



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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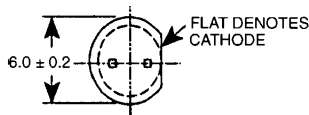
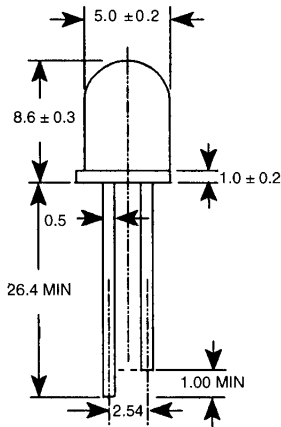
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SUPER RED MV8140 CLEAR SUPER RED MV8190 DIFFUSED
SUPER RED MV8141 CLEAR SUPER RED MV8191 DIFFUSED

PACKAGE DIMENSIONS



ST1683

NOTES:

1. ALL DIMENSIONS ARE IN MM.
2. LEAD SPACING IS MEASURED WHERE THE LEADS EMERGE FROM THE PACKAGE.
3. PROTRUDED RESIN UNDER THE FLANGE IS 1.5 mm (0.059") MAX.

DESCRIPTION

These T-1¾ super bright LEDs have a moderate 40° or 45° viewing angle. The MV8190/1 are 40° and the MV8140/1 are 45°. All are made with GaAlAs LEDs on a GaAlAs substrate. They are encapsulated in an epoxy package. The MV8140/1 have a water clear lens while the MV8190/1 have a red diffused lens.

FEATURES

- Outstanding material efficiency.
- Popular T-1¾ package.
- Low drive current.
- Solid state reliability.
- Super high brightness.
- Standard 1 mil. lead spacing.

ABSOLUTE MAXIMUM RATING (T _a =25°C Unless Otherwise Specified)	
DC forward current (I _f)	40 mA
Operating temperature range	-40°C to +85°C
Storage temperature range	-40°C to +100°C
Lead soldering time (at 1/16 inch from the bottom of lamp)	5 seconds @ 260°C
Peak forward current (I _p) (at f=1.0 KHz, Duty factor= 1/10)	200 mA
Power dissipation (P _d)	110 mW
Recommended operating current (I _f Rec)	20 mA

ELECTRO-OPTICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ Unless Otherwise Specified)					
PART NUMBER	MV8190	MV8191	MV8140	MV8141	TEST CONDITIONS
Luminous intensity (mcd)					$I_F = 20\text{ mA}$
minimum	63	100	120	250	
typical	100	200	220	370	
maximum					
Forward voltage (V_F)					$I_F = 20\text{ mA}$
minimum			1.5		
typical			1.7		
maximum			2.4		
Peak wavelength (nm)			660		$I_F = 20\text{ mA}$
Spectral line half width (nm)			40		$I_F = 20\text{ mA}$
Reverse breakdown voltage (V_R)			5		$I_F = 10\ \mu\text{A}$
Viewing angle ($^\circ$)	45	45	40	40	$I_F = 20\text{ mA}$

TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES ($T_A = 25^\circ\text{C}$)

