	AlGaInP
PG	Ultra Pure Green	525	AlGaInP
BG	Ultra Blish Green	505	AlGaInP
Y	Yellow	585	GaAsP
UY	Ultra Yellow	590	AlGaInP
UYO	Ultra Amber	610	AlGaInP
B	Blue	460	InGaN
UB	Ultra Blue	470	InGaN
UV	violet	395	InGaN
UW	Ultra White	-	InGaN
UW	Ultra Warm White	-	InGaN
IR	Infrared	850-940	-
P	PhotoDiodes	850-940	-

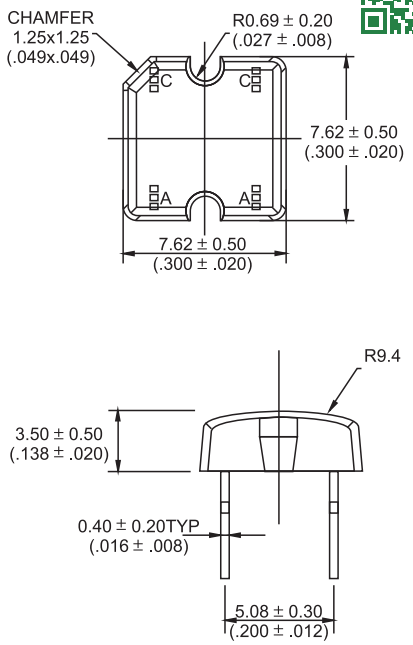
Super Flux LED

Part No	λ_P (nm)	Pulse Rate(Hz) VDD=5V (Hz)	Lens	Iv(mcd)		Viewing Angle 201/2	Drawing
				Min	Typ.		

BL-FL760Rxx

7.62*7.62*3.5MM, flat round top, SUPER FLUX LED LAMP

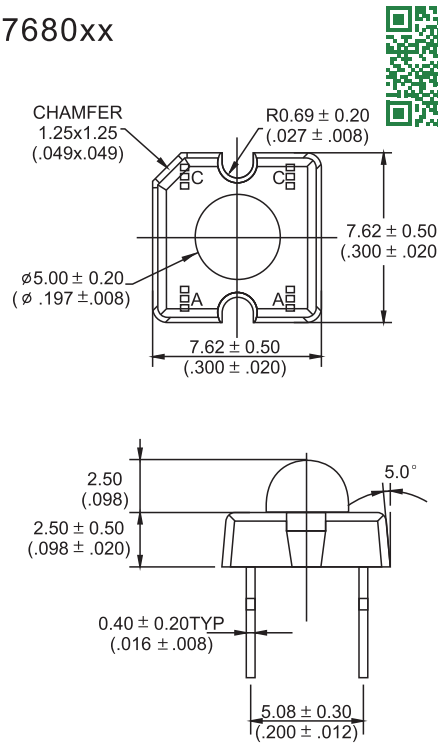
BL-FL760RURC	Ultra Red	660	Water Clear	600	1000	160
BL-FL760RUEC	Ultra Red	630		800	1500	
BL-FL760RUYC	Ultra Yellow	590		600	1300	
BL-FL760RUGC	Ultra Green	574		200	700	
BL-FL760RPGC	Ultra Pure Green	525		1000	5000	
BL-FL760RBGC	Ultra Bluish Green	505		800	4000	
BL-FL760RUBC	Ultra Blue	470		800	2000	
BL-FL760RUWC	Ultra White	/		1000	5000	



BL-FL7680xx

7.62*7.62*5.0MM, 5MM ROUND SUPER FLUX LED LAMP

BL-FL7680URC	Ultra Red	660	Water Clear	600	1500	100
BL-FL7680UEC	Ultra Red	630		800	1800	
BL-FL7680UYC	Ultra Yellow	590		600	1600	
BL-FL7680UGC	Ultra Green	574		200	1000	
BL-FL7680PGC	Ultra Pure Green	525		1000	6000	
BL-FL7680BGC	Ultra Bluish Green	505		800	4800	
BL-FL7680UBC	Ultra Blue	470		800	5000	
BL-FL7680UWC	Ultra White	/		1000	6000	



All dimensions are in millimeters (inches)
Tolerance is ±0.25(0.01")unless otherwise note

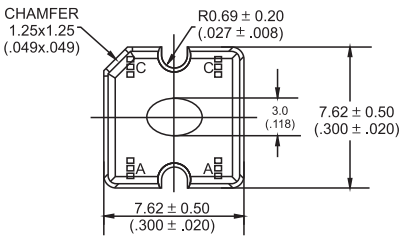
Super Flux LED

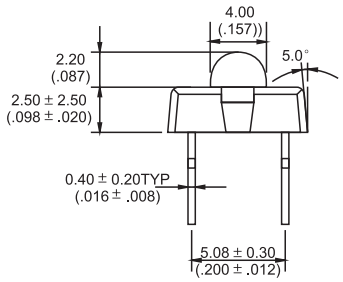
Part No	λ_P (nm)	Pulse Rate(Hz) VDD=5V (Hz)	Lens	Iv(mcd)		Viewing Angle 201/2	Drawing
				Min	Typ.		

BL-FL7653xx

7.62*7.62*4.7MM, 3MM Elliptical head SUPER FLUX LED LAMP

BL-FL7653URC	Ultra Red	660	Water Clear	100	600	30/90
BL-FL7653UEC	Ultra Red	630		150	750	
BL-FL7653UYC	Ultra Yellow	590		200	800	
BL-FL7653UGC	Ultra Green	574		300	550	
BL-FL7653PGC	Ultra Pure Green	525		600	2800	
BL-FL7653BGC	Ultra Bluish Green	505		500	2500	
BL-FL7653UBC	Ultra Blue	470		500	2800	
BL-FL7653UWC	Ultra White	/		500	2500	

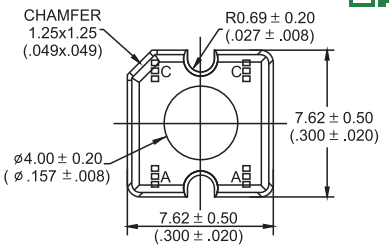


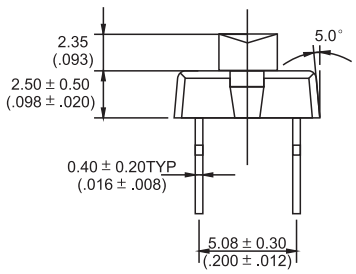


BL-FL7644xx

7.62*7.62*4.0MM, 4MM Cylindrical, Inverted Cone
SUPER FLUX LED LAMP

BL-FL7644URC	Ultra Red	660	Water Clear	200	800	140
BL-FL7644UEC	Ultra Red	630		180	900	
BL-FL7644UYC	Ultra Yellow	590		300	900	
BL-FL7644UGC	Ultra Green	574		400	700	
BL-FL7644PGC	Ultra Pure Green	525		600	3000	
BL-FL7644BGC	Ultra Bluish Green	505		500	2800	
BL-FL7644UBC	Ultra Blue	470		500	3000	
BL-FL7644UWC	Ultra White	/		500	3000	





All dimensions are in millimeters (inches)
Tolerance is ±0.25(0.01")unless otherwise note

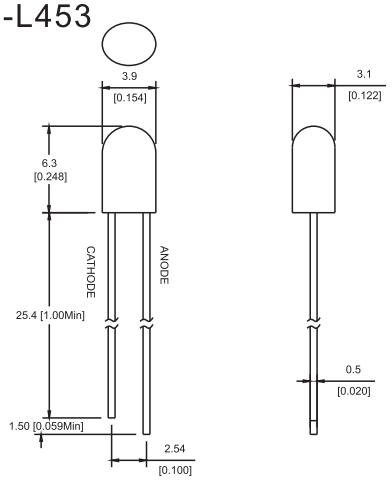
Oval LEDs

Part No	λ_P (nm)	Pulse Rate(Hz) VDD=5V (Hz)	Lens	Iv(mcd)		Viewing Angle 201/2	Drawing
				Min	Typ.		

