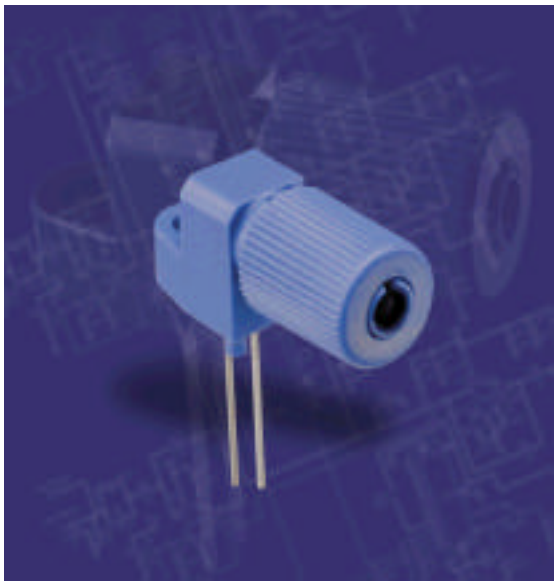
INDUSTRIAL FIBER OPTICS

November 2000

Product Upgrade

Industrial Fiber Optics has upgraded the IF-E93 green LED in its product line of fiber optic LEDs and Photodetectors. The optical output spectrum from the IF-E93 peaks at a wavelength of 530 nm that ideally maps to the lowest attenuation window of PMMA plastic optical fiber. (Attenuation of PMMA plastic fiber at 530 nm is less than .1 db/m, as compared to .16 to .2 dB/m for more commonly used 650 nm LEDs.) This high-power green LED is capable of distances of 150 meters at data rates of 5 Mbps using standard 1 mm core plastic fiber. In addition, the rise and fall times of the IF-E93 have been improved to allow for data rates up to 30 Mbps.



Applications for this LED include:

- Water Turbidity and Plant Sensors
- Local Area Networks
- Long Distance Communications over Plastic Fiber
- Optical Wavelength Multiplexing
- Medical Electronics and instruments
- Automotive Electronics
- Fiber Optic Modems

Features of this device are:

- No Optical Design Required
- Mates with Standard, 1000 µm 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
- Visible Light Output

CHARACTERISITICS

Parameter	*Symbol*	*Type*	*Unit*
Peak Wavelength	λ_{peak}	530	nm
Spectral Bandwidth (50% of I_{max})	$\Delta\lambda$	50	nm
Output Power Coupled to Plastic fiber (1 mm core diameter) - Lens to fiber distance = 0.1 mm; 10 cm length polished fiber; I_F = 10 mA	φ_{min}	75 -11	uW dBm
Transition time (10% to 90% and 90% to 10%) (I_F = 20 mA)	t_r, t_f	3.5, 16	ns
Capacitance (V_F = 0, F = 1 MHz	C_o	100	pF
Forward Voltage (I_F = 20 mA)	V_f	4	V
Temperature Coefficient, λ_{peak}	TC_λ	.17	nm/°K

The cost-per-unit ranges from $3.00-$7.00, with lead times of three weeks or less. Devices are available from distributors or direct for OEM customers. For data sheets please see our web site. For all other information, contact us via e-mail at indfo@i-fiberoptics.com or at the address listed below.

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