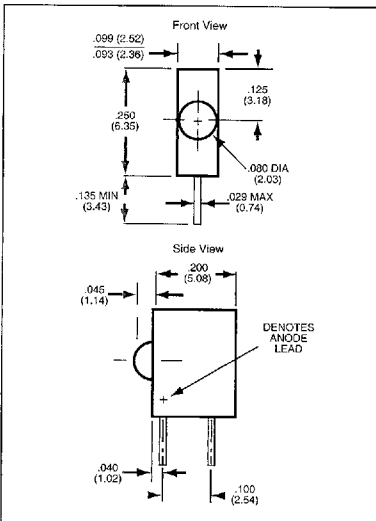


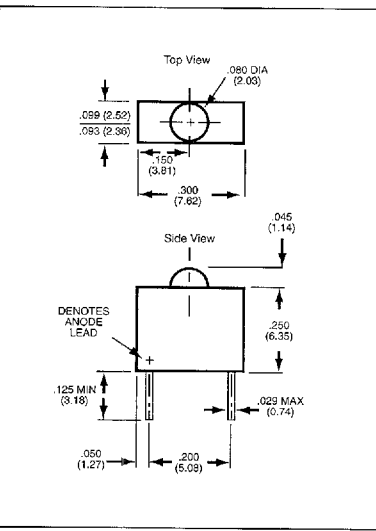
T-3/4 (Subminiature) - Long Package

Part Number	Source Color	Typical Wave-length λ_p (nm)	Lens Color	Typical Viewing Angle	I_F (mA) for MR Parts V_F (V)		Luminous Intensity I_V (mcd)		Notes
					typ	max	min	typ	
MV5000.MP1	Red	660	Red Diffused	40°	1.7	2.0	1.0	2.0	3
MV5300.MP1	Yellow	585	Yellow Diffused	40°	2.1	3.0	0.2	0.5	3
MV5400.MP1	Green	565	Green Diffused	40°	2.3	3.0	0.4	0.7	3
MR5000.MP1	Red	660	Red Diffused	40°	3.0	4.0	0.3	0.6	12,13
MR5010.MP1	Red	660	Red Diffused	40°	6.0	8.0	0.6	1.2	12,13
MR5020.MP1	Red	660	Red Diffused	40°	16.0	21.0	1.0	2.0	12,13
MR5310.MP1	Yellow	585	Yellow Diffused	40°	5.0	6.7	0.3	0.6	12,13
MR5410.MP1	Green	565	Green Diffused	40°	5.0	6.7	0.3	0.5	12,13



T-3/4 (Subminiature) - Short Package

Part Number	Source Color	Typical Wave-length λ_p (nm)	Lens Color	Typical Viewing Angle	I_F (mA) for MR Parts V_F (V)		Luminous Intensity I_V (mcd)		Notes
					typ	max	min	typ	
MV5000.MP2	Red	660	Red Diffused	40°	1.7	2.0	1.0	3.0	3
MV5300.MP2	Yellow	585	Yellow Diffused	40°	2.1	3.0	0.2	0.5	3
MV5400.MP2	Green	565	Green Diffused	40°	2.3	3.0	0.8	0.7	3
MR5000.MP2	Red	660	Red Diffused	40°	3.8	4.0	0.8	0.6	12,13
MR5010.MP2	Red	660	Red Diffused	40°	6.8	8.0	0.6	1.2	12,13
MR5020.MP2	Red	660	Red Diffused	40°	16.0	21.0	1.0	2.0	12,13
MR5310.MP2	Yellow	585	Yellow Diffused	40°	5.0	6.7	0.3	0.6	12,13
MR5410.MP2	Green	565	Green Diffused	40°	5.0	6.7	0.3	0.5	12,13



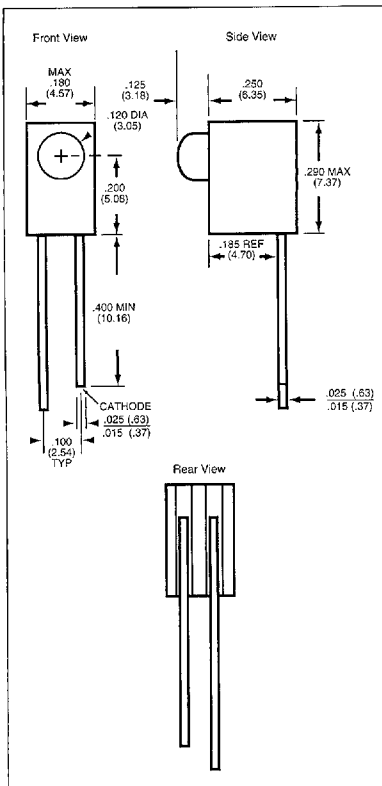
T-3/4 (Subminiature) - Top View Package

Part Number	Source Color	Typical Wave-length λ_p (nm)	Lens Color	Typical Viewing Angle	I_F (mA) for MR Parts V_F (V)		Luminous Intensity I_V (mcd)		Notes
					typ	max	min	typ	
MV5000.MP3	Red	660	Red Diffused	40°	1.7	2.0	1.0	2.0	3
MV5300.MP3	Yellow	585	Yellow Diffused	40°	2.1	3.0	0.2	0.5	3
MV5400.MP3	Green	565	Green Diffused	40°	2.3	3.0	0.9	0.7	3
MR5000.MP3	Red	660	Red Diffused	40°	3.0	4.0	0.3	0.6	12,13
MR5010.MP3	Red	660	Red Diffused	40°	6.0	8.0	0.6	1.2	12,13
MR5020.MP3	Red	660	Red Diffused	40°	13.0	21.0	1.0	2.0	12,13
MR5310.MP3	Yellow	585	Yellow Diffused	40°	5.0	6.7	0.3	0.6	12,13
MR5410.MP3	Green	565	Green Diffused	40°	5.0	6.7	0.3	0.5	12,13

