

Connector accessories for fiber optic test laboratories

Diamond offers a series of connector accessories useful in fiber optic Test & Measurement laboratories. These consist of optical transition adapters (UGT), a Multi-purpose Adapter System (MAS), optical termination modules (OTM), optical reflection modules (ORM), and optical attenuation modules (OAF).

1. Optical Transition Adapter (UGT)

Optical Transition Adapters (UGT) are compact, in-line, male-to-female elements used to transition between similar or dissimilar endface geometries, eg. from 0° PC connectors to 8° angle-polished (APC) connectors. (Or the reverse.) In the laboratory, they are also of value as "sacrificial" interfaces to protect front panel connector endfaces from the damage and contamination of repeated matings. An UGT as a sacrificial interface can be used on the inside of an instrument (Fig. 1), or on the front panel to facilitate user access (Fig. 2).

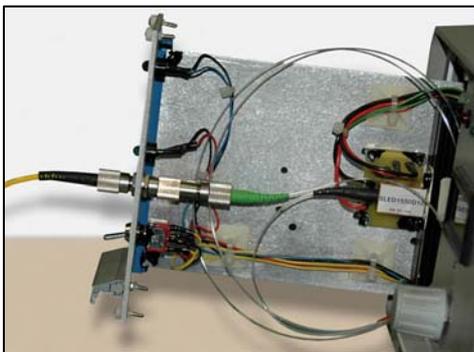


Fig. 1. UGT as sacrificial interface inside instrument.



Fig. 2. UGT as sacrificial interface on instrument front panel.

2. Multi-purpose Adapter System (MAS)

The Diamond Multi-purpose Adapter System (MAS) is a flexible, modular fiber optic connection system for Test & Measurement equipment. Based on 2.5mm ferrule technology, the system consists of a universal flange and a series of interchangeable adapters for most common connector types. Adapters can be easily removed to facilitate ferrule cleaning. MAS adapters can be used together with an OTA inside an instrument (as above) to create a "sacrificial" interface.



Fig. 3. Multi-purpose Adapter System (MAS) interface on instrument front panel.

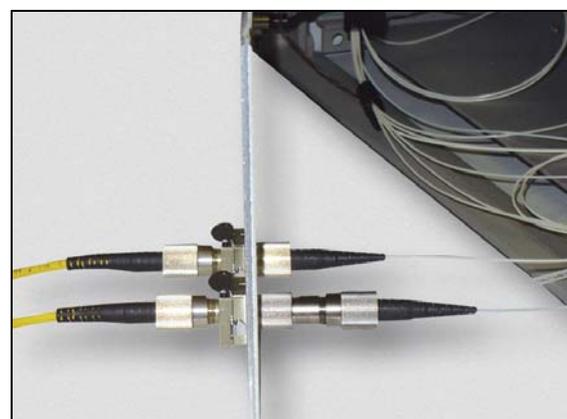


Fig. 4. MAS interface with OTA as sacrificial interface inside instrument.

3. Optical Termination Module (OTM)

Optical Termination Modules (OTM) are compact, in-line elements used to terminate an optical line, eliminating reflections from the glass-to-air interface for minimal back reflection. They are useful in metrology applications and for measurement of back reflection (return loss, RL).

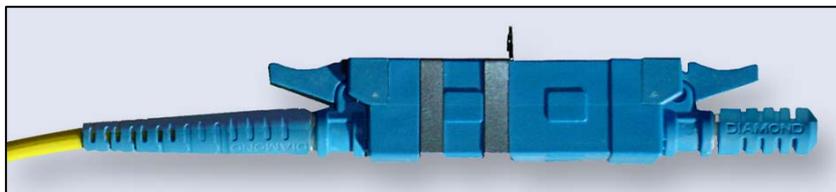


Fig. 5. Optical Termination Module (OTM) (right).

4. Optical Reflection Module (ORM)

Optical Reflection Modules (ORM) are compact, in-line elements used to terminate an optical line with maximum reflectance (return loss < 1 dB).

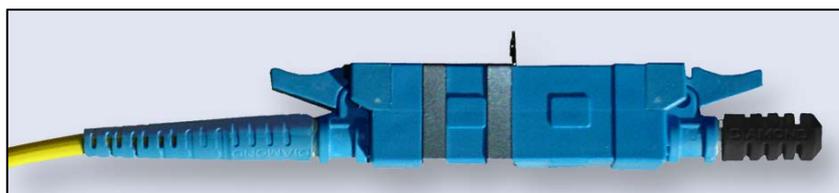


Fig. 6. Optical Reflection Module (ORM) (right).

5. Optical Attenuation Modules (OAF)

Optical Attenuation Modules (OAF) are compact, in-line, male-to-female elements that introduce a precisely calibrated amount of fixed attenuation in an optical path. OAF modules are available in PC and APC versions, and can be manufactured with specified attenuations between 2 dB and 30 dB.

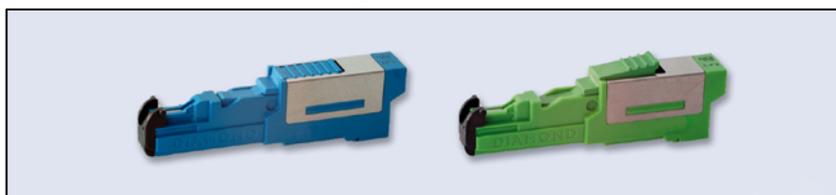


Fig. 7. Optical Attenuation Modules (OAF).

Application example:

An Optical Reflection Module (ORM), in combination with an Optical Attenuation Module (OAF) can be used to generate a precise reflectance for the calibration of laboratory equipment.

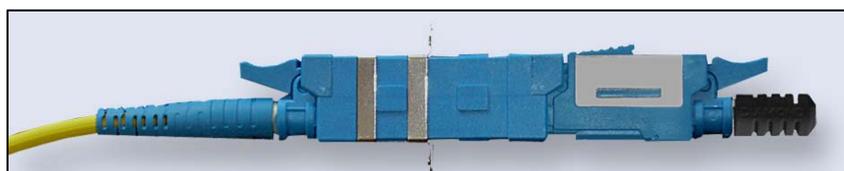


Fig. 8. Optical Reflection Module (ORM) (right), with Optical Attenuation Module (OAF) (center).

Diamond SA (Losone, Switzerland) is an industry-leading developer and manufacturer of high-precision fiber optic connectors and related components.