

## Excellent Integrated System Limited

Stocking Distributor

Click to view price, real time Inventory, Delivery & Lifecycle Information:

[Fairchild Semiconductor](#)  
[MV9100](#)

For any questions, you can email us directly:

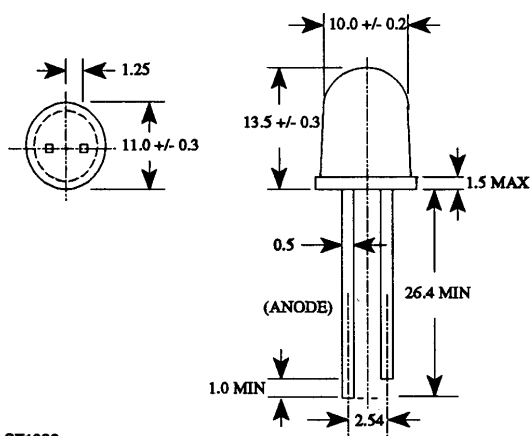
[sales@integrated-circuit.com](mailto:sales@integrated-circuit.com)



## SUPER BRIGHT 10 mm LED LAMPS

**SUPER RED MV9100 CLEAR**  
**SUPER RED MV9101 CLEAR**  
**SUPER RED MV9102 CLEAR**

### PACKAGE DIMENSIONS



ST1632

#### 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 10 mm super bright LEDs have a narrow 8° viewing angle for concentrated light output. The MV9100/1/2 are made with GaAlAs LEDs on a GaAs substrate. They are all encapsulated in an epoxy package and have water clear lenses.

### FEATURES

- Outstanding material efficiency.
- Low drive current.
- Solid state reliability.
- Super high brightness suitable for outdoor applications.
- Standard 1 mil. lead spacing.

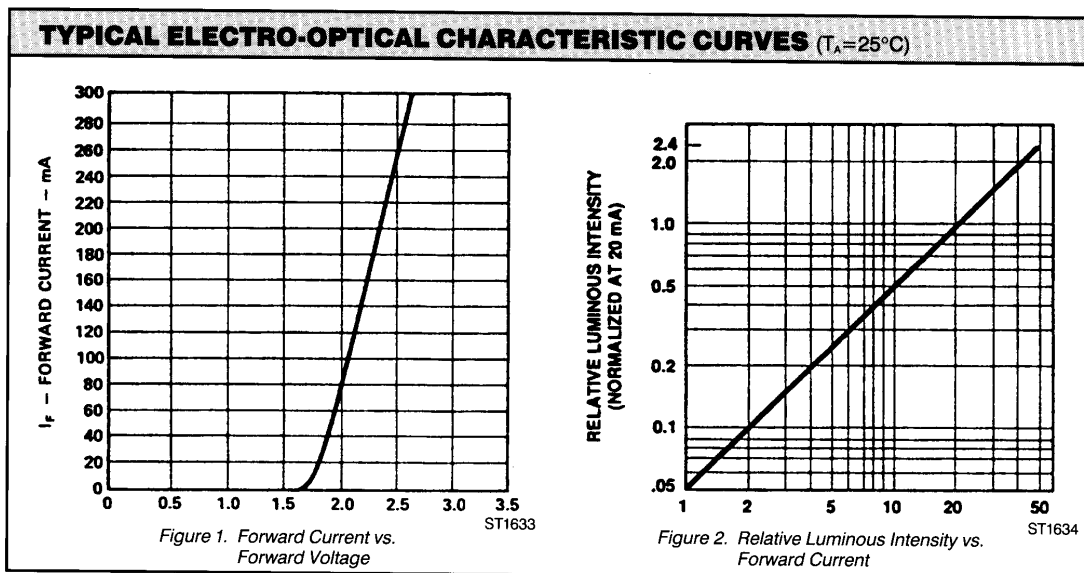
### ABSOLUTE MAXIMUM RATING ( $T_A = 25^\circ\text{C}$ Unless Otherwise Specified)