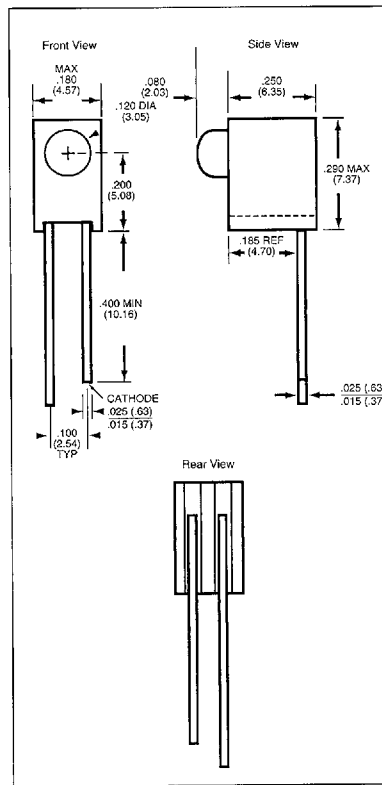
General Notes for all PCB Mount LED Indicators

All dimensions are in inches (mm).
Tolerance is $\pm .015$ ($\pm .38$) unless otherwise specified.

Custom color combinations are available.



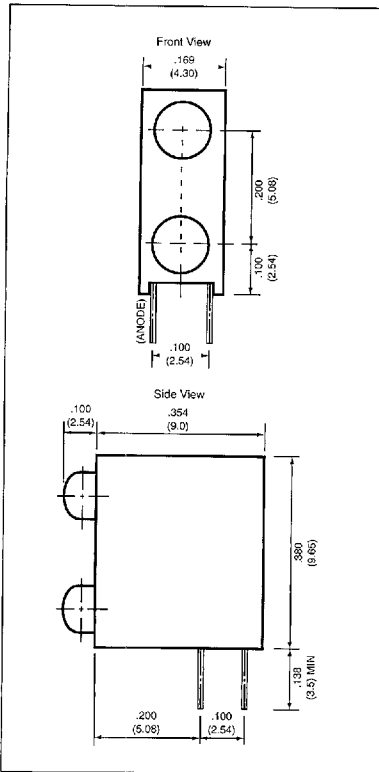
T-1 (3 mm)										
Part Number	Source Color	Wave-length λ_p (nm)	Lens Color	Typical Viewing Angle	I_F (mA) for MR Parts V_F (V)		Luminous Intensity I_V (mcd)		Notes	
					typ	max	min	typ		
MV5064.MP4A	Red	660	Red Diffused	60°	1.6	2.2	0.5	1.5	2	
MV5364.MP4A	Yellow	585	Yellow Diffused	60°	2.1	3.0	1.0	2.0	1	
MV5464.MP4A	Green	565	Green Diffused	60°	2.2	3.0	10	15	3	
MV5764.MP4A	HER	635	Red Diffused	60°	2.0	3.0	1.0	2.0	1	
HLMP-1700.MP4A				50°	1.8	2.2	1.0	2.0	5	
HLMP-1719.MP4A	Yellow	585	Yellow Diffused	50°	1.9	2.7	1.0	2.0	5	
HLMP-1790.MP4A	Green	565	Green Diffused	50°	1.9	2.7	1.0	2.0	5	
HLMP-K101.MP4A	AlGaAs Red	660	Red Diffused	60°	1.8	2.2	22	45	3	
HLMP-K105.MP4A			Red Clear	35°	1.8	2.2	35	70	1	
HLMP-K150.MP4A			Red Diffused	60°	1.6	1.8	1.2	2.0	4	
HLMP-K155.MP4A			Red Clear	45°	1.6	1.8	2.0	3.0	4	
MR5060.MP4A	Red	660	Red Diffused	60°	13	20	0.8	1.5	12,13	
MR5360.MP4A	Yellow	585	Yellow Diffused	60°	10	15	1.5	4.0	12,13	
MR5460.MP4A	Green	565	Green Diffused	60°	12	15	1.5	4.0	12,13	
MR5760.MP4A	HER	635	Red Diffused	60°	10	15	1.5	4.0	12,13	



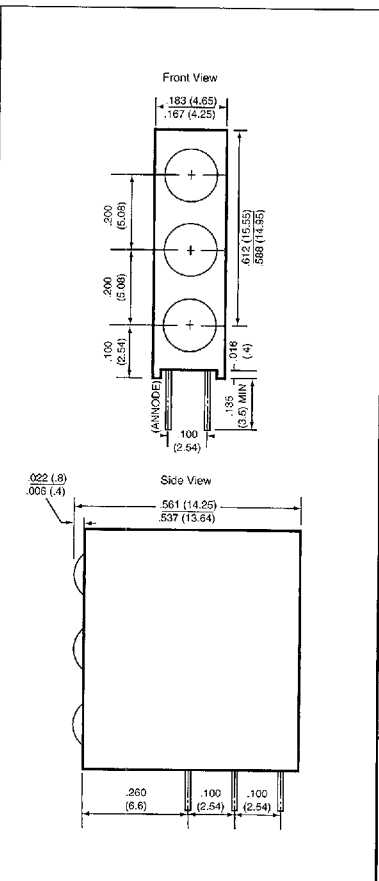
T-1 (3 mm)										
Part Number	Source Color	Wave-length λ_p (nm)	Lens Color	Typical Viewing Angle	I_F (mA) for MR Parts V_F (V)		Luminous Intensity I_V (mcd)		Notes	
					typ	max	min	typ		
MV5064.MP4B	Red	660	Red Diffused	60°	1.6	2.2	0.5	1.5	2	
MV5364.MP4B	Yellow	585	Yellow Diffused	60°	2.1	3.0	1.0	2.0	1	
MV5464.MP4B	Green	565	Green Diffused	60°	2.2	3.0	10	15	3	
MV5764.MP4B	HER	635	Red Diffused	60°	2.0	3.0	1.0	2.0	1	
HLMP-1700.MP4B				50°	1.8	2.2	1.0	2.0	5	
HLMP-1719.MP4B	Yellow	585	Yellow Diffused	50°	1.9	2.7	1.0	2.0	5	
HLMP-1790.MP4B	Green	565	Green Diffused	50°	1.9	2.7	1.0	2.0	5	
HLMP-K101.MP4B	AlGaAs Red	660	Red Diffused	60°	1.8	2.2	22	45	3	
HLMP-K105.MP4B			Red Clear	35°	1.8	2.2	35	70	1	
HLMP-K150.MP4B			Red Diffused	60°	1.6	1.8	1.2	2.0	4	
HLMP-K155.MP4B			Red Clear	45°	1.6	1.8	2.0	3.0	4	
MR5060.MP4B	Red	660	Red Diffused	60°	13	20	0.8	1.5	12,13	
MR5360.MP4B	Yellow	585	Yellow Diffused	60°	10	15	1.5	4.0	12, 13	
MR5460.MP4B	Green	565	Green Diffused	60°	13	15	1.5	4.0	12,13	
MR5760.MP4B	HER	635	Red Diffused	60°	13	15	1.5	4.0	12,13	