4mm Ovel Type (3.9*3.1*6.3mm) LED Lamps.

BL-L453UEC	Ultra Red	630	Water Clear	300	800	70/30
BL-L453UYC	Ultra Yellow	590		300	800	
BL-L453UGC	Ultra Green	574		100	250	
BL-L453PGC	Ultra Pure Green	525		800	1800	
BL-L453BGC	Ultra Bluish Green	505		600	1500	
BL-L453UBC	Ultra Blue	470		600	1500	
BL-L453UWC	Ultra White	/		1000	2300	

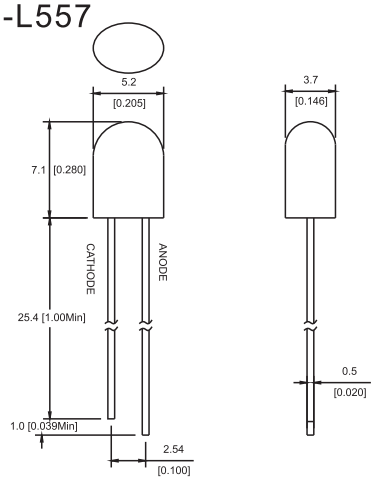
BL-L453



5mm Ovel Type (5.2*3.7*7.1mm) LED Lamps.

BL-L557UEC	Ultra Red	630	Water Clear	250	800	70/40
BL-L557UYC	Ultra Yellow	590		250	800	
BL-L557UGC	Ultra Green	574		100	250	
BL-L557PGC	Ultra Pure Green	525		600	1800	
BL-L557BGC	Ultra Bluish Green	505		550	1500	
BL-L557UBC	Ultra Blue	470		600	1500	
BL-L557UWC	Ultra White	/		1000	2300	

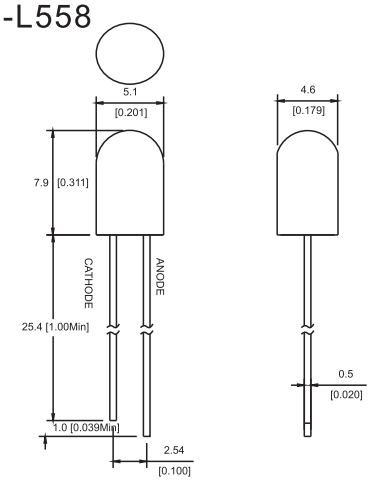
BL-L557



5mm Ovel Type (4.6*5.8*7.9mm) LED Lamps.

BL-L558UEC	Ultra Red	630	Water Clear	300	850	30/75
BL-L558UYC	Ultra Yellow	590		300	850	
BL-L558UGC	Ultra Green	574		100	280	
BL-L558PGC	Ultra Pure Green	525		900	2000	
BL-L558BGC	Ultra Bluish Green	505		650	1700	
BL-L558UBC	Ultra Blue	470		800	1800	
BL-L558UWC	Ultra White	/		1200	2500	

BL-L558



All dimensions are in millimeters (inches)
Tolerance is ±0.25(0.01")unless otherwise note

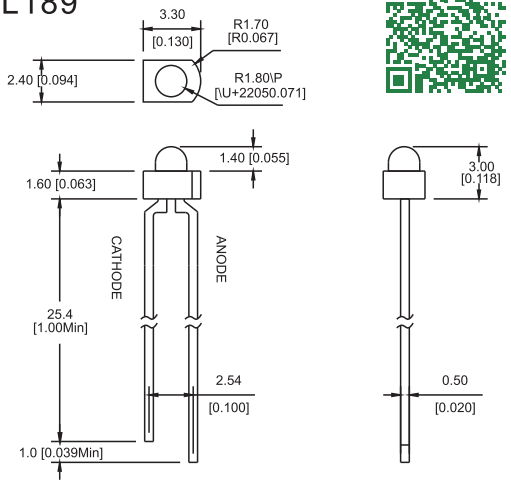
Ultra Bight LEDs

Part No	λ_P (nm)	Pulse Rate(Hz) VDD=5V (Hz)	Lens	Iv(mcd)		Viewing Angle 201/2	Drawing
				Min	Typ.		

1.8 mm Round Type LED Lamps.

BL-L189UEC	Ultra Red	630	Water Clear	120	700	50
BL-L189UYC	Ultra Yellow	590		150	600	
BL-L189UGC	Ultra Green	574		50	800	
BL-L189PGC	Ultra Pure Green	525		400	1200	
BL-L189BGC	Ultra Bluish Green	505		400	1000	
BL-L189UBC	Ultra Blue	470		400	1200	
BL-L189UWC	Ultra White	/		400	2500	

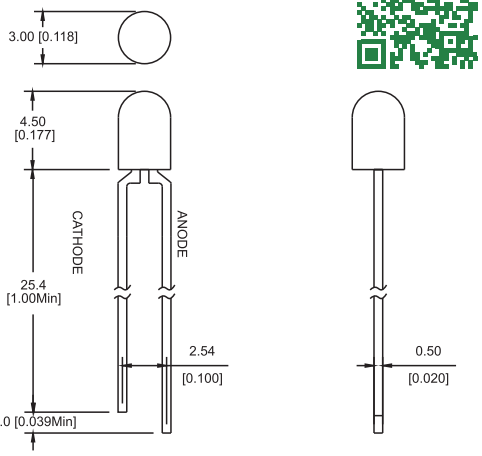
BL-L189



3.0 mm Round Type LED Lamps.

BL-L304UEC	Ultra Red	630	Water Clear	900	1800	30
BL-L304UYC	Ultra Yellow	590		900	2000	
BL-L304UGC	Ultra Green	574		220	600	
BL-L304PGC	Ultra Pure Green	525		1200	3000	
BL-L304BGC	Ultra Bluish Green	505		900	2800	
BL-L304UBC	Ultra Blue	470		500	1400	
BL-L304UWC	Ultra White	/		900	2000	

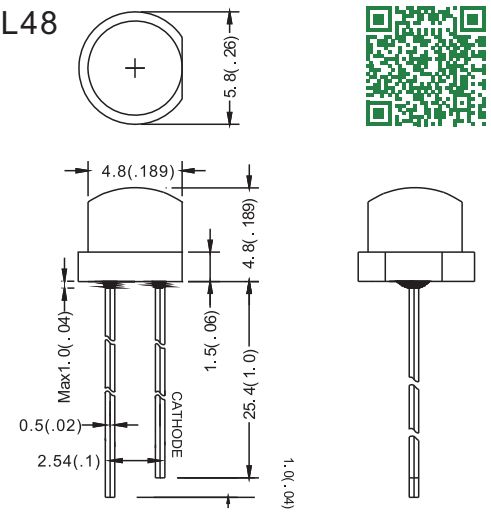
BL-L304



4.8mm Round-Helmet Type LED Lamp

BL-L48UEC	Ultra Red	630	Water Clear	200	500	80
BL-L48UYC	Ultra Yellow	590		200	500	
BL-L48UGC	Ultra Green	574		140	300	
BL-L48PGC	Ultra Pure Green	525		500	1000	
BL-L48BGC	Ultra Bluish Green	505		300	700	
BL-L48UBC	Ultra Blue	470		500	1200	
BL-L48UWC	Ultra White	/		3000	10000	

