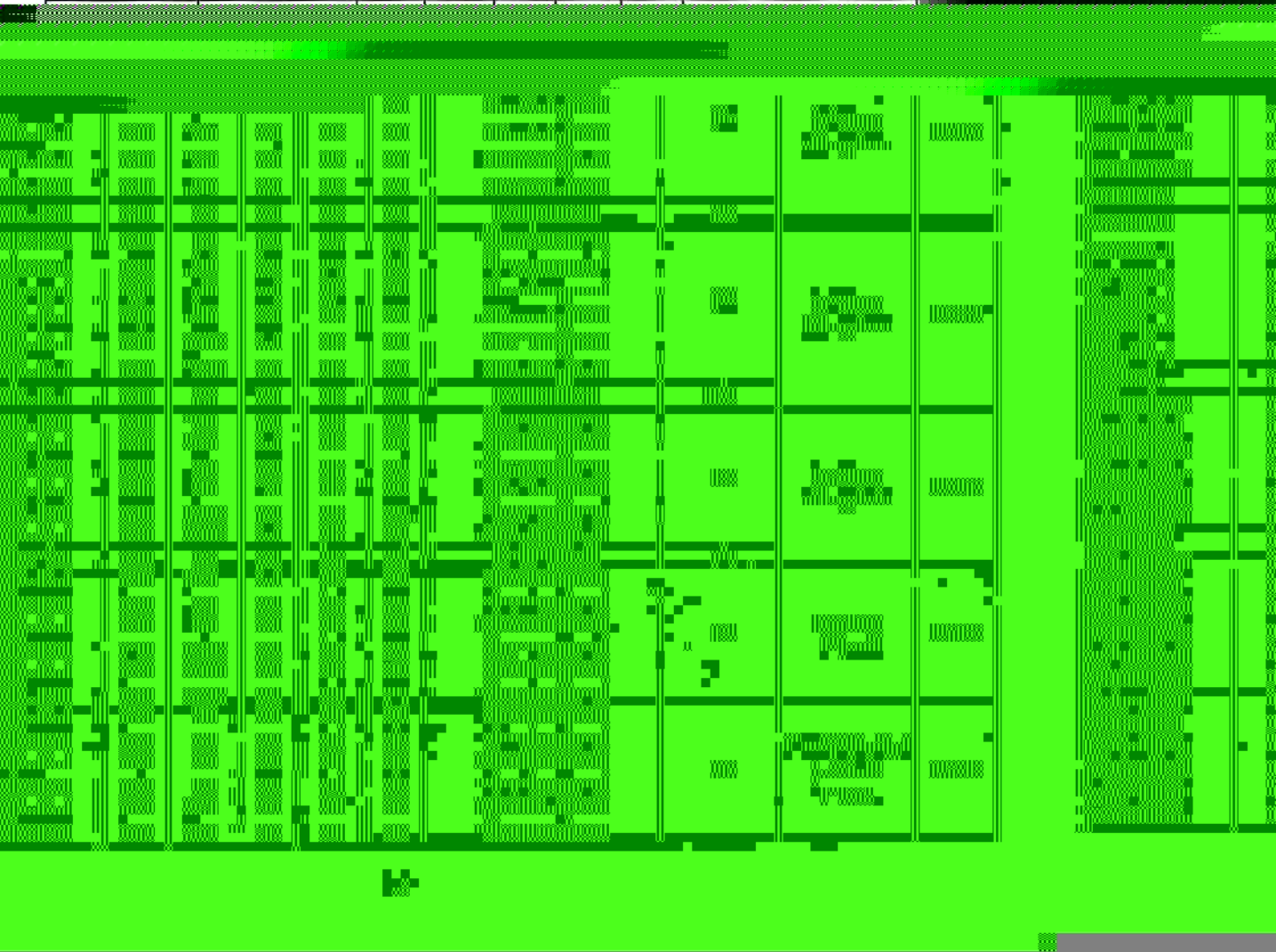


# Ultra Bright LED Lamps

TYPE NO.	SOURCE COLOUR	$\lambda_p$ (nm)	IV		Vf		LENS CHARACTERISTICS	VIEWING ANGLE 20 1/2 (degree)	PACKAGE	CASE
			MIN (mcd)	If (mA)	MAX (V)	If (mA)				
MSE18TA	GaAlAs Red	660	70	20	2.4	20	Clear transparent	24	$\phi$ 1.8mm Dot Point	L-18b
MOE18TA-1	AlGaInP Orange	620	200	20	3.0	20	Clear transparent			
MOE18TA-2	AlGaInP Orange	620	320	20	3.0	20	Clear transparent			
MOE18TA-3	AlGaInP Orange	620	450	20	3.0	20	Clear transparent			
MOE18TAH	AlGaInP Orange	620	650	20	3.0	20	Clear transparent			
MYE18TA-1	AlGaInP Yellow	595	300	20	3.0	20	Clear transparent			
MYE18TA-2	AlGaInP Yellow	595	500	20	3.0	20	Clear transparent			
MYE18TA-3	AlGaInP Yellow	595	700	20	3.0	20	Clear transparent			
MYE18TAH	AlGaInP Yellow	592	850	20	3.0	20	Clear transparent			
MSE18DA	GaAlAs Red	660	15	20	2.4	20	Red Diffused	52		
MSB30DA	GaAlAs Red	660	9.0	20	2.4	20	Red Diffused	112	$\phi$ 3.5x2.9mm Arrow Head Pointer	L-30b
MSB31TA-0	GaAlAs Red	660	80	20	2.4	20	Clear transparent	40	$\phi$ 3.2mm	L-31b
MSB31TA-1	GaAlAs Red	660	150	20	2.4	20	Clear transparent			
MSB31TA-2	GaAlAs Red	660	220	20	2.4	20	Clear transparent			
MSB31TA-3	GaAlAs Red	660	300	20	2.4	20	Clear transparent			
MSB31TA-4	GaAlAs Red	660	380	20	2.4	20	Clear transparent			
MSB31TA-5	GaAlAs Red	660	500	20	2.4	20	Clear transparent			
MSB31CA-0	GaAlAs Red	660	80	20	2.4	20	Red transparent			
MSB31CA-1	GaAlAs Red	660	150	20	2.4	20	Red transparent			
MSB31CA-2	GaAlAs Red	660	220	20	2.4	20	Red transparent			
MSB31CA-3	GaAlAs Red	660	300	20	2.4	20	Red transparent			
MSB31CA-4	GaAlAs Red	660	380	20	2.4	20	Red transparent			
MSB31CA-5	GaAlAs Red	660	500	20	2.4	20	Red transparent			
MOB31TA-1	AlGaInP Orange	620	600	20	3.0	20	Clear transparent			
MOB31TA-2	AlGaInP Orange	620	1000	20	3.0	20	Clear transparent			
MOB31TA-3	AlGaInP Orange	620	1400	20	3.0	20	Clear transparent			
MOB31TAH	AlGaInP Orange	620	2000	20	3.0	20	Clear transparent			
MGB31TA-1	Hi-Eff Green	570	150	20	3.0	20	Clear transparent			
