

The Fiber *Shaker*



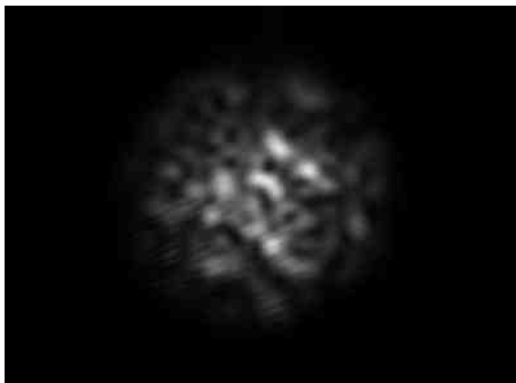
- Reduce speckle noise in Encircled Flux measurements
- Comply with FOTP – 203
- 3 independent shaker motors

Arden's Modal Explorer makes measurement of Encircled Flux easy, and accurate, and it complies with international standards.

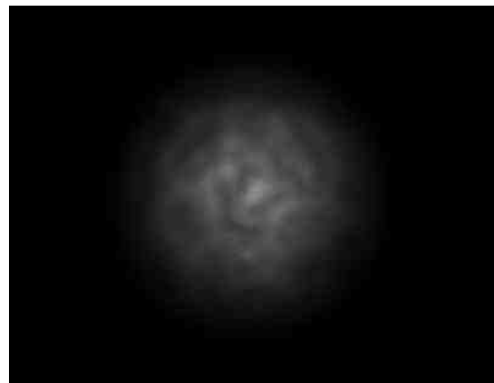
But if you are measuring laser-based transmission light sources for multimode systems you may need to use a test jumper assembly and fiber shaker in order to avoid "speckle". Industry standards – for example IEEE 802.3aq and FOTP – 203 - call for the use of a mechanical fiber shaker made up of 3 independent figure-of-eight elements.

The fiber shaker reduces speckle by changing the differential path length of the various modes in the fiber. Part of the fiber is shaken continuously in each of three nominally orthogonal directions during the measurement to allow the speckle to be averaged out. This will ensure sufficient repeatability for the measurement of the Encircled Flux.

The 10m fiber jumper is mechanically shaken continuously in each of three nominally orthogonal directions (using three independent shaker mechanisms) during the measurement. A motor-driven eccentric drives a slider back and forth at about one stroke per second, alternately flattening and stretching one loop in each of figure of eight with 25 mm amplitude. The shake frequencies in the three directions are such that the three shake cycles synchronize no more often than once every five hundred cycles of the nominal shake frequency, which is 1 Hz.



Light source output without shaker



Light source output with *Shaker*

Technical Specification

- Conforms to IEC 61280-4-1
- Dimensions 435 x 330 x 97 mm
- Coils 10m fibers in length
- Line voltage 90-264V
- Mass 3Kg

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