Notes

- $V_F @ I_F = 20$ mA, $I_V @ I_F = 10$ mA
- $V_F @ I_F = 10$ mA, $I_V @ I_F = 5$ mA
- $V_F & I_V @ I_F = 20$ mA
- $V_F & I_V @ I_F = 1$ mA
- $V_F & I_V @ I_F = 2$ mA
- Integral Resistor
- $I_F & I_V @ V_F = 5$ V
- $I_F & I_V @ V_F = 12$ V
- HER = High Efficiency Red



T-1 (3 mm) Bilevel									
Part Number	Source Color	Wave-length λ_p (nm)	Lens Color	Typical Viewing Angle	Forward Voltage V_F (V)		Luminous Intensity I_V (mcd)		Notes
					typ	max	min	typ	
QLA694B-2H	B. Red	697	Red Diffused	140°	2.1	2.8	0.9	1.4	6
QLA694B-2I	HER	635	Red Diffused	140°	2.0	2.8	4.0	6.0	6
QLA694B-2G	Green	565	Green Diffused	140°	2.1	2.8	4.0	6.0	6
QLA694B-2Y	Yellow	585	Yellow Diffused	140°	2.0	2.8	4.0	6.0	6
QLA694B-HG	B. Red	697	Diffused	140°	2.1	2.8	0.9	1.4	6
	Green	565							
QLA694B-GY	Green	565	Diffused	140°	2.1	2.8	4.0	6.0	6
	Yellow	585							

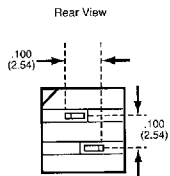
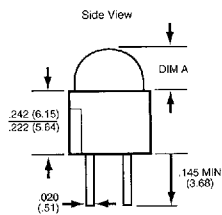
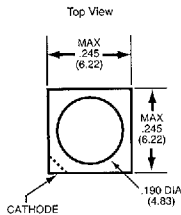


T-1 (3 mm) Trilevel									
Part Number	Source Color	Wave-length λ_p (nm)	Lens Color	Typical Viewing Angle	Forward Voltage V_F (V)		Luminous Intensity I_V (mcd)		Notes
					typ	max	min	typ	
QLA764B-3H	B. Red	697	Red Diffused	140°	2.1	2.8	0.9	1.4	6
QLA764B-3I	HER	635	Red Diffused	140°	2.0	2.8	4.0	6.0	6
QLA764B-3G	Green	565	Green Diffused	140°	2.1	2.8	4.0	6.0	6
QLA764B-3Y	Yellow	585	Yellow Diffused	140°	2.0	2.8	4.0	6.0	6
QLA764B-HGY	B. Red	697	Diffused	140°	2.1	2.8	0.9	1.4	6
	Green	565							
	Yellow	585							
QLA764B-YGH	Yellow	585	Diffused	140°	2.1	2.8	4.0	6.0	6
	Green	565							
	B. Red	697							