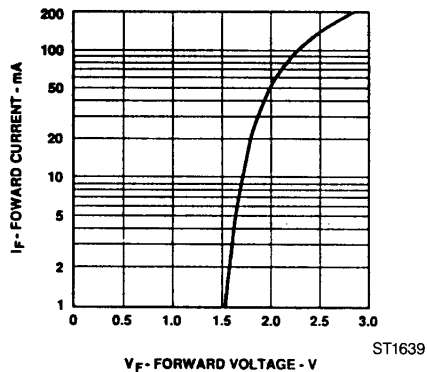


Fig. 1. Forward Current vs. Forward Voltage

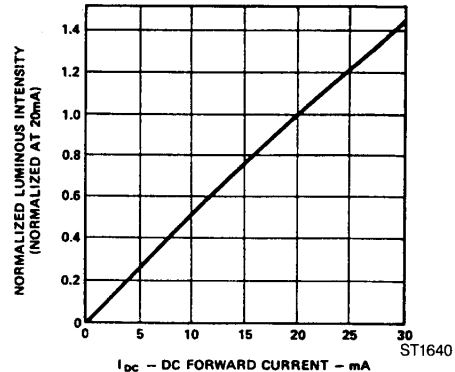


Fig. 2. Relative Luminous Intensity vs. Forward Current

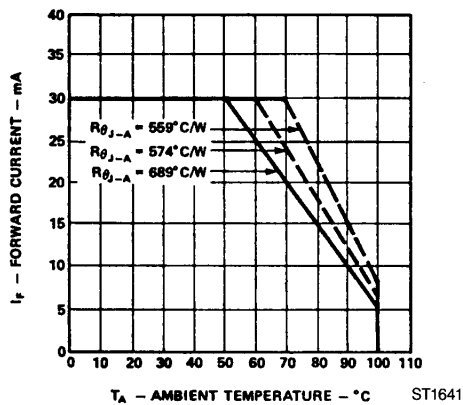


Fig. 3. Maximum Forward DC Current vs. Ambient Temperature Derating based on $T_J \text{ MAX} = 110^\circ$.

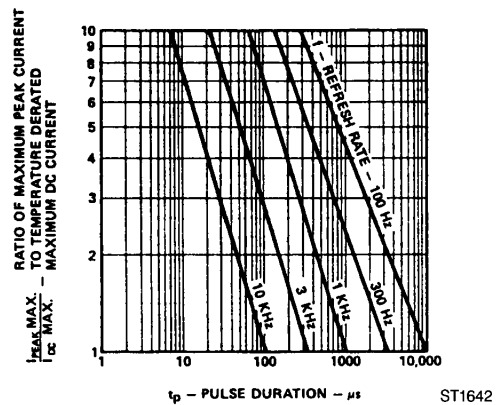


Fig. 4. Maximum Peak Current vs. Pulse Duration

TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES (T_A=25°C)

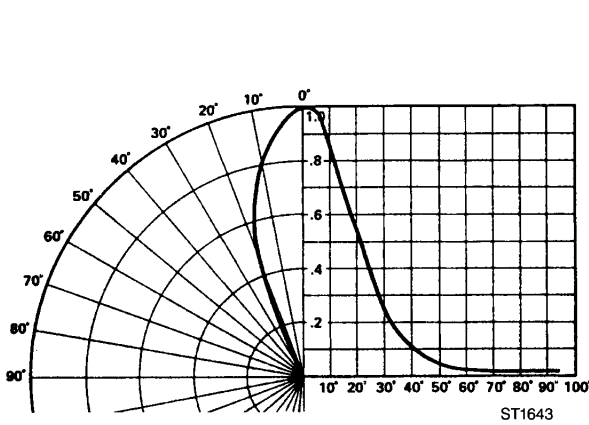


Fig. 5. Relative Luminous Intensity vs. Angular Displacement MV8190/1

ST1643

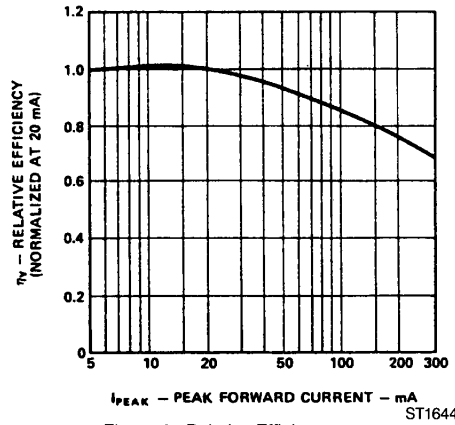


Figure 6. Relative Efficiency vs. Peak Forward Current

ST1644

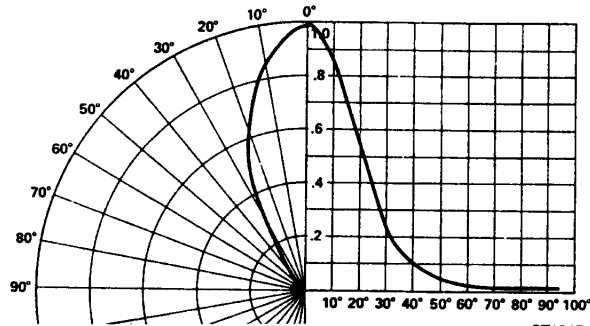


Fig. 7. Relative Luminous Intensity vs. Angular Displacement MV8140/1

ST1645



SUPER BRIGHT T-1 3/4 (5mm) LED LAMPS

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