



EDUCATIONAL KIT – FIBER OPTICS

OZ Optics introduces a Fiber Optics Educational Kit. The kit is designed to teach technicians, engineers and students the fundamentals of fiber optics. The introduction level kit consists of 5 standard labs:

- 1) How to couple light into a fiber from a source.
- 2) How to measure the numerical aperture of a fiber.
- 3) How to collimate and focus the fiber output.
- 4) How to measure insertion losses.
- 5) How to attenuate light in fibers.

The kit comes complete with a lab manual and the necessary fiber optic components except the source and the detector. Contact OZ Optics to obtain a copy of the lab manual. The introduction level educational kit comes in both singlemode and multimode fiber versions. Components in the singlemode fiber version normally come with NTT-FC compatible connectors. The multimode fiber version is also available with NTT-FC connectors, as well as SMA 905 and ATT-ST connectors. Kits with other types of connectors are also available. Each introductory level kit includes the following components:

- 1) A laser to fiber coupler.
- 2) A blocking style variable attenuator.
- 3) Two 1.5 meter long jumper assemblies with connectors on both ends.
- 4) A fiber collimator.
- 5) A sleeve-through connector.
- 6) Complete lab manuals and an instructional video.
- 7) A 14" x 13" x 5" foam lined case.

The unit price of the introduction level kit with 5 standard labs is \$645.00 USD for multimode fibers, and \$935.00 USD for singlemode fibers. A combined kit which includes both single and multimode labs is available for \$1055.00 USD. The customer also has the option to purchase any individual lab.



Multimode Labs 1 and 2 are available for \$250.00 USD; labs 1, 2, 4 and 5 are \$489.00 USD. Quantity discounts are available.

The following labs are available at an additional cost:

- 6) How to pigtail black boxes with fibers.
 - 7) How to couple light from a laser diode into fiber.
 - 8) How to measure return losses (backreflection).
 - 9) How to mechanically splice two fibers.
 - 10) How to connectorize a fiber.
 - 11) How to transmit audio signals using fibers.
 - 12) How to transmit video signals using fibers.
 - 13) Fiber Optic Holography.
 - 14) Fiber Optic Interferometry.
 - 15) How to measure the extinction ratio of polarization preserving fibers.
 - 16) Wavelength division multiplexing of audio/video signals.
- OZ Optics is in the process of preparing video instructions for the kit. We also design custom specified labs. Contact OZ Optics for further information.

ORDERING INFORMATION

Part Number

FOEK-0X-A,B,C,D,E-W-F-LH

LAB #- F

Description

Fiber optic educational kit.
Individual Fiber Optic Labs

Where: **X** is the connector receptacle type (See table 1),
A,B,C,D,E are the requested lab numbers,
W is the operating wavelength in nm,
F is the fiber type (S for singlemode, M for multimode, P for polarization maintaining fiber),
LH is the laser head adapter number (See table 2).
is the number of the lab (6 for Lab 6).

Example: A customer wants an introduction level singlemode fiber optic kit with NTT-FC connectors for a He-Ne Laser with a 1-32 TPI male adapter. OZ Optics' part number: FOEK-03-1,2,3,4,5-633-S-1. If the customer wants both singlemode and multimode fiber optic kit, the part number will be: FOEK-03-1,2,3,4,5-633-S,M-1.

TABLE 1: AVAILABLE CONNECTORS

CONNECTOR TYPE	CONNECTOR RECEPTACLE NUMBER (X)
2mm OD Ferrule	1
1.8mm OD Ferrule	1.8
AT&T Biconic	2
Universal Receptacle for connectors with 2.5mm OD ferrules	2.5U
Standard NTT-FC/PC	3
Super NTT-FC/PC	3S
Ultra NTT-FC/PC	3U
Angled NTT-FC/PC	3A
Angled NTT-FC/AFC	3AF
NEC-D4	4
SMA905	5
SMA906	6
Diamond 3.5mm OD	7
AT&T-ST [®]	8
Super AT&T-ST [®]	8S
Ultra AT&T-ST [®]	8U
Diamond HMS-10/HP 2.5mm OD	9
DIN Standard 2.5mm OD	0
SC	SC
Angled SC	SCA
Ultra SC	SCU
No Connector	X

Table 2: STANDARD LASER HEAD ADAPTERS

LASER HEAD ADAPTER	ADAPTER NUMBER (LH)	BAR CODE #
1"-32 TPI Male Threaded Adapter	1	817
1.75" Disk Adapter with 4 holes on corners of 1" square	2	830
3/4" - 32TPI Male Threaded Adapter	3	825
5/8" - 32TPI Male Threaded Adapter	4	826
1/2"-20 TPI Male Threaded Adapter for Amoco lasers	5	824
5/8"-24 TPI Male Threaded Adapter	6	919
1.75" O.D. Female Adapter for cylindrical lasers without any mounting holes	7	834
1.50" O.D. Female Adapter for cylindrical lasers without any mounting holes	8	938
1.38" O.D. Female Adapter for cylindrical lasers without any mounting holes	9	929
1.25" O.D. Female Adapter for cylindrical lasers without any mounting holes	10	841
Post Mount with 1/4"-20 TPI hole	11	835
25mm O.D. Male Adapter for Spindler and Hoyer Optical Bench	12	851
Polytec Laser Head Adapter	13	931
Disk Adapter with 4 holes on 0.625" square for Lightwave Electronic lasers	14	800
1.75" O.D. Disk Adapter with 4 holes on 1" square and 1"-32 TPI female thread in the middle	15	836
1/2"-40 TPI UNF-2A Male Threaded Adapter	16	802
Disk Adapter with 4 holes on 27mm bolt circle Siemens Lasers	17	850
5/8"-24 TPI Female Laser Head Adapter for ILT lasers	18	765
Disk Adapter with 3 holes on a 2.25" diameter bolt circle for Omnichrome lasers	19	928
1.75" Disk Adapter with 4 holes on a 35mm diameter bolt circle	20	837