BL-L48



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For more, please visit http://www.betlux.com

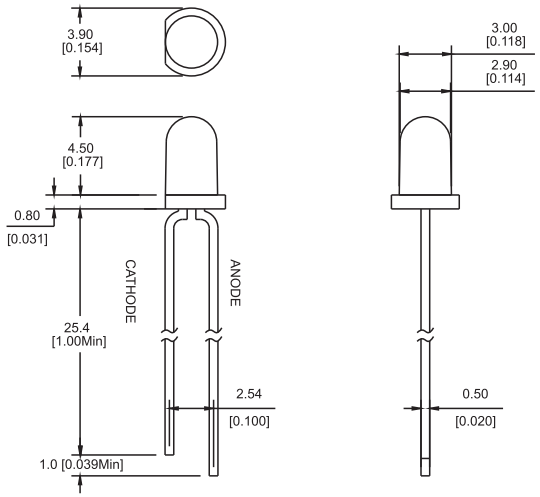
Ultra Bight LEDs

Part No	λ_P (nm)	Pulse Rate(Hz) VDD=5V (Hz)	Lens	Iv(mcd)		Viewing Angle 201/2	Drawing
				Min	Typ.		

1.8 mm Round Type LED Lamps.

BL-L314SRC	Hi Red	660	Water Clear	50	220	30
BL-L314LRC	Super Red	660		200	500	
BL-L314URC	Ultra Red	660		500	900	
BL-L314UEC	Ultra Red	630		900	1800	
BL-L314UYC	Ultra Yellow	590		900	2000	
BL-L314UGC	Ultra Green	574		220	600	
BL-L314PGC	Ultra Pure Green	525		1200	3000	
BL-L314BGC	Ultra Bluish Green	505		900	2800	
BL-L314UBC	Ultra Blue	470		500	1400	
BL-L314VC	UV	405		100	150	
BL-L314UWC	Ultra White	/		900	2000	
BL-L314SRC	Hi Red	660	Diffused	18	60	60
BL-L314LRC	Super Red	660		30	100	
BL-L314URC	Super Red	660		80	200	
BL-L314UEC	Ultra Red	630		100	250	
BL-L314UYC	Ultra Yellow	590		100	300	
BL-L314UGC	Ultra Green	574		100	300	
BL-L314PGC	Ultra Pure Green	525		35	80	
BL-L314BGC	Ultra Bluish Green	505		350	800	
BL-L314UBC	Ultra Blue	470		200	700	
BL-L314UWC	Ultra White	/		800	1800	

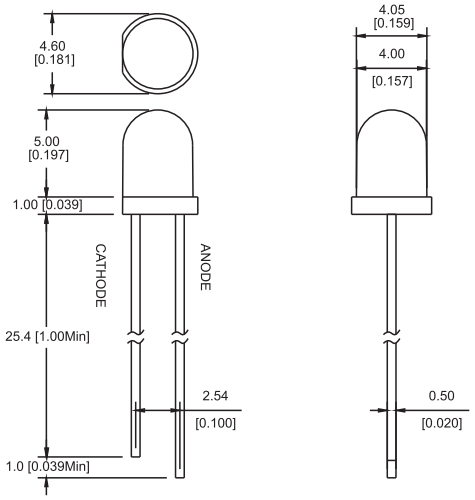
BL-L314



4.0mm Round Type LED Lamps

BL-L413UEC	Ultra Red	630	Water Clear	900	1900	25
BL-L413UYC	Ultra Yellow	590		900	2100	
BL-L413UGC	Ultra Green	574		220	650	
BL-L413PGC	Ultra Pure Green	525		1200	4000	
BL-L413BGC	Ultra Bluish Green	505		900	3500	
BL-L413UBC	Ultra Blue	470		500	4000	
BL-L413UWC	Ultra White	/		3000	10000	

BL-L413



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Tolerance is ±0.25(0.01")unless otherwise note

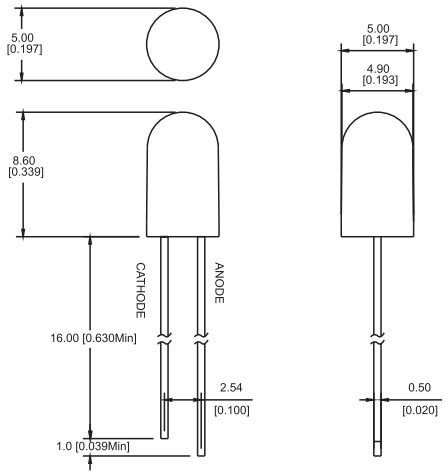
Ultra Bight LEDs

Part No	λ_P (nm)	Pulse Rate(Hz) VDD=5V (Hz)	Lens	Iv(mcd)		Viewing Angle 201/2	Drawing
				Min	Typ.		

5mm Round LED Lamps.

BL-L502UEC	Ultra Red	630	Water Clear	800	2000	20
BL-L502UYC	Ultra Yellow	590		1000	2200	
BL-L502UGC	Ultra Green	574		300	700	
BL-L502PGC	Ultra Pure Green	525		2000	5000	
BL-L502BGC	Ultra Bluish Green	505		1800	4000	
BL-L502UBC	Ultra Blue	470		2000	5000	
BL-L502UWC	Ultra White	/		3000	10000	

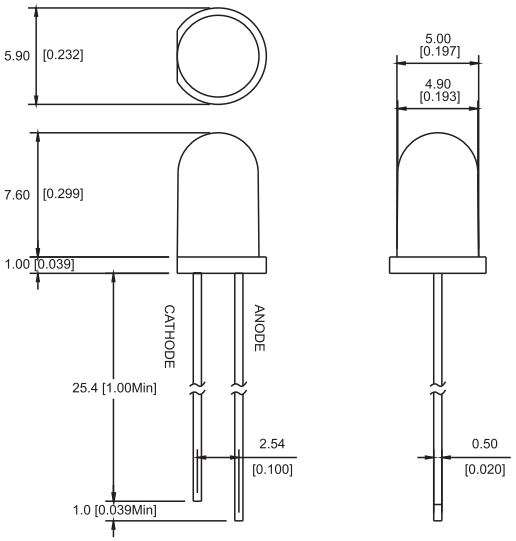
BL-L502



5mm Round LED Lamps.