Notes

6. V_F & I_V @ $I_F = 10$ mA B. Red = Bright Red HER = High Efficiency Red

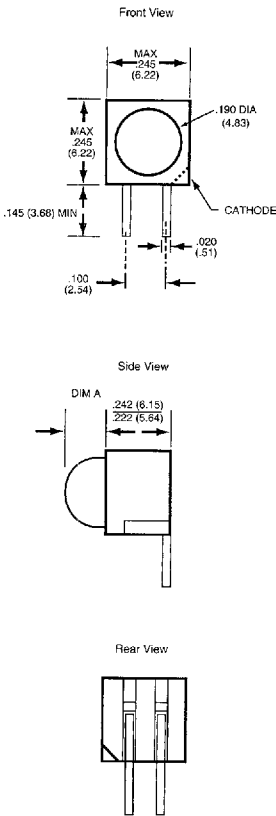
T-1 3/4 (5 mm)										
Part Number	Source Color	Wave-length λ_p (nm)	Lens Color	Typical Viewing Angle	I_F (mA) for MR Parts V_F (V) typ max		Luminous Intensity I_V (mcd) min typ		Notes	
MV60538.MP5	Red	660	Red Diffused	65°	1.7	2.0	0.8	2.0	3,21	
MV63538.MP5	Yellow	585	Yellow Diffused	65°	2.1	3.0	2.5	18	3,21	
MV64538.MP5	Green	565	Green Diffused	65°	2.2	3.0	1.6	25	3,21	
MV67538.MP5	HER	635	Red Diffused	65°	2.1	3.0	3.0	14	3,21	
MV60539.MP5	Red	660	Red Diffused	65°	1.7	2.0	0.8	2.0	3,22	
MV63539.MP5	Yellow	585	Yellow Diffused	65°	2.1	3.0	2.5	18	3,22	
MV64539.MP5	Green	565	Green Diffused	65°	2.2	3.0	1.6	25	3,22	
MV67539.MP5	HER	635	Red Diffused	65°	2.1	3.0	3.0	14	3,22	
HLMP-47009.MP5	HER	635	Red Diffused	45°	1.8	2.2	1.2	2.0	5,22	
HLMP-47199.MP5	Yellow	585	Yellow Diffused	45°	1.9	2.7	1.2	10	5,22	
HLMP-47409.MP5	Green	565	Green Diffused	45°	1.9	2.3	1.2	2.0	5,22	
HLMP-D1019.MP5	AlGaAs	660	Red Diffused	65°	1.8	2.2	35	70.0	3,22	
HLMP-D1509.MP5	Red		Red Clear	24°	1.6	1.8	1.2	3.0	4,22	
MV33509.MP5	Yellow	585	Yellow Clear	24°	2.2	3.0	80	150	3,22	
MV34509.MP5	Green	565	Green Clear	24°	2.2	3.0	80	150	3,22	
MV37509.MP5	HER	635	Orange Clear	24°	2.2	3.0	80	150	3,22	
MR30509.MP5	Red	660	Red Diffused	60°	13	20	1.0	2.0	12,13,22	
MR30519.MP5				60°	13	20	1.0	2.0	12,14,22	
MR33509.MP5	Yellow	585	Yellow Diffused	60°	10	15	1.5	4.0	12,13,22	
MR33519.MP5				60°	13	20	1.5	4.0	12,14,22	
MR34509.MP5	Green	565	Green Diffused	60°	12	15	1.5	4.0	12,13,22	
MR34519.MP5				60°	12	20	1.5	4.0	12,14,22	
MR37509.MP5	HER	635	Red Diffused	60°	10	15	1.5	4.0	12,13,22	
MR37519.MP5				60°	13	20	1.5	4.0	12,14,22	
MV54919.MP5	AlGaAs Red	660	White Diffused	100°	2.1	3.0	2.0	6.0	3,22,23,24	
	Green	565								



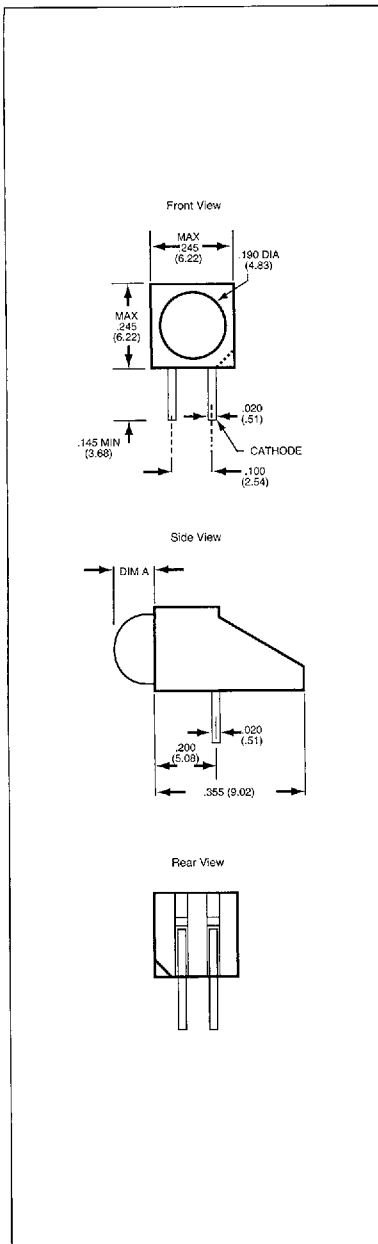
Notes

- | | | |
|--|--------------------------------|--|
| 2. $V_F @ I_F = 10$ mA, $I_V @ I_F = 5$ mA | 12. Integral Resistor | 23. Bicolor |
| 3. V_F & $I_V @ I_F = 20$ mA | 13. I_F & $I_V @ V_F = 5$ V | 24. The cathode is the AlGaAs red cathode for red/green bicolor LED. |
| 4. V_F & $I_V @ I_F = 1$ mA | 14. I_F & $I_V @ V_F = 12$ V | HER = High Efficiency Red |
| 5. V_F & $I_V @ I_F = 2$ mA | 21. DIM A = 0.125 (3.18) | |
| 6. V_F & $I_V @ I_F = 10$ mA | 22. DIM A = 0.180 (4.57) | |

T-1 3/4 (5 mm)



