LASER COMPONENTS

FK11 & FK12 Precision Fiber Optic Cleavers

FK11

The FK11 Precision Fiber Cleaver uses patented, ultrasonic cleaving technology to produce flat, clean, low end-angle cleaves every time. That means low-loss, high-strength fusion splices, optimum performance of pigtailed active devices, and consistent results in measurement applications. The FK11 will also minimize the time required to make splices and maximize the output of test systems that rely on high-quality cleaves.

FK11-LDF

The FK11-LDF Large Diameter Fiber Cleaver employs the FK11 cleaving technology to produce flat, clean, low end-angle cleaves on large diameter fibers and fibers having non-circular geometry. While cleave performance is dependent on stresses within the fiber, it has been demonstrated that the FK11-LDF is capable of producing cleaves with end angles less than 1.5^O.

FK12

The FK12 Angled Fiber Cleaver sets the standard for low reflectance fiber termination of better than -60 dB. Fast and repeatable cleaving of fiber ends at user-selectable cleave angles (0° to 15°) make it possible for device manufacturers to reduce the reflectance of fiber connections and other terminations without the use of index-matching gels. The FK12 is the tool of choice when quick fiber termination and low return loss are required for minimum cost.

Features and Benefits

- "Tension first" cleaving, minimizes end face contamination and damage.
- Ultrasonic cleave initiation ensures flat, defect free cleaves.
- Long-life diamond blade provides dependable, extended use.
- Cleave a wide range of fiber types and sizes.
- Fast end terminations reduce installation and pigtailing costs.

Precision Fiber Cleaving is Easy

All FK-series cleavers employ the same patented operating principle. The fiber to be cleaved is restrained, placed under controlled tension and then the cleaver's ultrasonically vibrating diamond blade is brought into momentary contact with the fiber surface. The flaw created by the blade subsequently propagates through the fiber diameter due to the axial tension and the fiber ultimately cleaves. The result is a clean, flat fiber end face that is virtually free of defects and is optimal for mechanical termination, splicing or testing. For the FK12 cleaver, the user applies a specific amount of torsional stress to the fiber just before the cleaving step to achieve the desired end angle.

Specifications			
Model	**FK11 Series**	**FK11-LDF**	**FK12**
Fiber Types Cleaved	Silica	Hard and plastic-clad silica, all silica	Silica
Fiber Diameters [1, 2]	80 to 200 µm	180 to 400 µm	125 µm
Maximum Coating Diameter	900 µm	n/a	900 µm
Minimum Cleave Length	~ 6 mm	n/a	~ 6 mm
Cleave Angle Settings [3]	n/a	n/a	0 to 15°
Cleave Angle Repeatability [4]	< 0.6°	< 1.5°	< 1° [5]
Typical Blade Lifetime	> 20,000 cleaves	> 5,000 cleaves	> 20,000 cleaves

Case	ABS, non-slip feet, 6.25 mm (0.24") BSW thread tripod mount
Battery	9V alkaline (MN1604); estimated battery life > 10,000 cleaves
Weight	1.1 kg (2.4 lbs)
Dimensions (H x W x D)	75 x 153 x 150 mm (3.0" x 6.0" x 5.9")
Operating Temperature	0 to 45° C (32 to 113° F)
Storage Temperature	-20 to 60° C (-4 to 140° F)

Notes:
1. Nominal cladding diameter
2. Contact factory for other fiber diameters or non-circular fiber geometries
3. Standard 125 µm cladding diameter fiber
4. 2-sigma for FK11 Series and FK12, typical for FK11-LDF (depends on fiber type)
5. 8° setting

FK Cleaver Family

FK11   For fibers with nominal coating diameters to 250 µm, clamps fiber 16 mm from cleave point
FK11-2   Same as FK11 but with soft-faced, left-hand clamp for clamping on fiber buffer
FK11-4   For fibers with nominal coating diameters to 900 µm, clamps fiber 18 mm from cleave point
FK11-LDF   Large diameter fiber cleaver
FK12   Cleaver used to create angled fiber end faces

Note: Both the FK11 and FK12 Cleavers are available in RoHS compliant versions. Specify when ordering.

ISO 9001:2000   CE

ISO 9001:2000 certified. Printed in the USA. Specifications subject to change without notice.