MGB31TA-2	Hi-Eff Green	570	220	20	3.0	20	Clear transparent			
MGB31TA-3	Hi-Eff Green	570	300	20	3.0	20	Clear transparent			
MYB31TA-1	AlGaInP Yellow	595	900	20	3.0	20	Clear transparent			
MYB31TA-2	AlGaInP Yellow	595	1500	20	3.0	20	Clear transparent			
MYB31TA-3	AlGaInP Yellow	595	2500	20	3.0	20	Clear transparent			
MYB31TAH	AlGaInP Yellow	592	3000	20	3.0	20	Clear transparent			
MSB31DA-0	GaAlAs Red	660	18	20	2.4	20	Red Diffused	60		
MSB31DA-1	GaAlAs Red	660	35	20	2.4	20	Red Diffused			
MSB31DA-2	GaAlAs Red	660	50	20	2.4	20	Red Diffused			
MSB31DA-3	GaAlAs Red	660	70	20	2.4	20	Red Diffused			
MSB31DA-4	GaAlAs Red	660	90	20	2.4	20	Red Diffused			
MSB31DA-5	GaAlAs Red	660	120	20	2.4	20	Red Diffused			
MSB32CA	GaAlAs Red	660	100	20	2.4	20	Red transparent	30	T-1 Standard $\phi$ 3.0mm 1.1" Lead	L-32b
MSB32TA-0	GaAlAs Red	660	55	20	2.4	20	Clear transparent			
MSB32TA-1	GaAlAs Red	660	100	20	2.4	20	Clear transparent			
MSB32TA-2	GaAlAs Red	660	150	20	2.4	20	Clear transparent			
MSB32TA-3	GaAlAs Red	660	200	20	2.4	20	Clear transparent			
MSB32TA-4	GaAlAs Red	660	300	20	2.4	20	Clear transparent			
MSB32TA-5	GaAlAs Red	660	400	20	2.4	20	Clear transparent			
MOB32TA-1	AlGaInP Orange	620	400	20	3.0	20	Clear transparent			
MOB32TA-2	AlGaInP Orange	620	650	20	3.0	20	Clear transparent			
MOB32TA-3	AlGaInP Orange	620	900	20	3.0	20	Clear transparent			
MOB32TAH	AlGaInP Orange	620	1250	20	3.0	20	Clear transparent			

# Ultra Bright LED Lamps

TYPE NO.	SOURCE COLOUR	$\lambda_p$ (nm)	IV		Vf		LENS CHARACTERISTICS	VIEWING ANGLE 2 $\theta$ 1/2 (degree)	PACKAGE	CASE
			MIN (mcd)	If (mA)	MAX (V)	If (mA)				
MGB32TA-1	Hi-Eff Green	570	100	20	3.0	20	Clear transparent	30	T-1 Standard $\phi$ 3.0mm 1.1" Lead	L-32b
MGB32TA-2	Hi-Eff Green	570	150	20	3.0	20	Clear transparent			
MGB32TA-3	Hi-Eff Green	570	200	20	3.0	20	Clear transparent			
MYB32TA-1	AlGaInP Yellow	595	600	20	3.0	20	Clear transparent			
MYB32TA-2	AlGaInP Yellow	595	1000	20	3.0	20	Clear transparent	50		