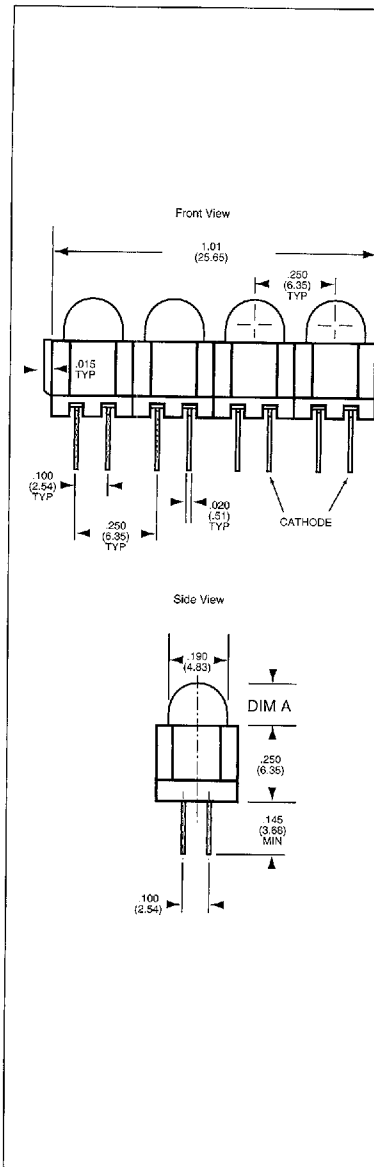
Part Number	Source Color	Wave-length λ_p (nm)	Lens Color	Typical Viewing Angle	I_F (mA) for MR Parts		Luminous Intensity I_V (mcd)		Notes
					V_F (V) typ	max	min	typ	
MV60538.MP6	Red	660	Red Diffused	55°	1.7	2.0	0.8	2.0	3,21
MV63538.MP6	Yellow	585	Yellow Diffused	65°	2.1	3.0	2.5	18	3,21
MV64538.MP6	Green	565	Green Diffused	65°	2.2	3.0	1.6	25	3,21
MV67538.MP6	HER	635	Red Diffused	65°	2.1	3.0	3.0	14	3,21
MV60539.MP6	Red	660	Red Diffused	65°	1.7	2.0	0.8	2.0	3,22
MV63539.MP6	Yellow	585	Yellow Diffused	65°	2.1	3.0	2.5	18	3,22
MV64539.MP6	Green	565	Green Diffused	65°	2.2	3.0	1.8	25	3,22
MV67539.MP6	HER	635	Red Diffused	65°	2.1	3.0	3.0	14	3,22
HLMP-47009.MP6	HER	635	Red Diffused	45°	1.8	2.2	1.2	2.0	5,22
HLMP-47199.MP6	Yellow	585	Yellow Diffused	45°	1.9	2.7	1.2	10	5,22
HLMP-47409.MP6	Green	565	Green Diffused	45°	1.9	2.3	1.2	3.0	5,22
HLMP-D1019.MP6	AlGaAs	660	Red Diffused	65°	1.8	2.2	35	70.0	3,22
HLMP-D1509.MP6	Red		Red Clear	24°	1.6	1.8	1.8	3.0	4,22
MV33509.MP6	Yellow	585	Yellow Clear	24°	2.2	3.0	80	150	3,22
MV34509.MP6	Green	565	Green Clear	24°	2.2	3.0	80	150	3,22
MV37509.MP6	HER	635	Orange Clear	24°	2.2	3.0	80	150	3,22
MR30509.MP6	Red	660	Red Diffused	60°	12	20	1.0	2.0	12,13,22
MR30519.MP6				60°	13	20	1.0	2.0	12,14,22
MR33509.MP6	Yellow	585	Yellow Diffused	60°	10	15	1.5	4.0	12,13,22
MR33519.MP6				60°	13	20	1.5	4.0	12,14,22
MR34509.MP6	Green	565	Green Diffused	60°	12	15	1.5	4.0	12,13,22
MR34519.MP6				60°	13	20	1.5	4.0	12,14,22
MR37509.MP6	HER	635	Red Diffused	60°	10	15	1.5	4.0	12,13,22
MR37519.MP6				60°	13	20	1.5	4.0	12,14,22
MV54919.MP6	AlGaAs Red Green	660 565	White Diffused	100°	2.1	3.0	2.0	6.0	2,22,23,24



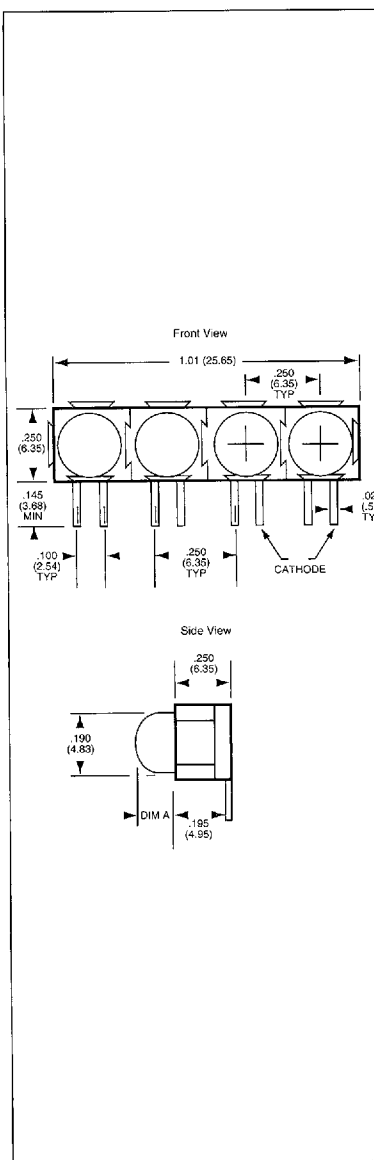
T-1 3/4 (5 mm)										
Part Number	Source Color	Wave-length λ_p (nm)	Lens Color	Typical Viewing Angle	I_F (mA) for MR Parts		Luminous Intensity I_V (mcd)		Notes	
					V_F (V) typ	max	min	typ		
MV60538.MP7	Red	660	Red Diffused	65°	1.7	2.0	0.8	2.0	3,21	
MV63538.MP7	Yellow	585	Yellow Diffused	65°	2.1	3.0	3.5	18	3,21	
MV64538.MP7	Green	565	Green Diffused	65°	2.2	3.0	1.6	25	3,21	
MV67538.MP7	HER	635	Red Diffused	65°	2.1	3.0	3.0	14	3,21	
MV60539.MP7	Red	660	Red Diffused	65°	1.7	2.0	0.8	2.0	3,25	
MV63539.MP7	Yellow	585	Yellow Diffused	65°	2.1	3.0	2.5	18	3,25	
MV64539.MP7	Green	565	Green Diffused	65°	2.2	3.0	16	25	3,25	
MV67539.MP7	HER	635	Red Diffused	65°	2.1	3.0	3.0	14	3,25	
HLMP-47009.MP7	HER	635	Red Diffused	45°	1.8	2.2	1.2	2.0	5,25	
HLMP-47199.MP7	Yellow	585	Yellow Diffused	45°	1.9	2.7	1.2	10	5,25	
HLMP-47409.MP7	Green	565	Green Diffused	65°	1.9	2.3	1.2	2.0	5,25	
HLMP-D1019.MP7	AlGaAs Red	660	Red Diffused	24°	1.8	2.2	35	70	3,25	
HLMP-D1509.MP7	Red		Red Clear	24°	1.6	1.8	1.2	3.0	3,25	
MV33509.MP7	Yellow	585	Yellow Clear	24°	2.2	3.0	80	150	3,25	
MV34509.MP7	Green	565	Green Clear	24°	2.2	3.0	80	150	3,25	
MV37509.MP7	HER	635	Orange Clear	24°	2.2	3.0	80	150	3,25	
MR30509.MP7	Red	660	Red Diffused	60°	5.0	20	1.0	2.0	12,13,25	
MR30519.MP7				60°	12.0	20	1.0	2.0	12,14,25	
MR33509.MP7	Yellow	585	Yellow Diffused	60°	5.0	15	1.5	4.0	12,13,25	
MR33519.MP7				60°	12.0	20	1.5	4.0	12,14,25	
MR34509.MP7	Green	565	Green Diffused	60°	5.0	15	1.5	4.0	12,13,25	
MR34519.MP7				60°	12.0	20	1.5	4.0	12,14,25	
MR37509.MP7	HER	635	Red Diffused	60°	5.0	15	1.5	4.0	12,13,25	
MR37519.MP7				60°	12.0	20	1.5	4.0	12,14,25	
MV54919.MP7	AlGaAs Red	660	White Diffused	100°	2.3	3.0	2.0	6.0	3,22,23,25	
	Green	565								

