Fiber Optics — FLCS Family Infrared LED

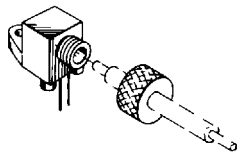
MFOE71

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

FLCS FAMILY
FIBER OPTICS
INFRARED LED
820 nm

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)



CASE 363B-01
PLASTIC
STYLE 1

Applications:

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

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°C Derate above 25°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°C unless otherwise noted)

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

OPTICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

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

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

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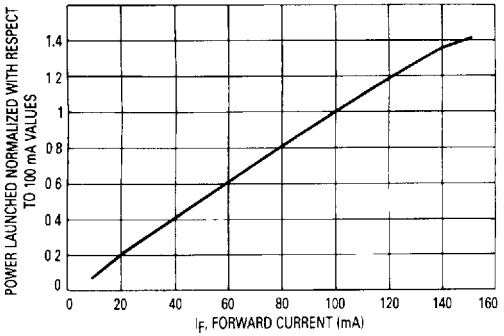

Figure 1. Normalized Power Launched versus Forward Current

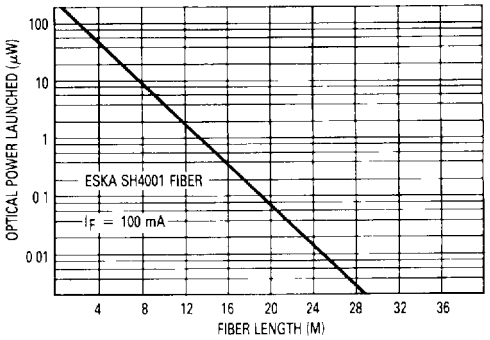

Figure 2. Power Launched versus Fiber Length

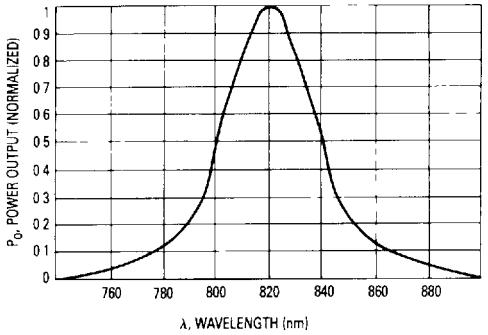

Figure 3. Typical Spectral Output versus Wavelength

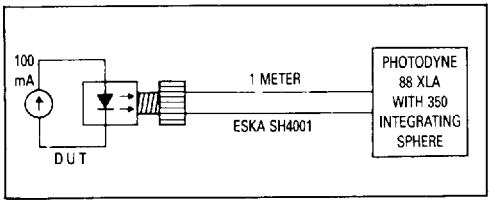

Figure 4. Power Launched Test Set

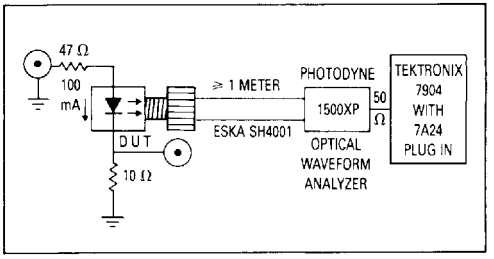

Figure 5. Optical Rise and Fall Time Test Set (10%–90%)