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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	Description
FOEK-0*X*-*A*,*B*,*C*,*D*,*E*-*W*-*F*-*LH*	Fiber optic educational kit.
LAB *#* - *F*	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" O.D. Disk adapter with 4 holes on corners of a 1" square	2	830
3/4"-32 TPI Male threaded adapter	3	825
5/8"-32 TPI Male threaded adapter	4	826
1/2"-20 TPI Male threaded adapter	5	824
5/8"-25 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
35mm O.D. Female Adapter for cylindrical lasers without any mounting holes	9	929
1.25" O.D. Female Adapter for cylindrical lenses without any mounting holes	10	841
Post mount adapter with an M6 and a 1/4"-20 TPI hole	11	835
25mm O.D. Male Laser Head Adapter	12	851
M24x1 Male Laser Head Adapter	13	931
1.15" O.D. Disk Adapter with 4 holes on a 0.625" square	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 Male Laser Head Adapter	16	802
35mm O.D. Disk Adapter with 4 holes on a 27mm bolt circle	17	850
5/8"-24 TPI Female Laser Head Adapter	18	765
2.75" O.D. Disk Adapter with 3 holes on a 2.25" diameter bolt circle	19	928
1.75" O.D. Disk Adapter with 4 holes on a 35mm diameter bolt circle	20	837
1.75" O.D. Disk Adapter with 3 holes on a 1.15" diameter bolt circle and 3/4"-32 TPI female thread in the middle	21	15351
1.75" O.D. Disk Adapter with 3 holes on a 1.15" diameter bolt circle	22	15368
1.75" O.D. Disk Adapter with 4 holes on a 35mm diameter bolt circle and 1"-32 TPI female thread in the middle	23	19791