

This compact and portable encircled flux measurement system helps you characterize and control launch conditions into multimode fibers. It operates at wavelengths ranging from 800nm to 1600nm (patent pending) and fiber core diameters up to 100 μ m.

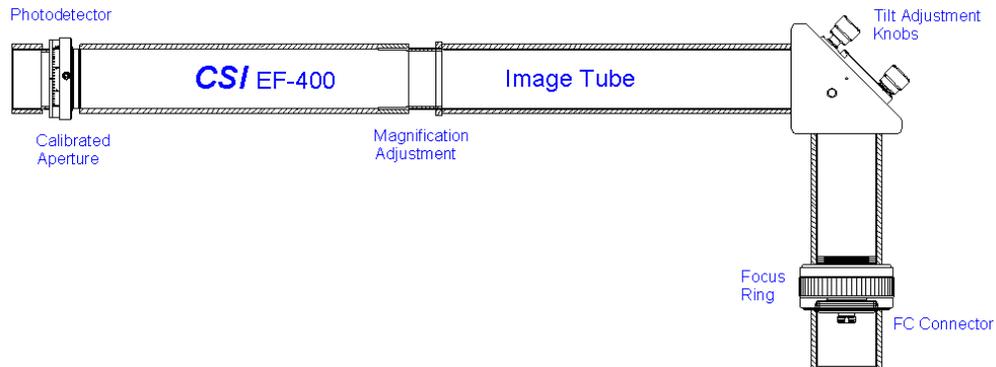


Figure 1. EF-400 Schematic Diagram

EF-400 generates a magnified image of the fiber facet on a calibrated iris diaphragm (Figure 1). The dial on the iris reads the opening of the aperture in millimeters. The provided software takes user input for measured optical powers

at various aperture settings. It then represents the data as a point on a standard encircled flux graph. This process can be repeated to show multiple measurement points on the same graph (Figure 2).

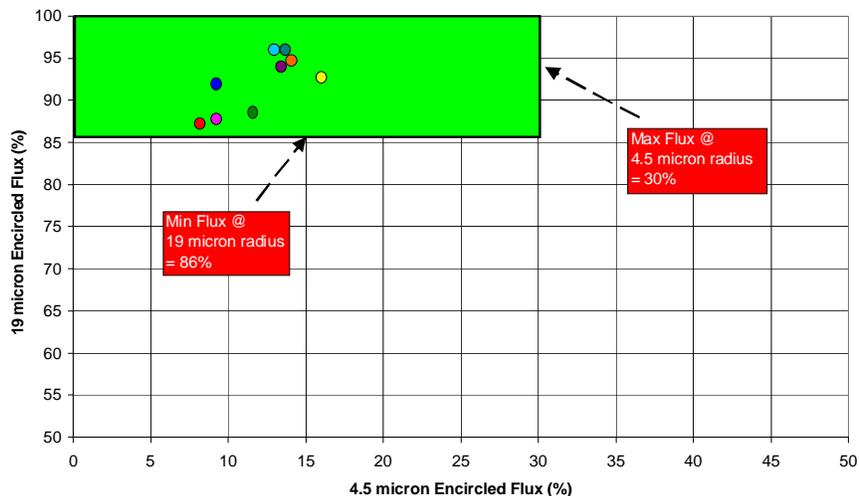


Figure 2. Encircled flux diagram for 50-micron core fiber (10GBASE-SR). The diagram is user adjustable to conform to other standards, e.g. (10GBASE-LRM).

The optical input port to EF-400 is an FC connector. An optical fiber to this port semi permanently. The other side of this fiber is the measurement port. As long as the optical fiber is not replaced and there is no mechanical shock to the EF-400, its calibration should hold. The user needs to calibrate the system, every time the optical fiber is replaced.

The photodetector that comes with EF-400 is a broadband detector that covers the wavelength range of 800nm to 1600nm. It is recommended that the output of the photodetector be measured by a precision ammeter. Measured optical power needs no calibration since only power ratios are used in encircled flux calculation.



Figure 3. EF-400 is 38 centimeters long (15"), and weights less than 1.0 kg (2 lb).

EF-400 needs two optical posts and post holders for mounting on an optical table or breadboard. It needs a precision ammeter for measuring the detected optical signal and a computer with Windows 98 or higher for running the encircled flux software.

Delivery time is 4-6 weeks ARO.

California Scientific manufactures high-speed optoelectronic test equipment for the fiber optic community.