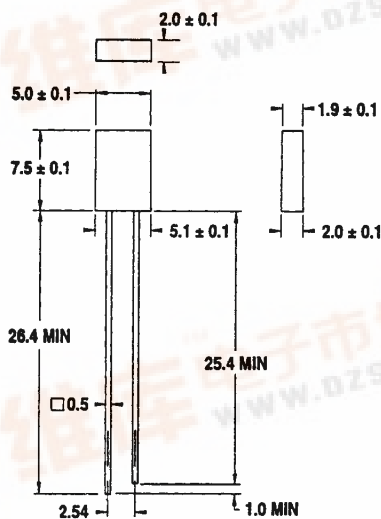


FAIRCHILD
SEMICONDUCTOR™

**RECTANGULAR
SOLID STATE LAMPS**

YELLOW MV53123
HIGH EFFICIENCY GREEN MV54123
HIGH EFFICIENCY RED MV57123

PACKAGE DIMENSIONS



C1667A

NOTES:

1. ALL DIMENSIONS ARE IN INCHES (MM)
2. TOLERANCES ARE ± 0.10 " INCHES UNLESS SPECIFIED.
3. AN EPOXY MENISCUS MAY EXTEND ABOUT .40" (1MM) DOWN THE LEADS. THE BASE OF THE PACKAGE IS NOT FLAT.

DESCRIPTION

These rectangular LED lamps provide a lighted surface area 2×5 mm. The High Efficiency Red and Yellow solid state lamps contain a gallium arsenide phosphide on gallium phosphide light emitting diode. The High Efficiency Green Lamps utilize an improved gallium phosphide light emitting diode.

FEATURES

- 2×5 mm lighted area
- High brightness—typically 4 mcd at 20 mA
- Solid state reliability
- Compact, rugged, lightweight

APPLICATIONS

- Legend backlighting
- Illuminated pushbutton
- Panel indicator
- Bargraph meter

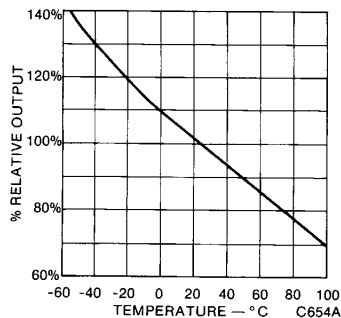
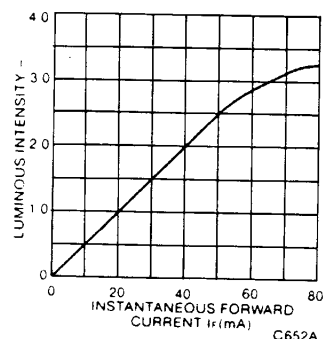
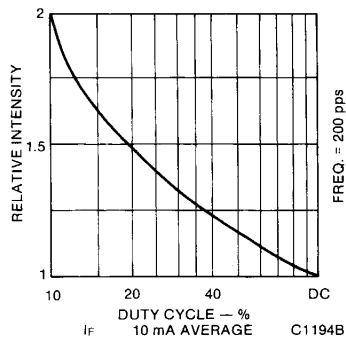
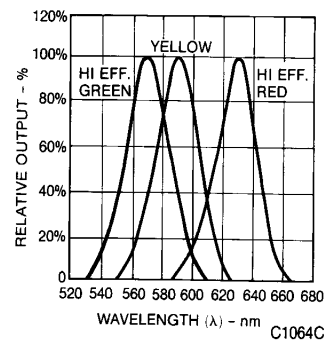
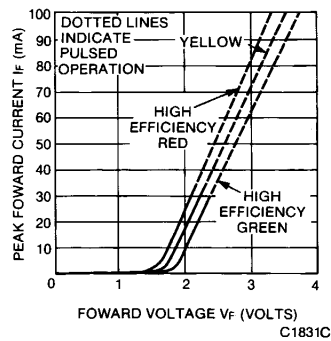


RECTANGULAR SOLID STATE LAMPS

ELECTRO-OPTICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ Unless Otherwise Specified)					
PARAMETER	TEST COND.	UNITS	MV53123	MV54123	MV57123
Forward voltage (V_F)					
typ.	$I_F = 20\text{ mA}$	V	2.1	2.2	2.0
max.	$I_F = 20\text{ mA}$	V	3.0	3.0	3.0
Luminous Intensity					
min.	$I_F = 20\text{ mA}$	mcd	1.0	1.0	1.0
typ.	$I_F = 20\text{ mA}$	mcd	4.0	4.0	4.0
Peak wavelength					
half width	$I_F = 20\text{ mA}$	mcd	585	562	635
		nm	45	30	45
Capacitance					
typ.	$V = 0, f = 1\text{ MHz}$	pF	45	20	45
Reverse voltage (V_R)					
min.	$I_R = 100\text{ }\mu\text{A}$	V	5.0	5.0	5.0
Viewing angle (total)		degrees	100	100	100

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ Unless Otherwise Specified)		
	MV53123	MV54123 MV57123
Power dissipation	85 mW	120 mW
Derate linearly from 50°C	1.6 mW/ $^\circ\text{C}$	1.6 mW/ $^\circ\text{C}$
Storage and operating temperatures	-55°C to $+100^\circ\text{C}$	-55°C to $+100^\circ\text{C}$
Peak forward current (1 μsec pulse width 300 pps)	60 mA	90 mA
Forward current	20 mA	30 mA
Lead soldering time at 260°C (See Note 1)	5 sec.	5 sec.
Reverse voltage	5.0 V	5.0 V

TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES
(25°C Free Air Temperature)



NOTES

1. The leads of the device immersed in molten solder, heated to a temperature of 260°C, to a point 1/16 inch (1.6 mm) from the body of the device per MIL-S-750, with dwell time of 5 seconds.



RECTANGULAR SOLID STATE LAMPS

DISCLAIMER

FAIRCHILD SEMICONDUCTOR RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. FAIRCHILD DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICENSE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

LIFE SUPPORT POLICY

FAIRCHILD'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE PRESIDENT OF FAIRCHILD SEMICONDUCTOR CORPORATION. As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury of the user.
2. A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.