The ModCon
Mode Controller

- EF compliant to IEC 62180-4-1
- Improves measurement repeatability in multi-mode fiber test
- Optimized for 850nm and 1300nm
- Works with all multi-mode fiber optic testers

Plug & play Encircled Flux Compliance

The Arden Photonics ModCon Mode Controller is a compact and lightweight module that will modify your LED or VCSEL light source to provide repeatable EF compliant launch conditions.
By simply plugging the ModCon into your light source you will be provided with a stable and consistent EF compliant output that meets IEC 62180-4-1:2009.

How does it work?

Measurements of loss and bandwidth in multi-mode fibers are highly dependent on the modal condition of the light source used for the measurement. For example, OTDR and LS/PM loss measurements can differ significantly simply because an OTDR uses a laser source and not an LED.

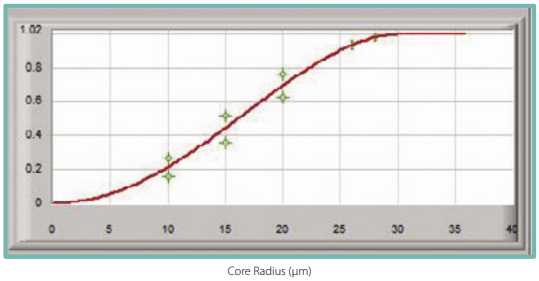
These widely different modal characteristics between sources used in measuring fiber optic systems and networks result in a large and source dependent uncertainty in the accuracy of measurements.

When using a ModCon, you launch the same distribution of modes into the fiber regardless of the source being used and consequently reduce the uncertainty in your measurements due to variation between sources.

In summary the ModCon increases the accuracy of measurements, gives better agreement between test data sets and is a simple and certifiable method of complying with international standards.

How does it work?

Every ModCon is rigorously tested using Arden's MPX Modal Explorer to ensure that its output meets the standard regardless of the modal distribution of the input. Additionally we can provide a Certificate of Conformance or Test Sheet to aid in fulfilling any of your test equipment record keeping obligations.



(Left)
Plot of typical source showing compliance with the EF requirements in IEC 61280-4-1

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beyond borders

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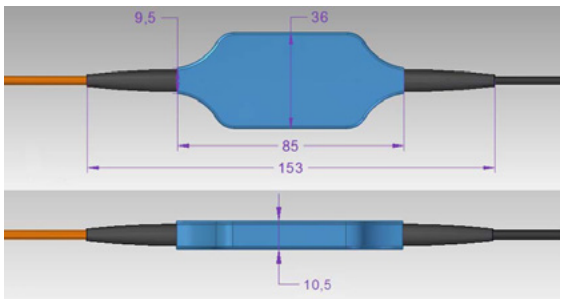
Technical Specification

Physical	
Mass	50g
Dimensions (Excluding Cabling)	153mm x 36mm x 10.5mm
Input Cable Length	1.0m
Output Cable Length	1.0m
Input/Output Cable Jacket	3mm PVC jacket with Aramid strength member
Enclosure material	High strength polymer

Optical	
Maximum power throughout	10mW
Insertion loss @ 850nm	50µm < 3dB; 62.5µm < 3dB
Encircled Flux compliance to	IEC 61280-4-1: 2009
Connectors	Reference grade
Component type	Passive

Dimensions (mm)



Ordering Information

MC-FC-50-N	Mode controller in 50/125µm fiber with FC connectors. Compact, blue body.
MC-FC-62-N	Mode controller in 62.5/125µm fiber with FC connectors. Compact, blue body.
MC-SC-50-N	Mode controller in 50/125µm fiber with SC connectors. Compact, blue body.
MC-SC-62-N	Mode controller in 62.5/125µm fiber with SC connectors. Compact, blue body.
MC-SC/LC-50-N	Mode controller in 50/125µm fiber with SC/LC connectors. Compact, blue body.
MC-SC/LC-62-N	Mode controller in 62.5/125µm fiber with SC/LC connectors. Compact, blue body.
MC-TE-CC	Certificate of conformance.
MC-TE-TC	Test certificate.
MC-URT	Return ModCon, re-terminate and re-test input and output connectors.

Other connector configurations are available by special order.

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