Notes

2. $V_F @ I_F = 10$ mA, $I_V @ I_F = 5$ mA
 3. V_F & $I_V @ I_F = 20$ mA
 4. V_F & $I_V @ I_F = 1$ mA
 5. V_F & $I_V @ I_F = 2$ mA
 6. V_F & $I_V @ I_F = 10$ mA
 12. Integral Resistor
 13. I_F & $I_V @ V_F = 5$ V
 14. I_F & $I_V @ V_F = 12$ V
 21. DIM A = 0.125 (3.18)
 22. DIM A = 0.180 (4.57)
 23. Bicolor
 24. The cathode is the AlGaAs red cathode for red/green bicolor LED.
 25. DIM A = 0.183 (4.65)
 26. DIM A = 0.140 (3.56)
 27. DIM A = 0.195 (4.95)
- HER = High Efficiency Red



T-1 3/4 (5 mm) Multiple										
Part Number	Source Color	Wave-length λ_p (nm)	Lens Color	Typical Viewing Angle	I_F (mA) for MR Parts		Luminous Intensity I_V (mcd)		Notes	
					V_F (V) typ	max	min	typ		
MV60538.MP8	Red	660	Red Diffused	65°	1.7	2.0	0.8	2.0	3,26	
MV63538.MP8	Yellow	585	Yellow Diffused	65°	2.1	3.0	3.5	18	3,26	
MV64538.MP8	Green	565	Green Diffused	65°	2.2	3.0	16	25	3,26	
MV67538.MP8	HER	635	Red Diffused	65°	2.1	3.0	3.0	14	3,26	
MV60539.MP8	Red	660	Red Diffused	65°	1.7	2.0	0.8	2.8	3,27	
MV63539.MP8	Yellow	585	Yellow Diffused	65°	2.1	3.0	2.5	18	3,27	
MV64539.MP8	Green	565	Green Diffused	65°	2.2	3.0	16	25	3,27	
MV67539.MP8	HER	635	Red Diffused	65°	2.1	3.0	3	14	3,27	
HLMP-47009.MP8	HER	635	Red Diffused	45°	1.8	2.2	1.2	2.0	5,27	
HLMP-47199.MP8	Yellow	585	Yellow Diffused	45°	1.9	2.7	1.2	10	5,27	
HLMP-47409.MP8	Green	565	Green Diffused	45°	1.9	2.3	1.2	2.0	5,27	
MV33509.MP8	Yellow	585	Yellow Clear	24°	2.2	3.0	80	150	3,27	
MV34509.MP8	Green	565	Green Clear	24°	2.2	3.0	80	150	3,27	
MV37509.MP8	HER	635	Orange Clear	24°	2.2	3.0	80	150	3,27	
MR30509.MP8	Red	660	Red Diffused	60°	12	20	1.0	2.0	12,13,27	
MR30519.MP8				60°	12	20	1.0	2.0	12,14,27	
MR33509.MP8	Yellow	585	Yellow Diffused	60°	10	15	1.5	4.0	12,13,27	
MR33519.MP8				60°	13	20	1.5	4.0	12,14,27	
MR34509.MP8	Green	565	Green Diffused	60°	12	15	1.5	4.0	12,13,27	
MR34519.MP8				60°	13	20	1.5	4.0	12,14,27	
MR37509.MP8	HER	635	Red Diffused	60°	10	15	1.5	4.0	12,13,27	
MR37519.MP8				60°	13	20	1.5	4.0	12,14,27	
MV54919.MP8	AlGaAs Red	660	White Diffused	100°	2.1	3.0	2.0	6.0	3,23,24,27	
	Green	565								

