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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



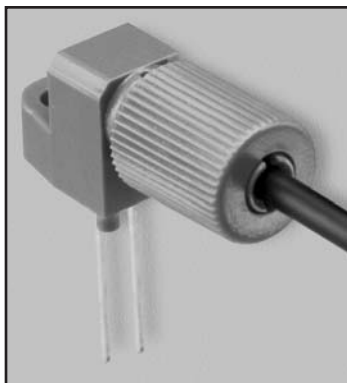
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DESCRIPTION

The IF-E91A is a high-output medium-speed infrared LED in a “connector-less” style plastic fiber optic package. The output spectrum peaks at 950 nm for the IF-E91A. The device package features an internal micro-lens, and a precision-molded PBT housing ensures efficient optical coupling with standard 1000 μ m plastic fiber cable.

APPLICATION HIGHLIGHTS

The high output and fast transition times of the IF-E91A is suitable for low-cost analog and digital data links. Used with an IF-D96 photologic detector, the IF-E91A can achieve data rates of 500 kbps at link distances up to 7 m. The drive circuit design is simpler than required for laser diodes, making the IF-E91A an excellent low-cost alternative in a variety of analog and digital applications.

APPLICATIONS

- Low-Cost Analog and Digital Data Links
- Digitized Audio
- Optical Sensors
- Medical Instruments
- Robotics Communications
- Motor Controller Triggering
- EMC/EMI Signal Isolation
- Electronic Games
- Intra-System Links: Board-to-Board, Rack-to-Rack

FEATURES

- ◆ Excellent Linearity
- ◆ No Optical Design Required
- ◆ Mates with Standard 1000 μ m Core Jacketed Plastic Fiber Cable
- ◆ Internal Micro-Lens for Efficient Coupling
- ◆ Inexpensive Plastic Connector Housing
- ◆ Connector-Less Fiber Termination and Connection
- ◆ Interference-Free Transmission from Light-Tight Housing
- ◆ RoHS Compliant

MAXIMUM RATINGS

($T_A=25^\circ\text{C}$)

Operating and Storage
Temperature Range

(T_{OP}, T_{STG})-40° to 85°C

Junction Temperature (T_J)85°C

Soldering Temperature
(2 mm from case bottom)

(T_S) $t \leq 5s$ 240°C

Reverse Voltage (V_R).....5 V

Power Dissipation

(P_{TOT}) $T_A=25^\circ\text{C}$80 mW

De-rate Above 25°C1.33 mW/°C

Forward Current, DC (I_F)

IF-E91A50 mA

Surge Current (I_{FSM}) $t \leq 10 \mu\text{sec}$

IF-E91A 1.2 A

CHARACTERISTICS ($T_A=25^\circ\text{C}$)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Peak Wavelength	λ_{PEAK}		940		nm
Spectral Bandwidth (50% of I_{MAX})	$\Delta\lambda$	–	± 20	–	nm
Output Power Coupled into Plastic Fiber (1 mm core diameter). Distance Lens to Fiber ≤ 0.1 mm, 1 m SH4001 fiber, $I_F=20$ mA	Φ_{min}	50 -13	70 -11.6	95 -10.2	μW dBm
Switching Times (10% to 90% and 90% to 10%)($R_L=47\Omega$, $I_F=10$ mA)	t_r, t_f	–	1.0	–	μs
Capacitance ($f=1$ MHz)	C_0	–	25	–	pF
Forward Voltage	V_f ($I_F=20$ mA) ($I_F=50\text{mA}$)	–	1.2 1.27	1.6 1.6	V

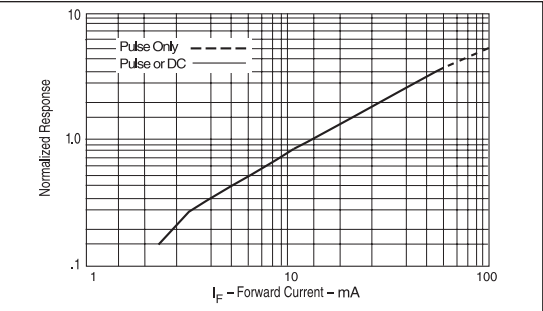


FIGURE 1. Normalized power launched versus forward current.