MYB32TA-3	AlGaInP Yellow	595	1400	20	3.0	20	Clear transparent			
MYB32TAH	AlGaInP Yellow	592	1650	20	3.0	20	Clear transparent	70		
MSB32WA	GaAlAs Red	660	30	20	2.4	20	Clear Diffused			
MSB32DA	GaAlAs Red	660	30	20	2.4	20	Red Diffused	70		
MSB33DA	GaAlAs Red	660	30	20	2.4	20	Red Diffused			



# Ultra Bright LED Lamps

TYPE NO.	SOURCE COLOUR	$\lambda_p$ (nm)	IV		Vf		LENS CHARACTERISTICS	VIEWING ANGLE 20 1/2 (degree)	PACKAGE	CASE		
			MIN (mcd)	If (mA)	MAX (V)	If (mA)						
MSB51CK-0	GaAlAs Red	660	40	20	2.4	20	Red transparent	70	T-1 3/4 Standard $\phi$ 5.0mm 1" Lead	L-51b		
MSB51CK-1	GaAlAs Red	660	60	20	2.4	20	Red transparent					
MSB51CK-2	GaAlAs Red	660	90	20	2.4	20	Red transparent					
MSB51CK-3	GaAlAs Red	660	120	20	2.4	20	Red transparent					
MSB51CK-4	GaAlAs Red	660	200	20	2.4	20	Red transparent					
MSB51CK-5	GaAlAs Red	660	350	20	2.4	20	Red transparent					
MSB51TA-0	GaAlAs Red	660	200	20	2.4	20	Clear transparent	20			T-1 3/4 Standard $\phi$ 5.0mm 1" Lead	L-51b
MSB51TA-1	GaAlAs Red	660	300	20	2.4	20	Clear transparent					
MSB51TA-2	GaAlAs Red	660	600	20	2.4	20	Clear transparent					
MSB51TA-3	GaAlAs Red	660	900	20	2.4	20	Clear transparent					
MSB51TA-4	GaAlAs Red	660	1200	20	2.4	20	Clear transparent					
MSB51TA-5	GaAlAs Red	660	1800	20	2.4	20	Clear transparent					
MSB51CA-0	GaAlAs Red	660	200	20	2.4	20	Red transparent	20	T-1 3/4 Standard $\phi$ 5.0mm 1" Lead	L-51b		
MSB51CA-1	GaAlAs Red	660	300	20	2.4	20	Red transparent					
MSB51CA-2	GaAlAs Red	660	600	20	2.4	20	Red transparent					
MSB51CA-3	GaAlAs Red	660	900	20	2.4	20	Red transparent					
MSB51CA-4	GaAlAs Red	660	1200	20	2.4	20	Red transparent					
MSB51CA-5	GaAlAs Red	660	1800	20	2.4	20	Red transparent					
MSB51TA-3B	AlGaInP Red	645	900	20	2.6	20	Clear transparent	20			T-1 3/4 Standard $\phi$ 5.0mm 1" Lead	L-51b
MSB51TA-4B	AlGaInP Red	645	1300	20	2.6	20	Clear transparent					
MSB51TA-5B	AlGaInP Red	645	1800	20	2.6	20	Clear transparent					
MOB51TA	Hi-Eff Orange	630	160	20	3.0	20	Clear transparent					