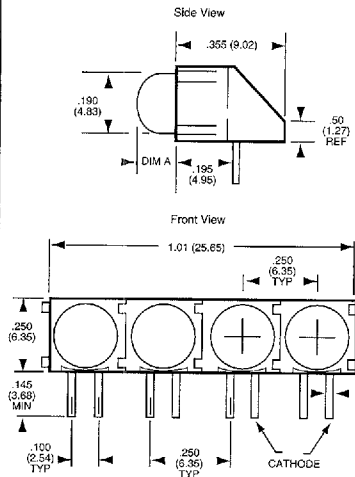


T-1 3/4 (5 mm) Multiple										
Part Number	Source Color	Wave-length λ_p (nm)	Lens Color	Typical Viewing Angle	I_F (mA) for MR Parts		Luminous Intensity I_V (mcd)		Notes	
					V_F (V) typ	max	min	typ		
MV60538.MP8A	Red	660	Red Diffused	65°	1.7	2.0	0.8	2.0	3,26	
MV63538.MP8A	Yellow	585	Yellow Diffused	65°	2.1	3.0	3.5	18	3,26	
MV64538.MP8A	Green	565	Green Diffused	65°	2.2	3.0	16	25	3,26	
MV67538.MP8A	HER	635	Red Diffused	65°	2.1	3.0	3.0	14	3,26	
MV60539.MP8A	Red	660	Red Diffused	65°	1.7	2.0	0.8	2.0	3,27	
MV63539.MP8A	Yellow	585	Yellow Diffused	65°	2.1	3.0	2.5	18	3,27	
MV64539.MP8A	Green	565	Green Diffused	65°	2.2	3.0	16	25	3,27	
MV67539.MP8A	HER	635	Red Diffused	65°	2.1	3.0	3	14	3,27	
HLMP-47009.MP8A	HER	635	Red Diffused	45°	1.8	2.2	1.2	2.0	5,27	
HLMP-47199.MP8A	Yellow	585	Yellow Diffused	45°	1.9	2.7	1.2	10	5,27	
HLMP-47409.MP8A	Green	565	Green Diffused	45°	1.9	2.3	1.2	2.0	5,27	
MV33509.MP8A	Yellow	585	Yellow Clear	24°	2.2	3.0	80	150	3,27	
MV34509.MP8A	Green	565	Green Clear	24°	2.2	3.0	80	150	3,27	
MV37509.MP8A	HER	635	Orange Clear	24°	2.2	3.0	80	150	3,27	
MR30509.MP8A	Red	660	Red Diffused	60°	12	20	1.0	2.0	12,13,27	
MR30519.MP8A				60°	13	20	1.0	2.0	12,14,27	
MR33509.MP8A	Yellow	585	Yellow Diffused	60°	10	15	1.5	4.0	12,13,27	
MR33519.MP8A				60°	13	20	1.5	4.0	12,14,27	
MR34509.MP8A	Green	565	Green Diffused	60°	12	15	1.5	4.0	12,13,27	
MR34519.MP8A				60°	13	20	1.5	4.0	12,14,27	
MR37509.MP8A	HER	635	Red Diffused	60°	12	15	1.5	4.0	12,13,27	
MR37519.MP8A				60°	13	20	1.5	4.0	12,14,27	
MV54919.MP8A	AlGaAs Red	660	White Diffused	100°	2.1	3.0	2.0	6.0	3,23,24,27	
	Green	565								

Notes

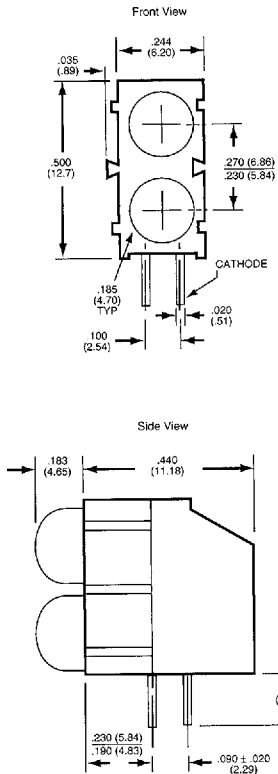
- | | | |
|--|--|---------------------------|
| 2. $V_F @ I_F = 10$ mA, $I_V @ I_F = 5$ mA | 13. I_F & $I_V @ V_F = 5$ V | 25. DIM A = 0.183 (4.65) |
| 3. V_F & $I_V @ I_F = 20$ mA | 14. I_F & $I_V @ V_F = 12$ V | 26. DIM A = 0.140 (3.56) |
| 4. V_F & $I_V @ I_F = 1$ mA | 21. DIM A = 0.125 (3.18) | 27. DIM A = 0.195 (4.95) |
| 5. V_F & $I_V @ I_F = 2$ mA | 22. DIM A = 0.180 (4.57) | HER = High Efficiency Red |
| 6. V_F & $I_V @ I_F = 10$ mA | 23. Bicolor | |
| 12. Integral Resistor | 24. The cathode is the AlGaAs red cathode for red/green bicolor LED. | |