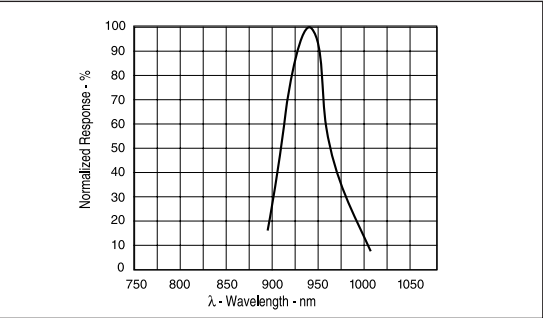


FIGURE 2. Typical spectral output vs. wavelength.

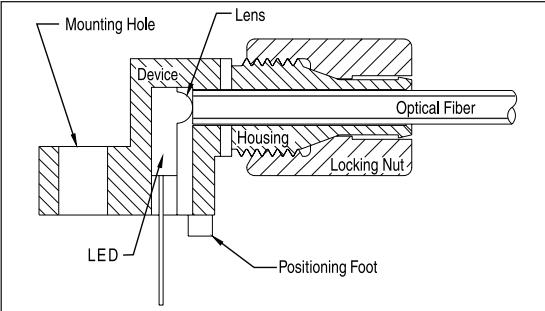


FIGURE 3. Cross-section of fiber optic device.

FIBER TERMINATION INSTRUCTIONS

1. Cut off the ends of the optical fiber with a single-edge razor blade or sharp knife. Try to obtain a precise 90-degree angle (square).
2. Insert the fiber through the locking nut and into the connector until the core tip seats against the internal micro-lens.
3. Screw the connector locking nut down to a snug fit, locking the fiber in place.

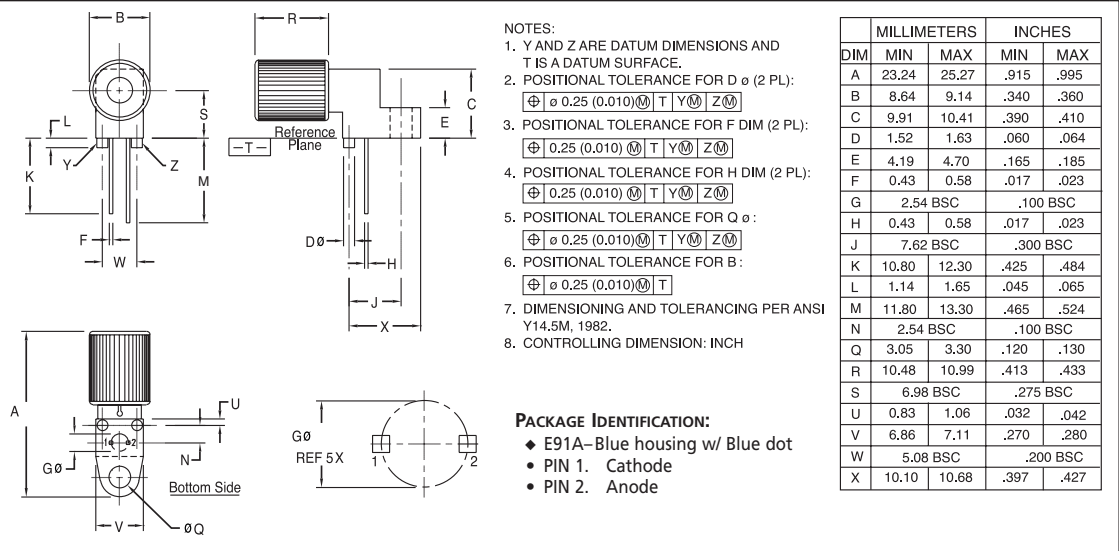


FIGURE 4. Case outline.