U-BRACKET ASSEMBLY – FIBER OPTIC

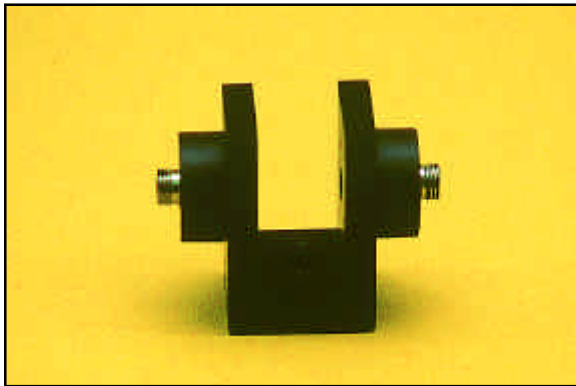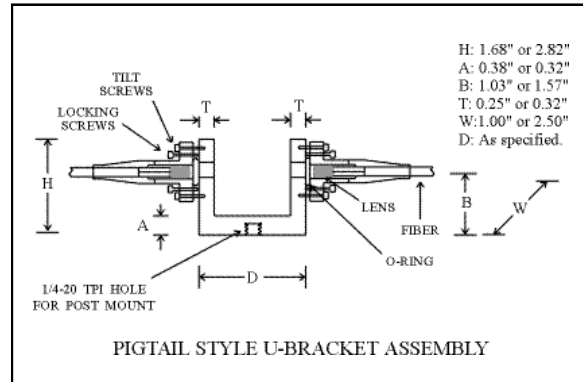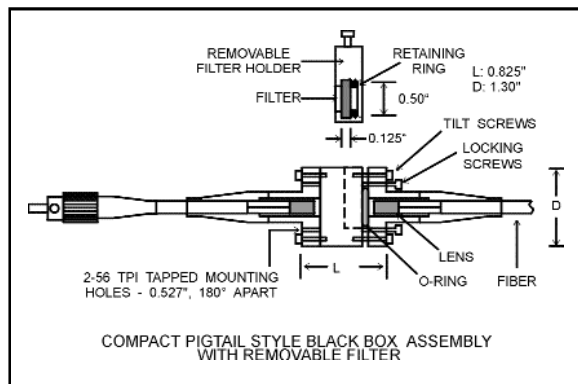PIGTAIL STYLE U-BRACKET ASSEMBLY

Fiber optic U-bracket assemblies are designed to transmit light from an optical fiber, across an air gap, and back into a second fiber with low losses. The U-bracket is prealigned at the factory for minimum insertion losses, making it very easy to use. A variety of bulk optical devices, including polarizers, isolators, filters, and waveplates, can be simply inserted into the U-bracket, allowing the user to quickly and easily test or prototype systems incorporating fiber and bulk optics.
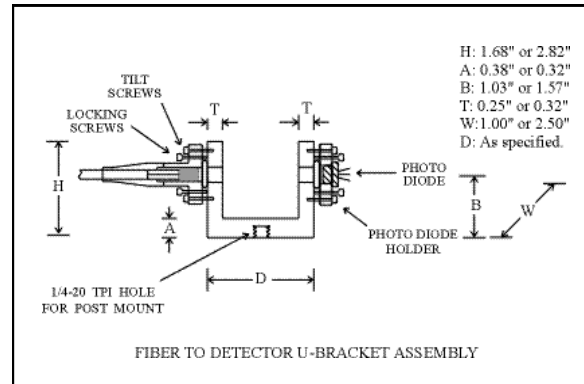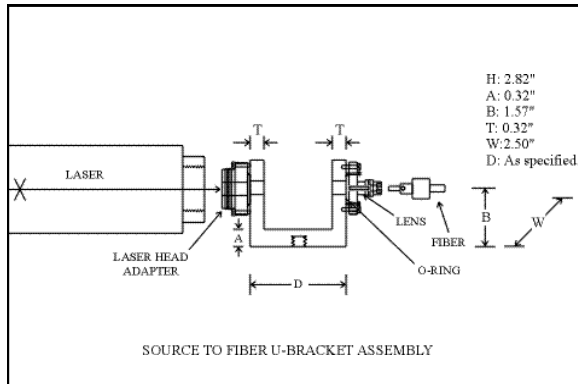
The U-Bracket assembly consists of three parts: an input fiber collimator, the U-bracket itself, and an output fiber focuser. Utilizing OZ Optics' patented tilt adjustment technique, losses of only 0.6 dB are achieved across a 60mm gap for pigtailed singlemode fibers, with backreflection levels of -25dB, -40dB or -60 dB available. Connector style assemblies are also available for a variety of connectors, including NTT-FC, AT&T-ST, bare fiber adapters, etc. Typical insertion losses are 1.0 dB across a 60mm gap for connectorized versions, with backreflection levels typically -20 dB.

