





The new generation of Multimode Fiber Adapters adds full standards compliant fiber certification capability to the WireXpert series of testers. A light source and power meter are used to measure the power loss and length of optical cables at 850 and 1300 nm. Certification of multimode fibers has often been a contentious issue due to the inherent uncertainties in the measurement process. ISO/IEC and TIA have recently adopted an Encircled Flux (EF) standard that defines the launch condition for the light sources used in multimode test equipment. The WireXpert's new EF compliant adapters give you guaranteed compliance to the EF standard IEC 61280-4-1.

Features

- Compliant to IEC- 61280-4-1 EF standards and IEC-14763-3
- Interchangeable robust SC, LC and ST adapter for EF kit
- Provides troubleshooting with built-in Visual Fault Locator (VFL)
- Improves repeatability of measurements
- Reduces insertion loss variation between laboratory and field instruments

EF Compliance with Modally Transparent Cord

EF compliant light source

end of the launch cord. These modal transparent launch cords

cost effective solution compared to alternatives which would

are readily available by most manufacturers and are a more

require special components attached to the launch cords.

with WireXpert



non compliant light source with other certifier

The standards require the EF compliance to be guaranteed at the end of the launch cord. To meet this requirement, WireXpert's innovative method of using modally transparent launch cords enables the retention of the EF compliance to the



EF Compliant

WireXpert is EF compliant all the way from the source

The WireXpert EF compliant multi mode testing solution eliminates the need to have specially designed expensive launch cords.

ENCIRCLED FLUX MULTIMODE ADAPTER

IT Networks





What is Encircled Flux?

Optical signals that carry information in multimode cabling do so in a variety of modes. Modal behavioris dependent on factors such as the diameter of the core (which determines the numerical aperture), the wavelength of the light source, and launch condition of the light source (overfilled or underfilled). Multimode fibers used for communication typically have a core diameter of 50 or 62.5µm as compared to Single-mode which has a diameter of 9µm. Due to the wide diameter of the core in multimode fiber cables, the amount of light that gets coupled from the light source is large, resulting in poor repeatability and high insertion loss variability between different measurement instruments.

Encircled Flux is a metric defined as the integration of intensity of light coupled into the fiber as a function of the radial distance from the center of the core. It is important to define the upper and lower bounds for the Encircled Flux to produce reproducible launch conditions. The IEC 61280-4-1 standard defines these two parameters and when a curve-fitting is done with these numbers, it will result in the familiar EF template graph as shown in the figure. The upper boundary refers to more light is getting coupled closer to the center of the core. The lower boundary is due to more light getting coupled further away from the center of the core. Therefore, the launch condition should stay between the upper and the lower boundaries of the graph in order to be considered as EF-compliant.

For more information please contact:

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Power Meter Specifications	
Input Connector	Interchangeable connector with LC, ST and SC options) Standard kit ships with SC
Detector Type	InGaAs
Wavelengths	850nm, 1300nm
Power Measurement Range	-15 dBm to -60 dBm at 850nm, -15 dBm to -70 dBm at 1300 nm
Measurement Linearity	<±0.1 dB in the power measurement range
Re-calibration Period	1 year
Loss/Length Specifications	
Specification	MMEF
Input Connectors	Interchangeable connector with LC, SC, ST options
Launch Condition	Encircled Flux compliant to IEC 61280-4-1
Fiber Types Tested	50/125, 62.5/125
Source Type and Wavelengths	850/1300 nm
Length Measurement Accuracy	±1.5m
Output Power (Nominal)	> -20 dBm at 850, 1300 nm
Output Power Stability	±0.02 dB after 3 minute warm up time
Visual Fault Locator (VFL)	
Output Power	>-4dBm, < -1 dBm
Continuous, blinking mode	
CW output	
SC connector	
Operating Wavelength	650 nm
Output Modes	Pulsed, Continuous
Connector Adapter	2.5mm
Laser Safety	Class II
Environmental Specifications	
Operating Temperature	0° C to 45° C
Storage Temperature	-20° C to 50 °C
Safety	EN61010

Ordering Information

WX_AD_EF_MM2

Encircled flux compliant multimode fiber adapter set (850nm and 1300nm). Includes a pair of FC-SC modally transparent test cords, a pair of SC-SC tail cords and cleaning kit WX_AC_LC_EF_MIM_CORDKIT

LC test cord kit for EF-compliant multimode adapter. Includes a pair of modally transparent FC-LC test cords, a pair of LC-LC simplex tail cords, a pair of interchangeable LC adapters and a pair of LC-LC duplex adapters

WX_AC_EF_MM_REFCORD_SC2

A pair of modally transparent FC-SC test reference cords and a pair of SC-SC tail cords WX_AC_MIM_ST_KIT

A pair of EF MM 50um FC to ST Reference cords, A pair of ST to ST MM 50 mm Reference Cord, 2 qty ST Adapter

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