DC forward current ( $I_F$ )	40 mA
Operating temperature range	$-40^\circ\text{C}$ to $+85^\circ\text{C}$
Storage temperature range	$-40^\circ\text{C}$ to $+100^\circ\text{C}$
Lead soldering time (at $\frac{1}{16}$ inch from the bottom of lamp)	5 seconds @ $260^\circ\text{C}$
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



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<b>ELECTRO-OPTICAL CHARACTERISTICS</b> ( $T_A = 25^\circ\text{C}$ Unless Otherwise Specified)				
PART NUMBER	MV9100	MV9101	MV9102	TEST CONDITIONS
Luminous intensity (mcd)				$I_f = 20\text{ mA}$
minimum	600	1000	1600	
typical	940	1500	2400	
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)		20		$I_f = 20\text{ mA}$
Reverse breakdown voltage ( $V_R$ )		5		$I_f = 10\text{ }\mu\text{A}$
Viewing angle ( $^\circ$ )		8		$I_f = 20\text{ mA}$



**FAIRCHILD**  
SEMICONDUCTOR™

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

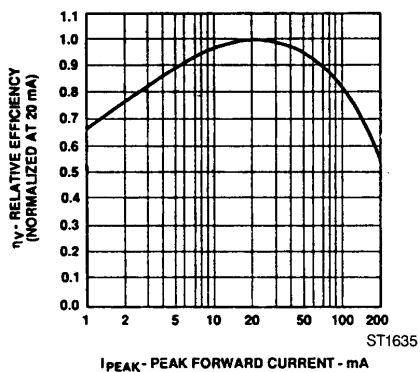


Figure 3. Relative Efficiency vs. Peak Forward Current

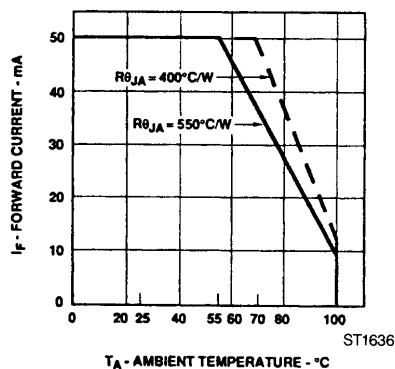


Figure 4. Maximum Forward DC Current vs. Ambient Temperature  
Derating based on  $T_J \text{ MAX} = 110^\circ$ .

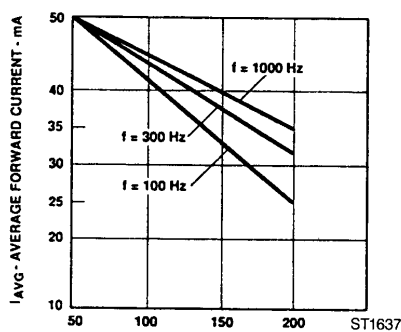


Figure 5. Maximum Average Current vs. Forward Current

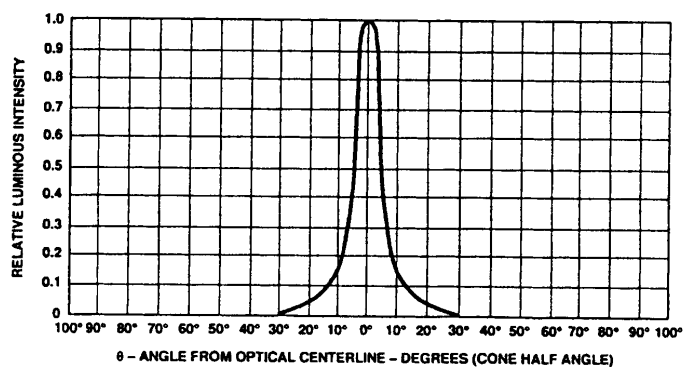


Figure 6. Relative Luminous Intensity vs. Angular Displacement



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