BL-L513SRC	Hi Red	660	Water Clear	50	250	20
BL-L513LRC	Super Red	660		250	600	
BL-L513URC	Ultra Red	660		600	1000	
BL-L513UEC	Ultra Red	630		800	2000	
BL-L513UYC	Ultra Yellow	590		1000	2200	
BL-L513UYOC	Ultra Amber	619		1000	2200	
BL-L513UGC	Ultra Green	574		300	700	
BL-L513PGC	Ultra Pure Green	525		2000	5000	
BL-L513BGC	Ultra Bluish Green	505		1800	4000	
BL-L513UBC	Ultra Blue	470		2000	5000	
BL-L513UVC	UV	405		80	150	
BL-L513UWC	Ultra White	/		3000	10000	
BL-L513SRD	Hi Red	660	Diffused	20	80	60
BL-L513LRD	Super Red	660		50	120	
BL-L513URD	Ultra Red	660		100	220	
BL-L513UED	Ultra Red	630		120	300	
BL-L513UYD	Ultra Yellow	590		120	320	
BL-L513UYOD	Ultra Amber	619		120	320	
BL-L513UGD	Ultra Green	574		45	100	
BL-L513PGD	Ultra Pure Green	525		400	900	
BL-L513BGD	Ultra Bluish Green	505		300	800	
BL-L513UBD	Ultra Blue	470		400	900	
BL-L513UWW	Ultra White	/		1000	2000	

BL-L513



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Tolerance is ±0.25(0.01")unless otherwise note

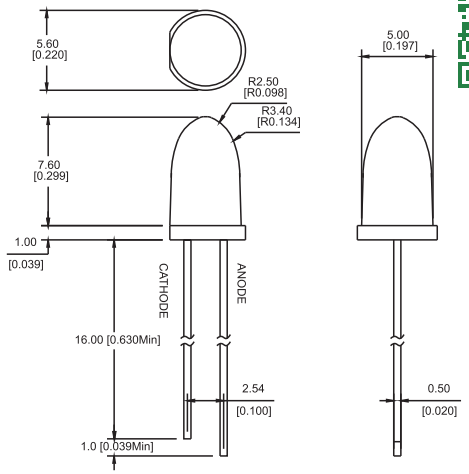
Ultra Bight LEDs

Part No	λ_P (nm)	Pulse Rate(Hz) VDD=5V (Hz)	Lens	Iv(mcd)		Viewing Angle 201/2	Drawing
				Min	Typ.		

5.0mm Round-Helmet Type LED Lamps.

BL-L522UEC	Ultra Red	630		1000	2500	
BL-L522UYC	Ultra Yellow	590		1000	2200	
BL-L522UGC	Ultra Green	574		400	1000	
BL-L522PGC	Ultra Pure Green	525	Water	3000	6000	15
BL-L522BGC	Ultra Bluish Green	505	Clear	2000	5000	
BL-L522UBC	Ultra Blue	470		2200	6000	
BL-L522UWC	Ultra White	/		5000	15000	

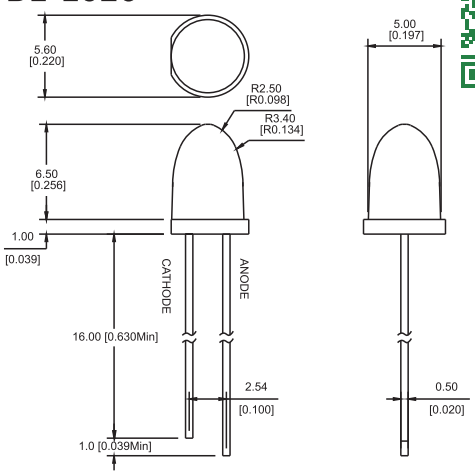
BL-L522



5.0mm Round-Helmet Type LED Lamps, with lower profile

BL-L523UEC	Ultra Red	630		900	2400	
BL-L523UYC	Ultra Yellow	590		900	2100	
BL-L523UGC	Ultra Green	574		300	900	
BL-L523PGC	Ultra Pure Green	525	Water	2000	5000	18
BL-L523BGC	Ultra Bluish Green	505	Clear	1800	4000	
BL-L523UBC	Ultra Blue	470		2000	5500	
BL-L523UWC	Ultra White	/		4500	12000	

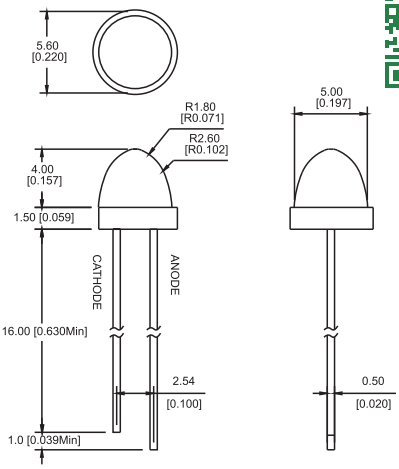
BL-L523



5.0mm Round-Helmet Type LED Lamps, with lower Profile

BL-L524UEC	Ultra Red	630		800	1800	
BL-L524UYC	Ultra Yellow	590		800	1500	
BL-L524UGC	Ultra Green	574		300	800	
BL-L524PGC	Ultra Pure Green	525	Water	1500	3000	20
BL-L524BGC	Ultra Bluish Green	505	Clear	1000	2700	
BL-L524UBC	Ultra Blue	470		1200	2500	
BL-L524UWC	Ultra White	/		3000	10000	

BL-L524



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Tolerance is ±0.25(0.01")unless otherwise note

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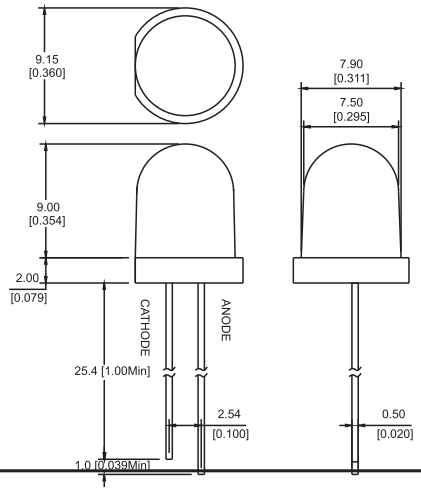
Ultra Bight LEDs

Part No	λ_P (nm)	Pulse Rate(Hz) VDD=5V (Hz)	Lens	Iv(mcd)		Viewing Angle 201/2	Drawing
				Min	Typ.		

8mm Round LED Lamps.

BL-L813UEC	Ultra Red	630		800	1500	
BL-L813UYC	Ultra Yellow	590		600	1300	
BL-L813UGC	Ultra Green	574		200	700	
BL-L813PGC	Ultra Pure Green	525	Water	1000	5000	25
BL-L813BGC	Ultra Bluish Green	505	Clear	800	4000	
BL-L813UBC	Ultra Blue	470		800	2000	
BL-L813UWC	Ultra White	/		1000	5000	

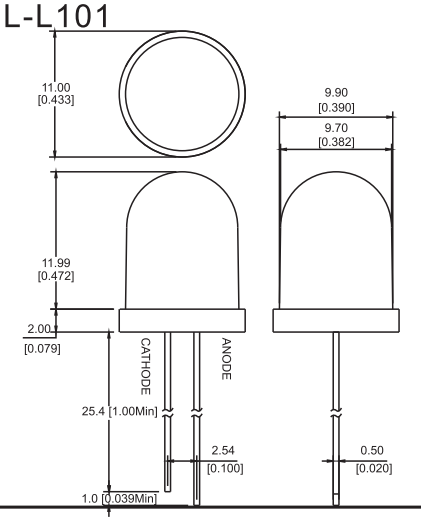
BL-L813



10mm Round LED Lamps.