MOB51TA-1	AlGaInP Orange	620	1000	20	3.0	20	Clear transparent					
MOB51TA-2	AlGaInP Orange	620	1500	20	3.0	20	Clear transparent					
MOB51TA-3	AlGaInP Orange	620	2000	20	3.0	20	Clear transparent					
MOB51TAH	AlGaInP Orange	620	3500	20	3.0	20	Clear transparent					
MGB51TA	Hi-Eff Green	570	200	20	3.0	20	Clear transparent	20	T-1 3/4 Standard $\phi$ 5.0mm 1" Lead	L-51b		
MGB51TA-1	Hi-Eff Green	570	200	20	3.0	20	Clear transparent					
MGB51TA-2	Hi-Eff Green	570	350	20	3.0	20	Clear transparent					
MGB51TA-3	Hi-Eff Green	570	500	20	3.0	20	Clear transparent					
MYB51TA	Hi-Eff Yellow	585	130	20	3.0	20	Clear transparent					
MYB51TA-1	AlGaInP Yellow	595	1500	20	3.0	20	Clear transparent					
MYB51TA-2	AlGaInP Yellow	595	2500	20	3.0	20	Clear transparent					
MYB51TA-3	AlGaInP Yellow	595	4000	20	3.0	20	Clear transparent					
MYB51TAH	AlGaInP Yellow	592	4500	20	3.0	20	Clear transparent					
MOB51CA	Hi-Eff Orange	630	160	20	3.0	20	Orange transparent	40			T-1 3/4 Standard $\phi$ 5.0mm 1" Lead	L-51b
MOB51CRA	Hi-Eff Orange	640	160	20	3.0	20	Red transparent					
MGB51CA	Hi-Eff Green	570	200	20	3.0	20	Green transparent					
MYB51CA	Hi-Eff Yellow	585	130	20	3.0	20	Yellow transparent					
MSB51DA-0	GaAlAs Red	660	20	20	2.4	20	Red Diffused					
MSB51DA-1	GaAlAs Red	660	30	20	2.4	20	Red Diffused					
MSB51DA-2	GaAlAs Red	660	80	20	2.4	20	Red Diffused					
MSB51DA-3	GaAlAs Red	660	130	20	2.4	20	Red Diffused					
MSB51DA-4	GaAlAs Red	660	180	20	2.4	20	Red Diffused					
MSB51DA-5	GaAlAs Red	660	250	20	2.4	20	Red Diffused					
MSB51DA-3B	AlGaInP Red	645	65	20	2.6	20	Red Diffused					
MSB51DA-4B	AlGaInP Red	645	95	20	2.6	20	Red Diffused					
MSB51DA-5B	AlGaInP Red	645	130	20	2.6	20	Red Diffused					
MSB53TA	GaAlAs Red	660	30	20	2.4	20	Clear transparent	96	$\phi$ 5.0mm Flat Top	L-53b		
MSB53CA	GaAlAs Red	660	30	20	2.4	20	Red transparent					
MSB53DA	GaAlAs Red	660	7.0	20	2.4	20	Red Diffused					
MSB55TA	GaAlAs Red	660	3.5	20	2.4	20	Clear transparent	170	$\phi$ 5.0mm Cylindrical	L-55b		
