

## Fiber Optics — FLCS Family Infrared LED

The MFOE71 is designed for low cost, medium frequency, short distance Fiber Optics Systems using 1000 micron core plastic fiber.

**Features:**

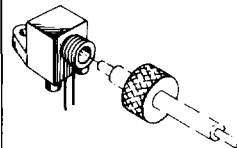
- Fast Response — > 10 MHz
- Spectral Response Matched to FLCS Detectors: MFOD71, 72, 73, 75
- FLCS Package
  - Low Cost
  - Includes Connector
  - Simple Fiber Termination and Connection
  - Easy Board Mounting
  - Molded Lens for Efficient Coupling
  - Mates with 1000 Micron Core Plastic Fiber (Eska SH4001)

**Applications:**

- Medical Electronics
- Industrial Controls
- Security Systems
- Short Haul Communication Systems
- High Isolation Interconnects
- M6800 Microprocessor Systems

**MFOE71**

**FLCS FAMILY  
 FIBER OPTICS  
 INFRARED LED  
 820 nm**



**CASE 383B-01  
 PLASTIC  
 STYLE 1**

**MAXIMUM RATINGS**

Rating	Symbol	Value	Unit
Reverse Voltage	$V_R$	6	Volts
Forward Current — Continuous — Peak Pulse	$I_F$	60 1	mA A
Total Power Dissipation ( $T_A = 25^\circ\text{C}$ Derate above $25^\circ\text{C}$ )	$P_D(1)$	150 2	mW mW/°C
Operating and Storage Junction Temperature Range	$T_J, T_{stg}$	-40 to +100	°C
Lead Solder Temperature (5 sec. max; 1/16 inch from case)	—	260	°C

(1) Measured with the device soldered into a typical printed circuit board.

**ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$  unless otherwise noted)**

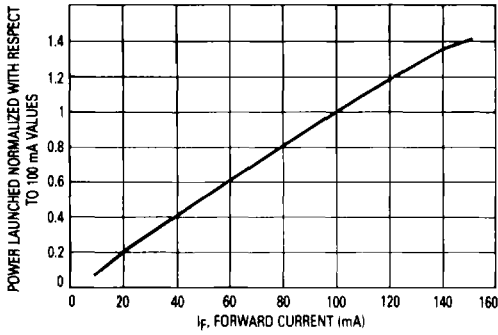
Characteristic	Fig. No.	Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage ( $I_R = 100 \mu\text{A}$ )	—	$V_{(BR)R}$	2	4	—	Volts
Forward Voltage ( $I_F = 100 \text{mA}$ )	—	$V_F$	—	1.5	2	Volts

**OPTICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$  unless otherwise noted)**

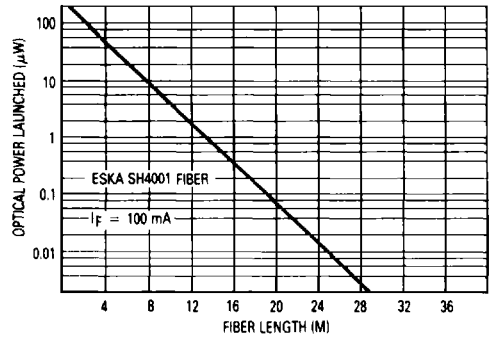
Characteristic	Fig. No.	Symbol	Min	Typ	Max	Unit
Power Launched ( $I_F = 100 \text{mA}$ )	4, 5	$P_L$	110	165	—	$\mu\text{W}$
Optical Rise and Fall Time ( $I_F = 100 \text{mA}$ ) Figure 5	2	$t_r, t_f$	—	25	35	ns
Peak Wavelength ( $I_F = 100 \text{mA}$ )	1	$\lambda_p$	—	820	—	nm

For simple fiber termination instructions, see the MFOD71, 72 and 73 data sheets.

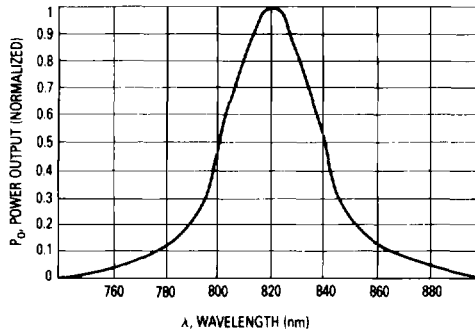
# MFOE71



**Figure 1. Normalized Power Launched versus Forward Current**

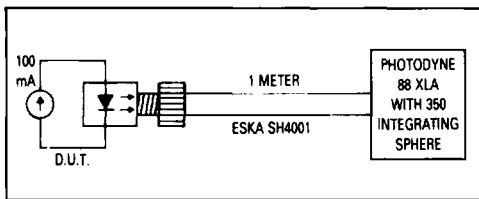


**Figure 2. Power Launched versus Fiber Length**

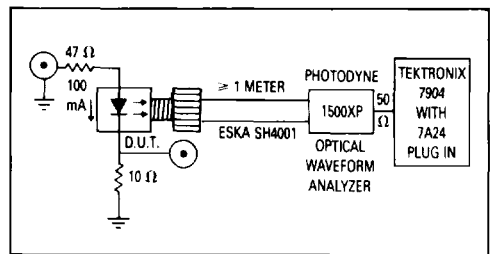


**Figure 3. Typical Spectral Output versus Wavelength**

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**Figure 4. Power Launched Test Set**



**Figure 5. Optical Rise and Fall Time Test Set (10%–90%)**