BL-L101UEC	Ultra Red	630		800	1500	
BL-L101UYC	Ultra Yellow	590		600	1300	
BL-L101UGC	Ultra Green	574		200	700	
BL-L101PGC	Ultra Pure Green	525	Water	1000	5000	25
BL-L101BGC	Ultra Bluish Green	505	Clear	800	4000	
BL-L101UBC	Ultra Blue	470		800	2000	
BL-L101UWC	Ultra White	/		1000	5000	

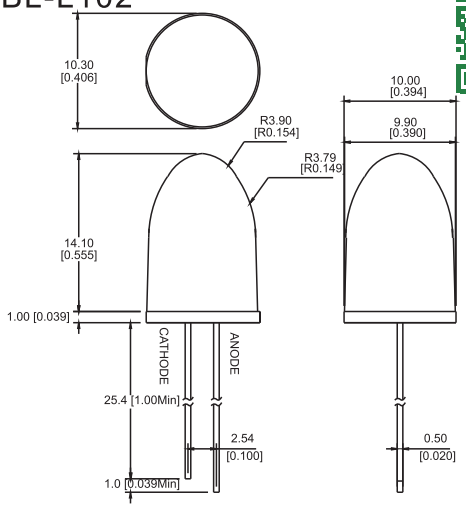
BL-L101



10mm Round-Helmet LED Lamps.

BL-L102UEC	Ultra Red	630		800	1800	
BL-L102UYC	Ultra Yellow	590		600	1500	
BL-L102UGC	Ultra Green	574		300	800	
BL-L102PGC	Ultra Pure Green	525	Water	1500	6000	15
BL-L102BGC	Ultra Bluish Green	505	Clear	1000	5000	
BL-L102UBC	Ultra Blue	470		1000	3000	
BL-L102UWC	Ultra White	/		5000	10000	

BL-L102



All dimensions are in millimeters (inches)
Tolerance is ±0.25(0.01")unless otherwise note

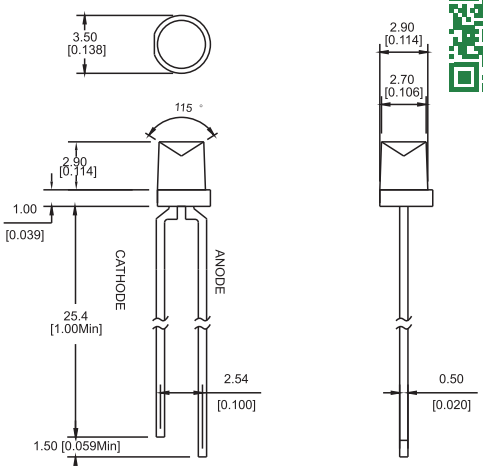
Ultra Bight LEDs

Part No	λ_P (nm)	Pulse Rate(Hz) VDD=5V (Hz)	Lens	Iv(mcd) Min	Iv(mcd) Typ.	Viewing Angle 201/2	Drawing

3.0mm Cylindrical, Inverted Cone LED lamp.

BL-L334UEC	Ultra Red	630	Water Clear	150	400	110
BL-L334UYC	Ultra Yellow	590		150	400	
BL-L334UGC	Ultra Green	574		30	100	
BL-L334PGC	Ultra Pure Green	525		300	1000	
BL-L334BGC	Ultra Bluish Green	505		220	800	
BL-L334UBC	Ultra Blue	470		500	1000	
BL-L334UWC	Ultra White	/		250	1200	

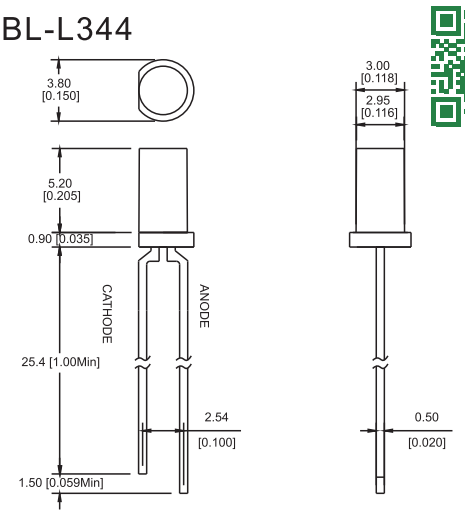
BL-L334



3.0mm Cylindrical LED lamp

BL-L344UEC	Ultra Red	630	Water Clear	160	450	110
BL-L344UYC	Ultra Yellow	590		160	450	
BL-L344UGC	Ultra Green	574		35	110	
BL-L344PGC	Ultra Pure Green	525		320	1100	
BL-L344BGC	Ultra Bluish Green	505		250	900	
BL-L344UBC	Ultra Blue	470		550	1100	
BL-L344UWC	Ultra White	/		300	1500	

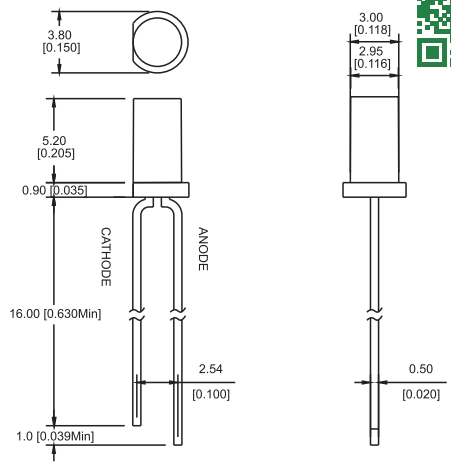
BL-L344



3.0mm Cylindrical LED lamp

BL-L342UEC	Ultra Red	630	Water Clear	160	450	100
BL-L342UYC	Ultra Yellow	590		160	450	
BL-L342UGC	Ultra Green	574		35	110	
BL-L342PGC	Ultra Pure Green	525		320	1100	
BL-L342BGC	Ultra Bluish Green	505		250	900	
BL-L342UBC	Ultra Blue	470		550	1100	
BL-L342UWC	Ultra White	/		300	1500	

BL-L342



All dimensions are in millimeters (inches)
Tolerance is ±0.25(0.01")unless otherwise note

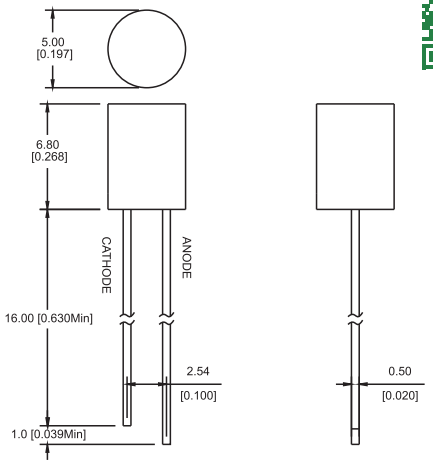
Ultra Bight LEDs

Part No	λ_P (nm)	Pulse Rate(Hz) VDD=5V (Hz)	Lens	Iv(mcd)		Viewing Angle 201/2	Drawing
				Min	Typ.		