MSB55CA	GaAlAs Red	660	3.5	20	2.4	20	Red transparent					
MSB55DA	GaAlAs Red	660	6.0	20	2.4	20	Red Diffused					

# Ultra Bright LED Lamps

TYPE NO.	SOURCE COLOUR	$\lambda_p$ (nm)	IV MIN (mcd)	If (mA)	Vf		LENS CHARACTERISTICS	VIEWING ANGLE 20 1/2 (degree)	PACKAGE	CASE
					MAX (V)	If (mA)				
MSB56TA MSB56CA	GaAlAs Red GaAlAs Red	660 660	200 200	20 20	2.4 2.4	20 20	Clear transparent Red transparent	34	$\phi$ 5.0mm Low Profile	L-56b
MSB61DA	GaAlAs Red	660	6.0	20	2.4	20	Red Diffused	156	2.5 x 5mm Rectangular Bars	L-61b
MSB62DA	GaAlAs Red	660	7.0	20	2.4	20	Red Diffused	160	2 x 5mm Rectangular Bars	L-62b
MSB63DA	GaAlAs Red	660	5.5	20	2.4	20	Red Diffused	156	Flangeless Rectangular Bars	L-63b
MSB64DA	GaAlAs Red	660	5.5	20	2.4	20	Red Diffused	148	2 x 4.95mm Flangeless Rectangular Bars	L-64b
MSB65DA	GaAlAs Red	660	4.5	20	2.4	20	Red Diffused	140	2 x 4.0mm Flangeless Rectangular Bars	L-65b
MSB66DA	GaAlAs Red	660	5.0	20	2.4	20	Red Diffused	142	1.75 x 4.0mm Flangeless Rectangular Bars	L-66b
MSB67DA	GaAlAs Red	660	4.5	20	2.4	20	Red Diffused	180	2.5 x 6.8mm Flangeless Rectangular Bars	L-67b
MSB68DA	GaAlAs Red	660	4.2	20	2.4	20	Red Diffused	180	4.95 x 4.95mm Flangeless Rectangular Bars	L-68b
MSB69DA	GaAlAs Red	660	4.0	20	2.4	20	Red Diffused	180	3.87 x 6.75mm Flangeless Rectangular Bars	L-69b
MSB70DA	GaAlAs Red	660	4.3	20	2.4	20	Red Diffused	148	2.15 x 4.95mm Flangeless Rectangular Bars	L-70b
MSB71DA	GaAlAs Red	660	4.5	20	2.4	20	Red Diffused	180	3.0 x 5.0mm Flangeless Rectangular Bars	L-71b
MSB72DA	GaAlAs Red	660	3.2	20	2.4	20	Red Diffused	154	2.0 x 4.95mm Flangeless Rectangular Bars	L-72b
MSB73DA	GaAlAs Red	660	2.2	20	2.4	20	Red Diffused	140	0.95 x 4.9mm Rectangular Bars	L-73b
MSB74DA	GaAlAs Red	660	4.5	20	2.4	20	Red Diffused	152	1.2x3.4mm Flangeless Rectangular Bars	L-74b
MSB75DA	GaAlAs Red	660	5.0	20	2.4	20	Red Diffused	172	1.9 x 3.1mm Flangeless Rectangular Bars	L-75b
MSB76DA	GaAlAs Red	660	4.8	20	2.4	20	Red Diffused	88	$\phi$ 2.0 x 3.7mm Nipple Type	L-76b
MSB77DA	GaAlAs Red	660	2.6	20	2.4	20	Red Diffused	172	1.4 x 3.7mm Rectangular Bars	L-77b