U-Brackets are available in different sizes, with different gap spacings according to the customer's needs. Many different custom designs can be made for your application. For instance, source to fiber versions are available, where light from either a laser, a laser diode, or an LED is transmitted across the air gap and into the output fiber. Another option is to have a photo detector attached to the output end of the U-bracket, to measure the transmitted light. Another device available is a black box with a removable filter holder, to quickly insert and remove a filter from the optical path. Contact OZ for further information.

COMPACT PIGTAIL STYLE BLACK BOX ASSEMBLY WITH REMOVABLE FILTER

SOURCE TO FIBER U-BRACKET ASSEMBLY

H: 2.82"
A: 0.32"
B: 1.57"
T: 0.32"
W:2.50"
D: As specified.

FIBER TO DETECTOR U-BRACKET ASSEMBLY

H: 1.68" or 2.82"
A: 0.38" or 0.32"
B: 1.03" or 1.57"
T: 0.25" or 0.32"
W:1.00" or 2.50"
D: As specified.

ORDERING INFORMATION:

Part Number	Description
UB-0_A_-_XY_-_W_-_I_-_O_-_D_	U-Bracket assembly with female connector receptacles.
UB-1_A_-11-_W_-_a/b_-_I_-_O_-_D_-_LB_-_XY_-_JD_-_L_	Pigtail style U-Bracket assembly with low backreflection.
UB-INSERT-01-0.5	0.5" OD Filter holder insert for small U-bracket UB-12, UB-02 style assemblies.
UB-250-_XY_-_W_-_F_	Black box assembly with female receptacles, and a removable filter.
UB-150-11-_W_-_a/b_-_F_-_LB_-_XY_-_JD_-_L_	Pigtail style black box assembly with low backreflection, and a removable filter.

Where: **_A_** is the size of the U-Bracket; 1 for large body (H=2.82", W=2.5", A=0.32", B=1.57", T=0.32"), 2 for small body (H= 1.68", W=1.0", A=0.38", B=1.03", T=0.25"). Custom size U-Bracket Assemblies are available on request.

_X,Y_ are the input and output connector receptacle types for connector style U-Brackets. For pigtail style U-Brackets they refer to the male connectors on the fiber ends (3 for NTT-FC, 5 for SMA 905, 8 for AT&T-ST, SC for SC connectors, X for unterminated fibers, etc.),

_W_ is the operating wavelength in nm,

_a,b_ are the fiber core and cladding sizes, respectively, in microns,

_I,O,F_ are the input and output fiber types (S for singlemode, M for multimode, P for polarization maintaining fibers),

_D_ is the length of the U-Bracket body in inches. (Standard sizes include D=1.85", D=3.03" for large body U-Brackets, D=1.15" or 1.80" for small body U-Brackets),

_LB_ is the desired backreflection level (25dB, 40dB, or 60dB for pigtail style systems),

_JD_ is the fiber jacket type (1 for uncabled fiber, 3 for 3mm OD loose tube Kevlar, 3A for 3mm OD armored cable, and 5A for 5mm armored cable.),

_L_ is the fiber length in meters.

Example: A customer wants to use a pigtail style U-Bracket for 1300nm fiber, with 40dB backreflection. The input side is polarization maintaining fiber, while the output side is singlemode fiber. Both fibers are one meter long, cabled with 3.0mm Kevlar cable, and terminated with male NTT-FC connectors. The small body size U-bracket with the 1.15 inch body length is to be used. OZ Optics' part number: **UB-12-11-1300-9/125-P-S-1.15-40-33-3.0-1.**

FILTER HOLDER INSERT DIMENSIONS