5mm Cylindrical LED lamp, FLAT TOP

BL-L542UEC	Ultra Red	630	Water Clear	260	600	90
BL-L542UYC	Ultra Yellow	590		260	500	
BL-L542UGC	Ultra Green	574		120	250	
BL-L542PGC	Ultra Pure Green	525		800	2000	
BL-L542BGC	Ultra Bluish Green	505		700	1800	
BL-L542UBC	Ultra Blue	470		650	1800	
BL-L542UWC	Ultra White	/		1000	2500	

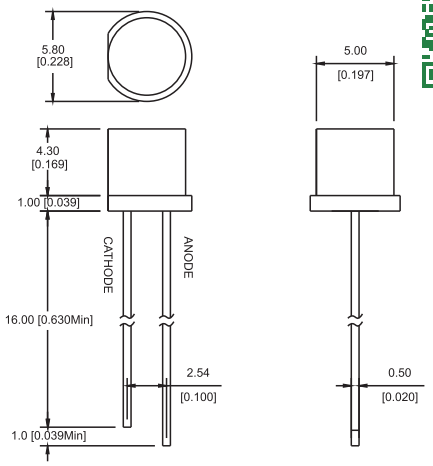
BL-L542



5mm Cylindrical LED lamp

BL-L543UEC	Ultra Red	630	Water Clear	260	600	80
BL-L543UYC	Ultra Yellow	590		260	500	
BL-L543UGC	Ultra Green	574		120	250	
BL-L543PGC	Ultra Pure Green	525		800	2000	
BL-L543BGC	Ultra Bluish Green	505		700	1800	
BL-L543UBC	Ultra Blue	470		650	1800	
BL-L543UWC	Ultra White	/		1000	2500	

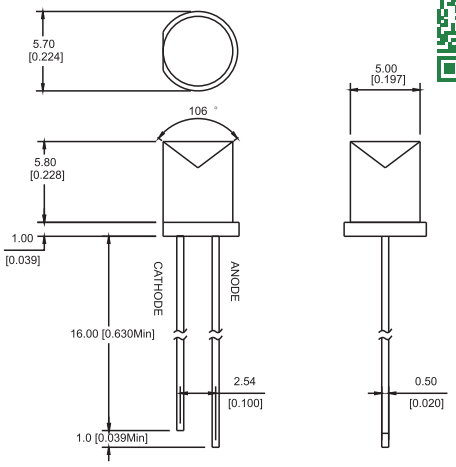
BL-L543



5mm Cylindrical LED lamp

BL-L532UEC	Ultra Red	630	Water Clear	100	350	110
BL-L532UYC	Ultra Yellow	590		100	350	
BL-L532UGC	Ultra Green	574		40	80	
BL-L532PGC	Ultra Pure Green	525		400	1000	
BL-L532BGC	Ultra Bluish Green	505		250	800	
BL-L532UBC	Ultra Blue	470		550	1000	
BL-L532UWC	Ultra White	/		250	1000	

BL-L532



All dimensions are in millimeters (inches)
Tolerance is ±0.25(0.01")unless otherwise note

For more, please visit http://www.betlux.com

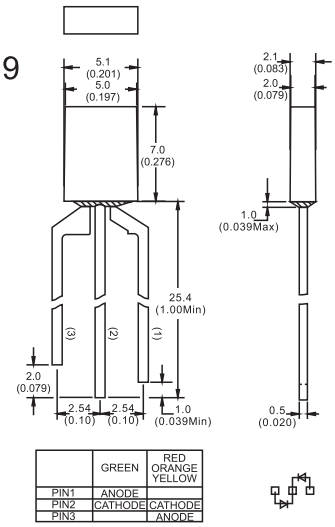
Bi-color and RGB color LED

Part No	λ_P (nm)	Pulse Rate(Hz) VDD=5V (Hz)	Lens	Iv(mcd) Min	Iv(mcd) Typ.	Viewing Angle 201/2	Drawing

2.0*5.0mm Rectangular Type BI-COLOR LED Lamps, with 3 leads.

BL-L2519EGW	Red	635	Water Diff.	7	80	110
	Green	570		4	50	
BL-L2519YGW	Yellow	585		4	120	
	Green	570		4	80	
BL-L2519UEUGW	Ultra Red	630		80	180	
	Ultra Green	574		60	80	

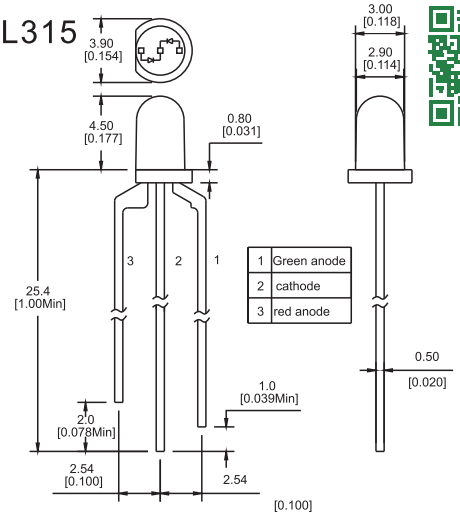
BL-L2519



3.0mm Round Type BI-COLOR LED Lamps, with 3 leads

BL-L315EGW	Red	635	Water Diff.	5	15	60
	Green	570		3	10	
BL-L315YGW	Yellow	585		3	10	
	Green	570		3	10	
BL-L315UEUGW	Ultra Red	630		90	180	
	Ultra Green	574		70	120	

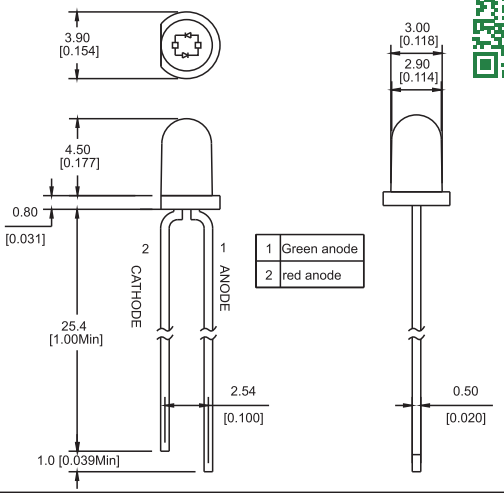
BL-L315



3.0mm Round Type BI-COLOR LED Lamps, with 2 leads

BL-L317EGW	Red	635	Water Diff.	5	15	60
	Green	570		3	10	
BL-L317YGW	Yellow	585		3	10	
	Green	570		3	10	
BL-L317UEUGW	Ultra Red	630		90	180	
	Ultra Green	574		70	120	

BL-L317



All dimensions are in millimeters (inches)
Tolerance is ±0.25(0.01")unless otherwise note

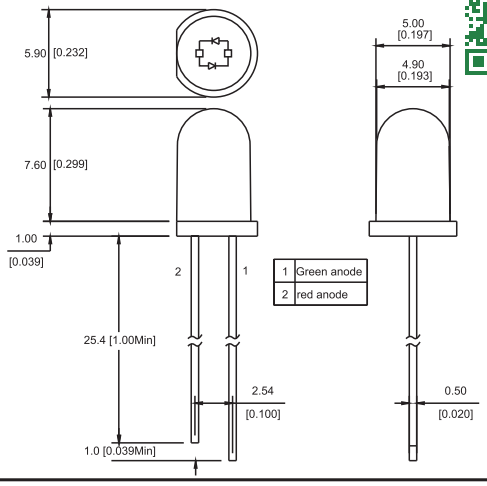
Bi-color and RGB color LED

Part No	λ_P (nm)	Pulse Rate(Hz) VDD=5V (Hz)	Lens	Iv(mcd)		Viewing Angle 201/2	Drawing
				Min	Typ.		