# Ultra Bright LED Lamps

TYPE NO.	SOURCE COLOUR	$\lambda_p$ (nm)	IV MIN (mcd)	If (mA)	Vf		LENS CHARACTERISTICS	VIEWING ANGLE 20 1/2 (degree)	PACKAGE	CASE
					MAX (V)	If (mA)				
MSB78DA	GaAlAs Red	660	4.3	20	2.4	20	Red Diffused	180	5.0 x 5.0mm Rectangular Bars	L-78b
MSB79DA	GaAlAs Red	660	6.3	20	2.4	20	Red Diffused	86	1.90x3.97mm Round Rectangular Bars	L-79b
MSB80TA	GaAlAs Red	660	100	20	2.4	20	Clear transparent	46	$\phi$ 7.8mm	L-80b
MSB80CA	GaAlAs Red	660	100	20	2.4	20	Red transparent			
MSB80DA	GaAlAs Red	660	36	20	2.4	20	Red Diffused	56	2.37 x 4.88mm Round Rectangular Bars	L-81b
MSB81TK	GaAlAs Red	660	60	20	2.4	20	Clear transparent	52		
MSB81CK	GaAlAs Red	660	60	20	2.4	20	Red transparent			
MSB81TA-0	GaAlAs Red	660	100	20	2.4	20	Clear transparent	16		
MSB81TA-1	GaAlAs Red	660	180	20	2.4	20	Clear transparent			
MSB81TA-2	GaAlAs Red	660	360	20	2.4	20	Clear transparent			
MSB81TA-3	GaAlAs Red	660	550	20	2.4	20	Clear transparent			
MSB81TA-4	GaAlAs Red	660	700	20	2.4	20	Clear transparent			
MSB81TA-5	GaAlAs Red	660	1000	20	2.4	20	Clear transparent			
MOB81TA	Hi-Eff Orange	630	100	20	3.0	20	Clear transparent			
MGB81TA	Hi-Eff Green	570	125	20	3.0	20	Clear transparent			
MYB81TA	Hi-Eff Yellow	585	90	20	3.0	20	Clear transparent			
MSB81DA	GaAlAs Red	660	35	20	2.4	20	Red Diffused		124	
MSB82DA	GaAlAs Red	660	5.0	20	2.4	20	Red Diffused	180	3.6 x 3.6mm Flangeless Rectangular Bars	L-82b
MSB83DA	GaAlAs Red	660	8.5	20	2.4	20	Red Diffused	92	1.7 x 3.95mm Round Rectangular Bars	L-83b
MSB90TA-0	GaAlAs Red	660	250	20	2.4	20	Clear transparent	16	$\phi$ 10mm Bomb Type	L-90b
MSB90TA-1	GaAlAs Red	660	400	20	2.4	20	Clear transparent			
MSB90TA-2	GaAlAs Red	660	800	20	2.4	20	Clear transparent			
MSB90TA-3	GaAlAs Red	660	1300	20	2.4	20	Clear transparent			
MSB90TA-4	GaAlAs Red	660	1600	20	2.4	20	Clear transparent			
MSB90TA-5	GaAlAs Red	660	5000	20	2.4	20	Clear transparent			
MOB90TA-1	AlGaInP Orange	620	2000	20	3.0	20	Clear transparent			
