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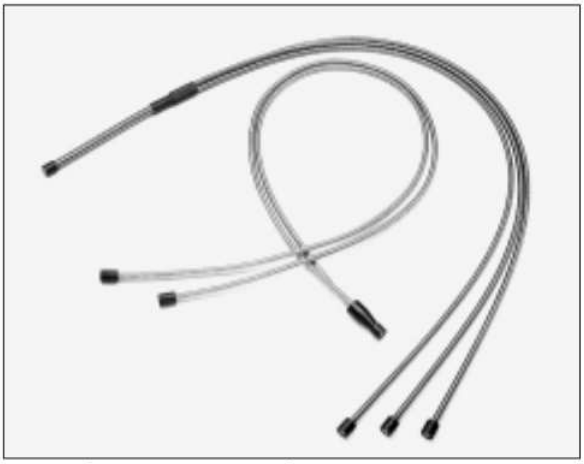
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Find the *Newport / Oriel 77536* at our website: ***Click HERE***



77536 Trifurcated and 77533 Bifurcated Fiber Bundles.

Simplify beam splitting or combining
Allow the use of a single source for multi-sample illumination, economically
High UV transmittance down to 260 nm
Custom lengths, diameters and configurations available

Our multi-branch fiber bundles have one common end and either two or three legs. They make inexpensive and simple beam splitters or combiners - without the worry of ambient light and the headache of optical axis alignment.

THE VERSATILITY OF MULTI-BRANCH FIBER BUNDLES

For the price of one light source and a trifurcated fiber bundle you get three sources! And, because the core diameters of our fiber bundles are large and the transmittance high, you don't need to compromise on throughput. The applications are extensive; below are just a few:

1. As a beam splitter; simultaneously illuminate various samples using one light source
2. As a beam combiner; collect light from various sources to illuminate one sample
3. Use one leg as a source and the second as a reference
4. In conjunction with bandpass filters; filter the beams to create three different color outputs from one source (See the ***TECH NOTE*** on the following page for details)
5. Monitor sample behavior at three different wavelengths

HIGH UV TRANSMITTANCE

The fibers are high quality glass or high grade fused silica. The fused silica bundles transmit down to 260 nm. Fig. 1 shows a transmittance curve for both materials.

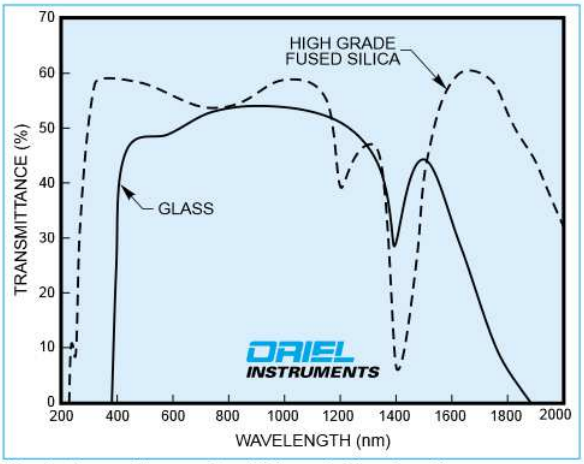


Fig. 1 Transmittance of multi-branch fiber bundles.

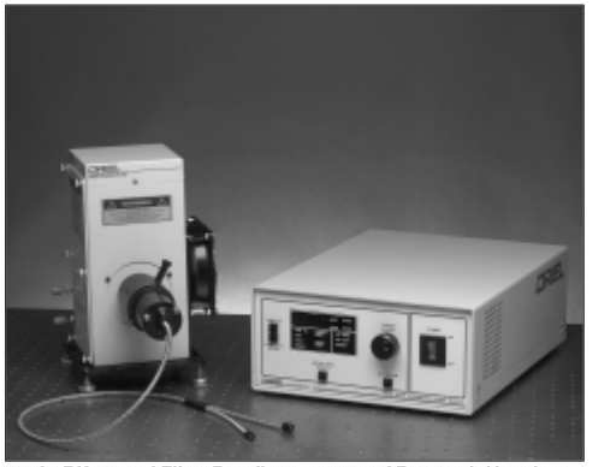
OUR FIBERS ARE COMB RANDOMIZED

These multi-branch fiber bundles are comb randomized to produce evenly divided outputs. When light is uniformly focused onto the large unified input, each leg of a bifurcated bundle receives 43% of the total incident energy. Each leg of a trifurcated bundle transmits 27% of the total incident radiation. (Approximately 4% is reflected at the input and output and packing fraction is 0.9). Note, these bundles are sensitive to position changes. Changing the position of the common end or either leg will change the output beam distribution and power. Try to avoid movement of the bundle during a measurement.