T-1 3/4 (5 mm) Multiple

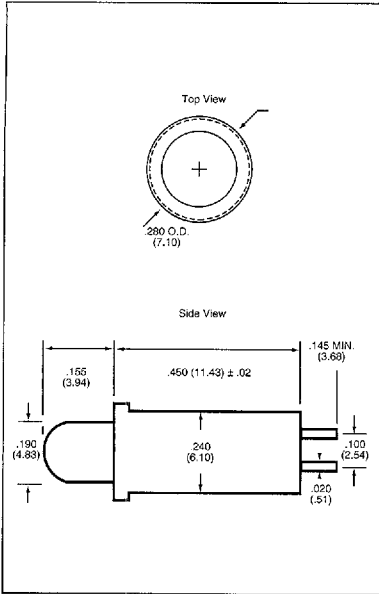


Part Number	Source Color	Wave-length λ_p (nm)	Lens Color	Typical Viewing Angle	I_F (mA) for MR Parts		Luminous Intensity I_V (mcd)		Notes
					V_F (V) typ	V_F (V) max	min	typ	
MV60538.MP8B	Red	660	Red Diffused	65°	1.7	2.0	0.8	2.0	3,26
MV63538.MP8B	Yellow	585	Yellow Diffused	65°	2.1	3.0	3.5	18	3,26
MV64538.MP8B	Green	565	Green Diffused	65°	2.2	3.0	16	25	3,26
MV67538.MP8B	HER	635	Red Diffused	65°	2.1	3.0	3	14	3,26
MV60539.MP8B	Red	660	Red Diffused	65°	1.7	2.0	0.8	2.0	3,27
MV63539.MP8B	Yellow	585	Yellow Diffused	65°	2.1	3.0	2.5	18	3,27
MV64539.MP8B	Green	565	Green Diffused	65°	2.2	3.0	16	25	3,27
MV67539.MP8B	HER	635	Red Diffused	45°	2.1	3.0	3	14	3,27
HLMP-47009.MP8B	HER	635	Red Diffused	45°	1.8	2.2	1.2	2.0	5,27
HLMP-47199.MP8B	Yellow	585	Yellow Diffused	45°	1.9	2.7	1.2	10	5,27
HLMP-47409.MP8B	Green	565	Green Diffused	45°	1.9	2.3	1.2	2.0	5,27
MV33509.MP8B	Yellow	585	Yellow Clear	24°	2.2	3.0	80	150	3,27
MV34509.MP8B	Green	565	Green Clear	24°	2.2	3.0	80	150	3,27
MV37509.MP8B	HER	635	Orange Clear	24°	2.2	3.0	80	150	3,27
MR30509.MP8B	Red	660	Red Diffused	60°	12	20	1.0	2.0	12,13,27
MR30519.MP8B				60°	13	20	1.0	2.0	12,14,27
MR33509.MP8B	Yellow	585	Yellow Diffused	60°	10	15	1.5	4.0	12,13,27
MR33519.MP8B				60°	13	20	1.5	4.0	12,14,27
MR34509.MP8B	Green	565	Green Diffused	60°	12	15	1.5	4.0	12,13,27
MR34519.MP8B				60°	13	20	1.5	4.0	12,14,27
MR37509.MP8B	HER	635	Red Diffused	60°	10	15	1.5	4.0	12,13,27
MR37519.MP8B				60°	13	20	1.5	4.0	12,14,27
MV54919.MP8B	AlGaAs Red	660	White Diffused	100°	2.1	3.0	2.0	6.0	3,23,24,27
	Green	565							

T-1 3/4 (5 mm) Bilevel



Part Number	Source Color	Wave-length λ_p (nm)	Lens Color	Typical Viewing Angle	I_F (mA) for MR Parts		Luminous Intensity I_V (mcd)		Notes
					V_F (V) typ	V_F (V) max	min	typ	
MV60539.MP90	Red	660	Red Diffused	65°	1.7	2.0	0.8	2.0	3
MV63539.MP93	Yellow	585	Yellow Diffused	65°	2.1	3.0	2.5	18	3
MV64539.MP94	Green	565	Green Diffused	65°	2.2	3.0	16	25	3
MV67539.MP97	HER	635	Red Diffused	65°	2.1	3.0	3	14	3
HLMP-47009.MP97	HER	635	Red Diffused	45°	1.9	2.2	1.2	2.0	5
HLMP-47199.MP93	Yellow	585	Yellow Diffused	45°	1.9	2.7	1.2	10	5
HLMP-47409.MP94	Green	565	Green Diffused	45°	1.9	2.3	1.2	2.0	5
MV33509.MP93	Yellow	585	Yellow Clear	24°	2.2	3.0	80	150	3
MV34509.MP94	Green	565	Green Clear	24°	2.2	3.0	80	150	3
MV37509.MP97	HER	635	Orange Clear	24°	2.2	3.0	80	150	3
MR30509.MP90	Red	660	Red Diffused	60°	12	20	1.0	2.0	12,13
MR33509.MP93	Yellow	585	Yellow Diffused	60°	10	15	1.5	4.0	12,13
MR34509.MP94	Green	565	Green Diffused	60°	12	15	1.5	4.0	12,13
MR37509.MP97	HER	635	Red Diffused	60°	10	15	1.5	4.0	12,13
MV54919 MP91	AlGaAs Red	660	White Diffused	100°	2.1	3.0	2.0	6.0	3,23,24
	AlGaAs Green	565							
	AlGaAs Green	660							



T-1 3/4 (5 mm) Vertical Standoff									
Part Number	Source Color	Wave-length λp (nm)	Lens Color	Typical Viewing Angle	I _F (mA) for MR Parts		Luminous Intensity I _V (mcd)		Notes
					V _F (V) typ	V _F (V) max	min	typ	
MV60539.MP10	Red	660	Red Diffused	65°	1.7	2.0	0.8	2.0	3
MV63539.MP10	Yellow	585	Yellow Diffused	65°	2.1	3.0	2.5	18.0	3
MV64539.MP10	Green	565	Green Diffused	65°	2.2	3.0	16.0	25.0	3
MV67539.MP10	HER	635	Red Diffused	65°	2.1	3.0	3.0	14.0	3
HLMP-47009.MP10	HER	635	Red Diffused	45°	1.8	2.2	1.2	2.0	5
HLMP-47199.MP10	Yellow	585	Yellow Diffused	45°	1.9	2.7	1.2	10.0	5
HLMP-47409.MP10	Green	565	Green Diffused	45°	2.3	2.3	1.2	2.0	5
MV33509.MP10	Yellow	585	Yellow Clear	24°	2.2	3.0	80	150	3
MV34509.MP10	Green	565	Green Clear	24°	2.2	3.0	80	150	3
MV37509.MP10	HER	635	Orange Clear	24°	2.2	3.0	80	150	3

Notes

- 3. V_F & I_V @ I_F = 20 mA
- 5. V_F & I_V @ I_F = 2 mA
- 12. Integral Resistor
- 13. I_F & I_V @ V_F = 5 V
- 23. Bicolor
- 24. The cathode is the AlGaAs red cathode for red/green bicolor LED.
HER = High Efficiency Red