



**Manufacturer:**  
Arden Photonics

**Manufacturer Part Number:**

AEP-50-SC/SC-2-S • AEP-50-SC/FC-2-S • AEP-50-SC/LC-2-S • AEP-62-SC/SC-2-S  
AEP-62-SC/FC-2-S • AEP-62-SC/LC-2-S • MC-FC-50-N • MC-FC-62-N • MC-SC/LC-50-N  
MC-SC/LC-62-N • MC-SC-50-N • MC-SC-62-N

- EF compliant to IEC 61280-4-1
- 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 61280-4-1:2009.

### 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.

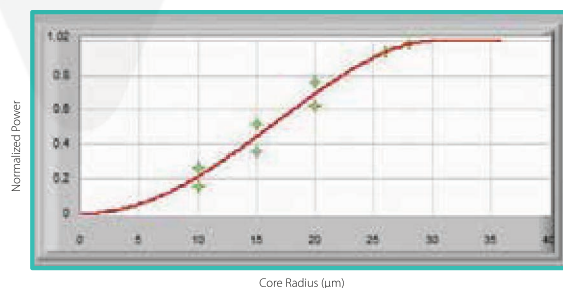
These widely different modal characteristics between sources used in measuring fiber optic systems and networks result in a large and source dependent uncertainty in the accuracy of measurements.

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.

### Standards compliance and certification

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

**Contact the professionals at Fiber Optic Center for a quote or to get more details.**

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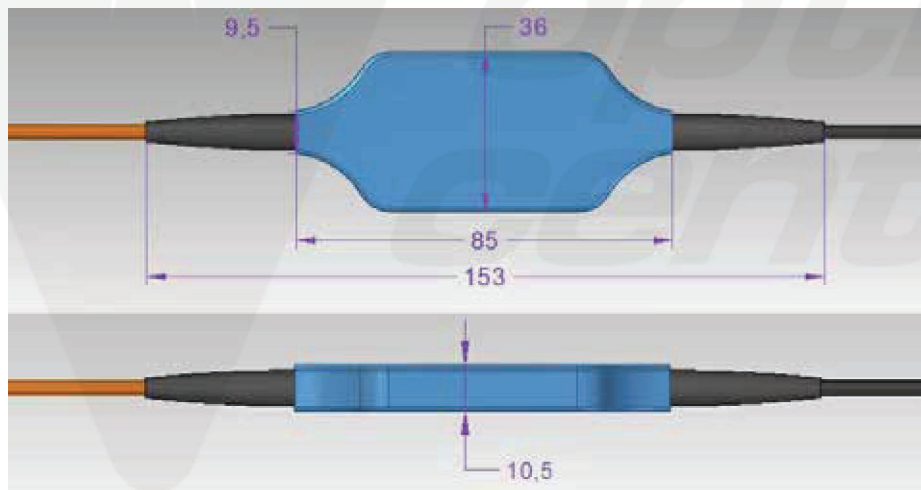
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**Technical Specification**

| 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)**



Issue Number: 5

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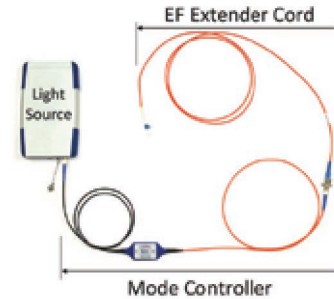
### ModCon EF preserving extender cords

ModCon Encircled Flux preserving extender cords can make the ModCon an even more cost effective and convenient way to ensure EF compliance in your multimode testing. By adding an extender cord to the output connector of your ModCon you can:

- 1) Protect the ModCon output connector from wear, thereby increasing the number of tests you can perform before you need to re-work the connector
- 2) Change connector type on the ModCon output. That means you can test systems with different input connectors just by switching the extender cord. For example you could test systems terminated with both SC and LC connectors with same ModCon just by switching the extender cord.

EF preserving patchcords are specially made and tested to match ModCons. They:

- a) cannot convert a fiber optic light source which is not EF compliant into a source which is compliant.
- b) cannot be replaced by a standard patchcord.



### Ordering Information

|                         |                                                                                 |
|-------------------------|---------------------------------------------------------------------------------|
| <b>MC-FC-50-N</b>       | Mode controller in 50/125µm fiber with FC connectors. Compact, blue body.       |
| <b>MC-FC-62-N</b>       | Mode controller in 62.5/125µm fiber with FC connectors. Compact, blue body.     |
| <b>MC-SC-50-N</b>       | Mode controller in 50/125µm fiber with SC connectors. Compact, blue body.       |
| <b>MC-SC-62-N</b>       | Mode controller in 62.5/125µm fiber with SC connectors. Compact, blue body.     |
| <b>MC-SC/LC-50-N</b>    | Mode controller in 50/125µm fiber with SC/LC connectors. Compact, blue body.    |
| <b>MC-SC/LC-62-N</b>    | Mode controller in 62.5/125µm fiber with SC/LC connectors. Compact, blue body.  |
| <b>MC-TE-CC</b>         | Certificate of conformance.                                                     |
| <b>MC-TE-TC</b>         | Test certificate.                                                               |
| <b>MC-URT</b>           | Return ModCon, re-terminate and re-test input and output connectors.            |
| <b>AEP-50-SC/SC-2-S</b> | ModCon EF extender cord, 50/125 fiber, 3mm jacket, 2m long, SC/SC connectors.   |
| <b>AEP-50-SC/FC-2-S</b> | ModCon EF extender cord, 50/125 fiber, 3mm jacket, 2m long, SC/FC connectors.   |
| <b>AEP-50-SC/LC-2-S</b> | ModCon EF extender cord, 50/125 fiber, 3mm jacket, 2m long, SC/LC connectors.   |
| <b>AEP-62-SC/SC-2-S</b> | ModCon EF extender cord, 62.5/125 fiber, 3mm jacket, 2m long, SC/SC connectors. |
| <b>AEP-62-SC/FC-2-S</b> | ModCon EF extender cord, 62.5/125 fiber, 3mm jacket, 2m long, SC/FC connectors. |
| <b>AEP-62-SC/LC-2-S</b> | ModCon EF extender cord, 62.5/125 fiber, 3mm jacket, 2m long, SC/LC connectors. |

Other connector configurations are available by special order.

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