MULTI-BRANCH vs MULTI-TRACK

Don't confuse these fiber optics with Multi-track Fibers which are used for multiplexing several inputs into a spectrograph slit. The common end of a Multi-track Fiber has an array of single fibers usually arranged in a slit-like configuration. Each fiber is a "leg" or track, off the common end. We carry these on page 8-21.

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77565 Bifurcated Fiber Bundle on output of Research Housing.

TECH NOTE

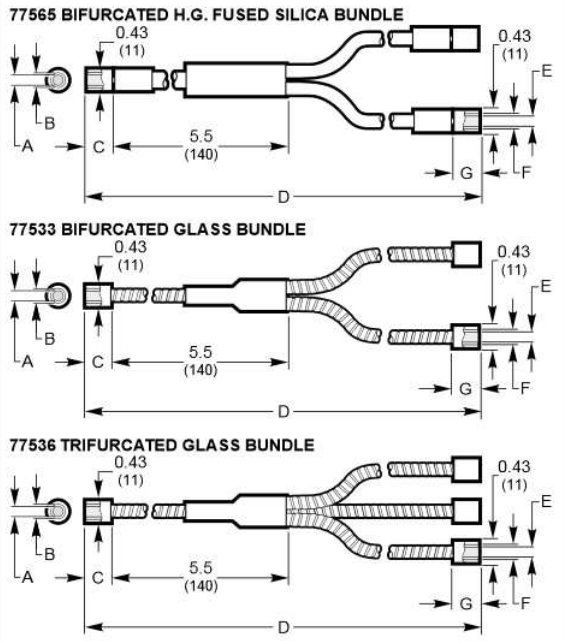
The combination of our Series Q Light Source (page 1-90) and multi-branch bundles makes an economical and most versatile low powered tunable light source. The Series Q has up to 4 output ports; couple a multi-branch fiber bundle to each port, place a different interference filter or bandpass filter at the output of each fiber leg and you have a tunable source.

DEEP UV VERSIONS

The high grade fused silica bundles transmit almost all arc lamp radiation, particularly if you are working with ozone free lamps. However, with prolonged UV exposure, the fibers solarize. We offer **new** solarization resistant single fibers for the deep UV output from our deuterium lamps and ozone producing arc lamps. See page 8-10

CONSTRUCTION

The fibers in the glass bundles are protected by an interlocking stainless steel sheathing. The high grade fused silica bundles have a PVC sheathing with Kevlar wrap and inner polypropylene tubing. The ends on all are terminated with our standard 11 mm ferrules; our fiber bundle holders and positioners (pages 18-37 to 18-38) accept 11 mm ends.



Dimensions in inches (mm)

Fig. 2 Dimensional diagram of Bifurcated and Trifurcated Fiber Bundles.

SPECIFICATIONS AND ORDERING INFORMATION

Fiber Material	N.A.	Accept. Cone 2a (degrees)	Common Bundle Dia. in (mm) (A)	Common End Tip Dia in (mm) (B)	Common End Tip Length in (mm) (C)	Total Length in (mm) (D)	Leg Bundle Dia. in (mm) (E)	Leg End Tip Dia. in (mm) (F)	Leg End Tip Length in (mm) (G)	Model No.	Price
Bifurcated Bundles											
Glass	0.56	68	0.177 (4.5)	0.250 (6.4)	0.50 (12.7)	36 (914)	0.125 (3.2)	0.187 (4.75)	0.50 (12.7)	**77533**	
H.G. Fused Silica	0.22	25	0.125 (3.2)	0.187 (4.7)	0.50 (12.7)	36 (914)	0.088 (2.2)	0.187 (4.75)	0.50 (12.7)	**77565**	
Trifurcated Bundles											
Glass	0.56	68	0.281 (5.5)	0.312 (7.9)	0.50 (12.7)	36 (914)	0.125 (3.2)	0.187 (4.75)	0.50 (12.7)	**77536**	

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