5.0mm Round Type BI-COLOR LED Lamps, with 2 lead

BL-L517EGW	Red	635	Water Diff.	8	20	60
	Green	570		5	15	
BL-L517YGW	Yellow	585		5	15	
	Green	570		5	15	
BL-L517UEUGW	Ultra Red	630		100	190	
	Ultra Green	574		80	130	

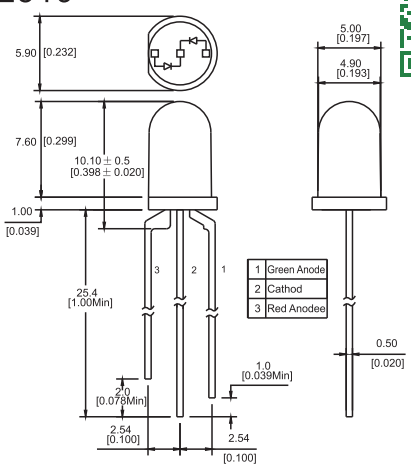
BL-L517



5.0mm Round Type BI-COLOR LED Lamps, with 3 lead

BL-L519EGW	Red	635	Water Diff.	8	20	60
	Green	570		5	15	
BL-L519YGW	Yellow	585		5	15	
	Green	570		5	15	
BL-L519UEUGW	Ultra Red	630		100	190	
	Ultra Green	574		80	130	

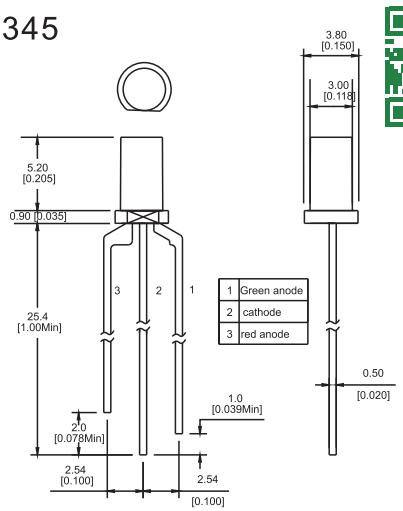
BL-L519



3.0mm Elipitical Type BI-COLOR LED Lamps, with 3 leads

BL-L345EGW	Red	635	Water Diff.	5	15	100
	Green	570		3	10	
BL-L345YGW	Yellow	585		3	10	
	Green	570		3	10	
BL-L345UEUGW	Ultra Red	630		90	180	
	Ultra Green	574		70	120	

BL-L345



All dimensions are in millimeters (inches)
Tolerance is ±0.25(0.01")unless otherwise note

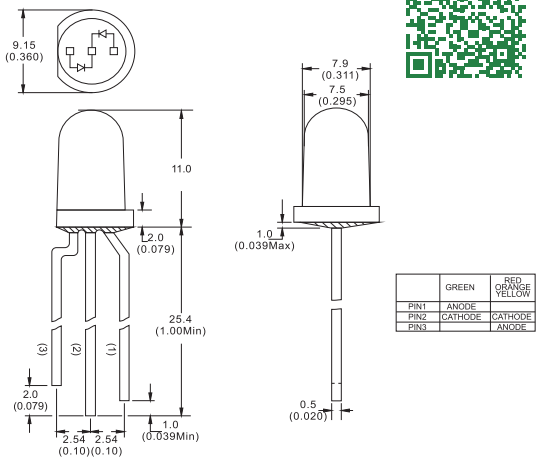
Bi-color and RGB color LED

Part No	λ_P (nm)	Pulse Rate(Hz) VDD=5V (Hz)	Lens	Iv(mcd)		Viewing Angle 201/2	Drawing
				Min	Typ.		

8mm Round Type BI-COLOR LED Lamps, with 3 lead

BL-L809EGW	Red	635	Water Diff.	8	20	60
	Green	570		5	15	
BL-L809YGW	Yellow	585		5	15	
	Green	570		5	15	
BL-L809UEUGW	Ultra Red	630		100	190	
	Ultra Green	574		80	130	

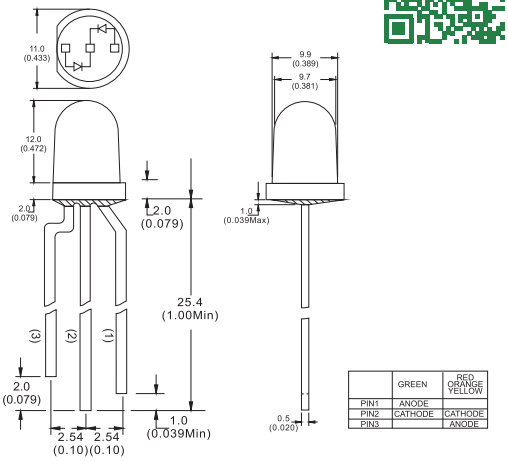
BL-L809



10mm Round Type BI-COLOR LED Lamps, with 3 lead

BL-L109EGW	Red	635	Water Diff.	8	20	60
	Green	570		5	15	
BL-L109YGW	Yellow	585		5	15	
	Green	570		5	15	
BL-L109UEUGW	Ultra Red	630		100	190	
	Ultra Green	574		80	130	

BL-L109



All dimensions are in millimeters (inches)
Tolerance is ±0.25(0.01")unless otherwise note

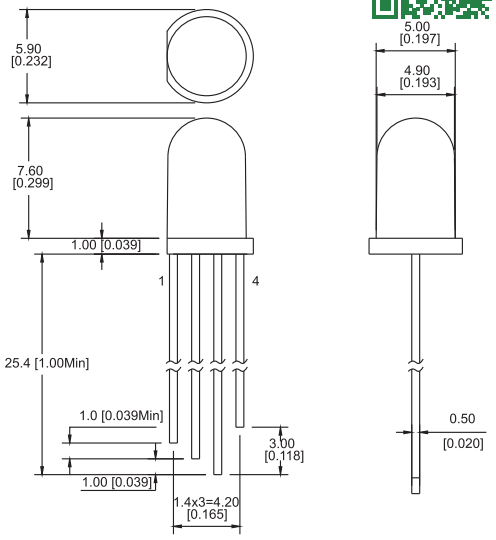
Bi-color and RGB color LED

Part No	λ_P (nm)	Pulse Rate(Hz) VDD=5V (Hz)	Lens	Iv(mcd)		Viewing Angle 201/2	Drawing
				Min	Typ.		

5.0mm Round Type, RGB Full Color LED Lamps

BL-L515RGBC-CA	Ultra Red	630	Water Clear	800	2000	20
	Ultra Pure Green	525		2000	5000	
	Blue	430		800	2000	
BL-L515RGBW-CA	Ultra Red	630	Water Diff.	200	500	30
	Ultra Pure Green	525		300	600	
	Blue	430		150	300	
BL-L515RGBC-CC	Ultra Red	630	Water Clear	800	2000	20
	Ultra Pure Green	525		2000	5000	
	Blue	430		800	2000	
BL-L515RGBW-CC	Ultra Red	630	Water Diff.	200	500	30
	Ultra Pure Green	525		300	600	
	Blue	430		150	300	

