

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:

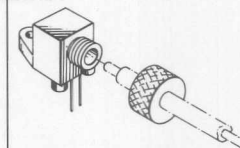
- Fast Response — > 10 MHz
- Spectral Response Matched to FLCS Detectors: MFOD71, 72, 73, 75
- FLCS Package
 - Low Cost
 - Includes Connector
 - Simple Fiber Termination and Connection
 - Easy Board Mounting
 - Molded Lens for Efficient Coupling
 - Mates with 1000 Micron Core Plastic Fiber (Eska SH4001)

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 363B-01
 PLASTIC
 STYLE 1**

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Reverse Voltage	V_R	6	Volts
Forward Current — Continuous	I_F	60	mA
— Peak Pulse		1	A
Total Power Dissipation @ $T_A = 25^\circ\text{C}$ Derate above 25°C	$P_D(1)$	150	mW
		2	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	—	μW
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	λ_p	—	820	—	nm

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

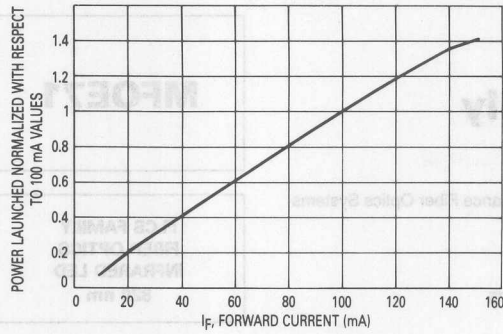


Figure 1. Normalized Power Launched versus Forward Current

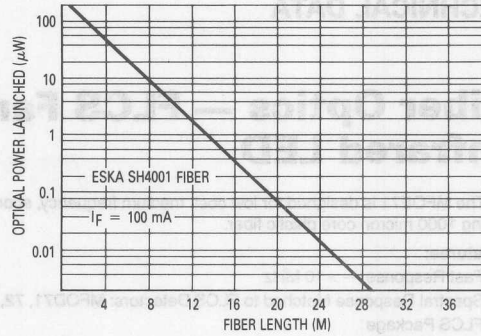


Figure 2. Power Launched versus Fiber Length

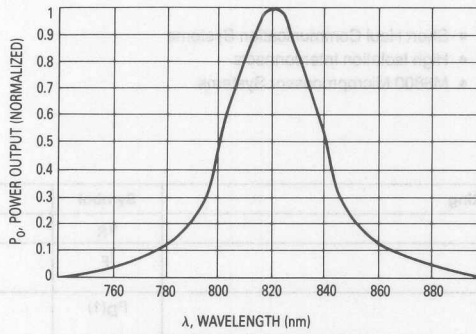
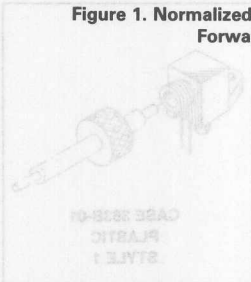


Figure 3. Typical Spectral Output versus Wavelength

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Unit	Value
Volts	6
mA	80
A	1
mW	150
mW/C	3
°C	-40 to +100
°C	25

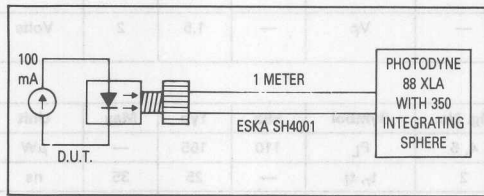


Figure 4. Power Launched Test Set

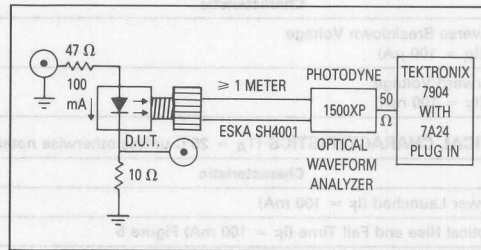


Figure 5. Optical Rise and Fall Time Test Set (10%-90%)