MOB90TA-2	AlGaInP Orange	620	3000	20	3.0	20	Clear transparent			
MOB90TA-3	AlGaInP Orange	620	4000	20	3.0	20	Clear transparent			
MOB90TAH	AlGaInP Orange	620	7000	20	3.0	20	Clear transparent			
MGB90TA-1	Hi-Eff Green	570	450	20	3.0	20	Clear transparent			
MGB90TA-2	Hi-Eff Green	570	750	20	3.0	20	Clear transparent			
MGB90TA-3	Hi-Eff Green	570	1000	20	3.0	20	Clear transparent			
MYB90TA-1	AlGaInP Yellow	595	3000	20	3.0	20	Clear transparent			
MYB90TA-2	AlGaInP Yellow	595	5000	20	3.0	20	Clear transparent			
MYB90TA-3	AlGaInP Yellow	595	8000	20	3.0	20	Clear transparent			
MYB90TAH	AlGaInP Yellow	592	9000	20	3.0	20	Clear transparent			
MSB100TA	GaAlAs Red	660	55	20	2.4	20	Clear transparent	28	$\phi$ 10mm	L-100b
MSB100CA	GaAlAs Red	660	55	20	2.4	20	Red transparent			
MSB100DA-1	GaAlAs Red	660	25	20	2.4	20	Red Diffused	60	1" Lead	L-100b
MSB100DA-2	GaAlAs Red	660	30	20	2.4	20	Red Diffused			
MSB100DA-3	GaAlAs Red	660	35	20	2.4	20	Red Diffused			
MSB100DA-4	GaAlAs Red	660	40	20	2.4	20	Red Diffused			
MSB100DA-5	GaAlAs Red	660	50	20	2.4	20	Red Diffused			

# Ultra Bright LED Lamps

TYPE NO.	SOURCE COLOUR	$\lambda_p$ (nm)	IV		Vf		LENS CHARACTERISTICS	VIEWING ANGLE 2 $\theta$ 1/2 (degree)	PACKAGE	CASE
			MIN (mcd)	If (mA)	MAX (V)	If (mA)				
MSB120TA	GaAlAs Red	660	55	20	2.4	20	Clear transparent	24	$\phi$ 12mm 1" Lead	L-120b
MSB120CA	GaAlAs Red	660	55	20	2.4	20	Red transparent			
MSB120DA-1	GaAlAs Red	660	25	20	2.4	20	Red Diffused	66		
MSB120DA-2	GaAlAs Red	660	30	20	2.4	20	Red Diffused			
MSB120DA-3	GaAlAs Red	660	35	20	2.4	20	Red Diffused			
MSB120DA-4	GaAlAs Red	660	40	20	2.4	20	Red Diffused			
MSB120DA-5	GaAlAs Red	660	50	20	2.4	20	Red Diffused			
MSZ2310TK	GaAlAs Red	660	40	20	2.4	20	Clear transparent	100	$\phi$ 5.0mm Oval Type	L-2310z
MSZ2310TK-2	GaAlAs Red	660	60	20	2.4	20	Clear transparent			
MSZ2310TK-3	GaAlAs Red	660	100	20	2.4	20	Clear transparent			
MSZ2310TK-4	GaAlAs Red	660	160	20	2.4	20	Clear transparent			
MSZ2310TK-5	GaAlAs Red	660	450	20	2.4	20	Clear transparent			