BL-L515



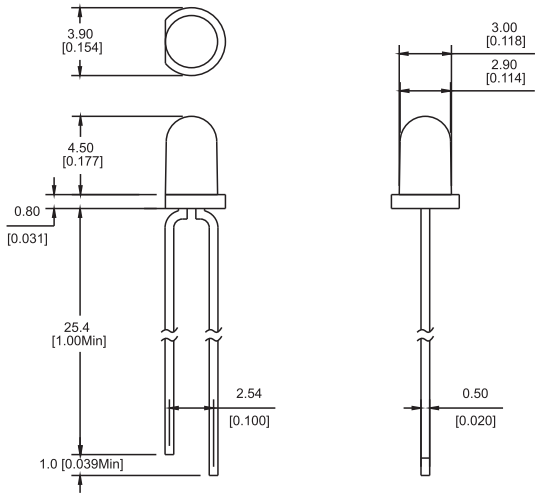
All dimensions are in millimeters (inches)
Tolerance is ±0.25(0.01")unless otherwise note

Blinking LED

3mm Blinking LED

Part No	λ_P (nm)	Pulse Rate(Hz) VDD=5V (Hz)	Lens	Iv(mcd) Min	Iv(mcd) Typ.	Viewing Angle 201/2
BL-L314SRC-B	660	2.4	Water Clear	50	220	30
BL-L314LRC-B	660	2.4		200	500	
BL-L314URC-B	660	2.4		500	900	
BL-L314UEC-B	630	2.4		900	1800	
BL-L314UYC-B	590	2.4		900	2000	
BL-L314UGC-B	574	2.4		220	600	
BL-L314PGC-B	525	2.4		1200	3000	
BL-L314BGC-B	505	2.4		900	2800	
BL-L314UBC-B	470	2.4		500	1400	
BL-L314VC-B	405	2.4		100	150	
BL-L314UWC-B	/	2.4		900	2000	

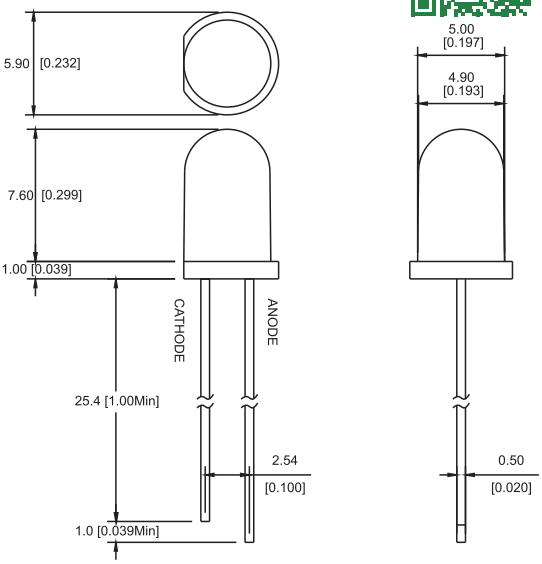
BL-L314XX-B



5mm Blinking LED

Part No	λ_P (nm)	Pulse Rate(Hz) VDD=5V (Hz)	Lens	Iv(mcd) Min	Iv(mcd) Typ.	Viewing Angle 201/2
BL-L513SRC-B	660	2.4	Water Clear	50	250	20
BL-L513LRC-B	660	2.4		250	600	
BL-L513URC-B	660	2.4		600	1000	
BL-L513UEC-B	630	2.4		800	2000	
BL-L513UYC-B	590	2.4		1000	2200	
BL-L513UGC-B	574	2.4		300	700	
BL-L513PGC-B	525	2.4		2000	5000	
BL-L513BGC-B	505	2.4		1800	4000	
BL-L513UBC-B	470	2.4		2000	5000	
BL-L513VC-B	405	2.4		80	150	
BL-L513UWC-B	/	2.4		3000	10000	

BL-L513XX-B



All dimensions are in millimeters (inches)
Tolerance is ±0.25(0.01")unless otherwise note

Applicant Note

CAUTIONS for Through-Hole LED Lamps

1.Application
The LEDs described here are intended to be used for ordinary electronic equipment (such as office equipment, communication equipment and household applications). Consult Betlux's Sales in advance for information on applications in which exceptional reliability is required, particularly when the failure or malfunction of the LEDs may directly jeopardize life or health (such as in aviation, transportation, traffic control equipment, medical and life support systems and safety devices).

2.Storage
The storage ambient for the LEDs should not exceed 30℃ temperature or 70% relative humidity. It is recommended that LEDs out of their original packaging are used within three months
For extended storage out of their original packaging, it is recommended that the LEDs be stored in a sealed container with appropriate desiccant or in a desiccator with nitrogen ambient.

3.Cleaning
Use alcohol-based cleaning solvents such as isopropyl alcohol to clean the LED if necessary

4.Lead Forming & Assembly
During lead forming, the leads should be bent at a point at least 3mm from the base of LED lens. Do not use the base of the leadframe as a fulcrum during forming.
Lead forming must be done before soldering, at normal temperature.
During assembly on PCB, use minimum clinch force possible to avoid excessive mechanical stress.

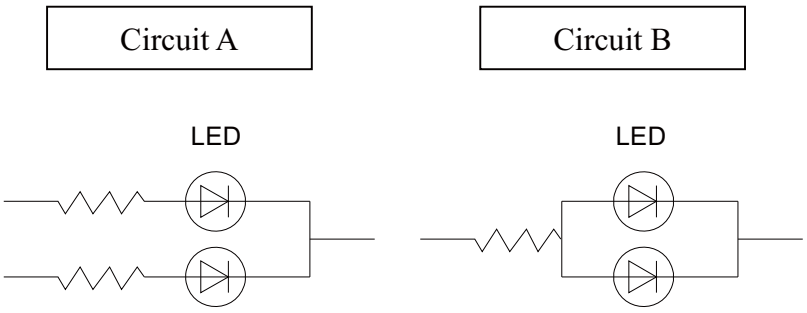
5.Soldering
When soldering, leave a minimum of 2mm clearance from the base of the base of the lens to the soldering point. Dipping the lens into the solder must be avoided.
Do not apply any external stress to the lead frame during soldering while the LED is at high temperature.
Recommended soldering conditions:

Soldering iron		Wave soldering	
Temperature	300℃ Max.	Pre-Heat	100℃ Max.
Soldering time	3 sec. Max.	Pre-heat time	60 sec. Max.
	(one time only)	Solder wave	260℃ Max.
		Soldering time	5 sec. Max.

Note: Excessive soldering temperature and/or time might result in deformation of the LED lens or catastrophic failure of the LED

6.Drive Method
An LED is a current-operated device. In order to ensure intensity uniformity on multiple LEDs connected in parallel in an application, it is recommended that a current limiting resistor be incorporated in the drive circuit, in series with each LED as shown in Circuit A below.

Applicant Note



(A) Recommended circuit
(B) The brightness of each LED might appear different due to the differences in the I-V characteristics of those LEDs

7.ESD (Electrostatic Discharge)
Static Electricity or power surge will damage the LED.
Suggestions to prevent ESD damage:
Use a conductive wrist band or anti-electrostatic glove when handling these LEDs
All devices, equipment, and machinery must be properly grounded
Work tables, storage racks, etc. should be properly grounded
Use ion blower to neutralize the static charge which might have built up on surface of the LED's plastic lens as a result of friction between LEDs during storage and handling
ESD-damaged LEDs will exhibit abnormal characteristics such as high reverse leakage current, low forward voltage, or “light off” at low currents. To verify for ESD damage, check for “light on” and Vf of the suspect LEDs at low currents.
The Vf of “good” LEDs should be>2.0V@0.1mA for InGaN product and >1.4V@0.1mA for AlInGaP product.