

## FEATURES AND SPECIFICATIONS



# MPO Fiber Optic Loopback Assemblies

## 106005 Multi-Fiber Loopback Assemblies

**For compact testing of QSFP optical transceivers or network optical links, Molex's MPO Loopback Assemblies offer a new, robust solution for Telecom and Datacom applications**

Loopbacks for MT interconnect applications are driven by both network systems-solutions providers and the optical-device community that design and make transceivers or active components. Loopbacks are used primarily as a means to test optical links in networks or devices by "looping back" the connections from the TX (transmit) pairs to the RX (receive) pairs. By doing this, a complete optical link is formed, allowing the optical performance evaluation of a discrete component or a complete link in a network path covering one or more interfaces.

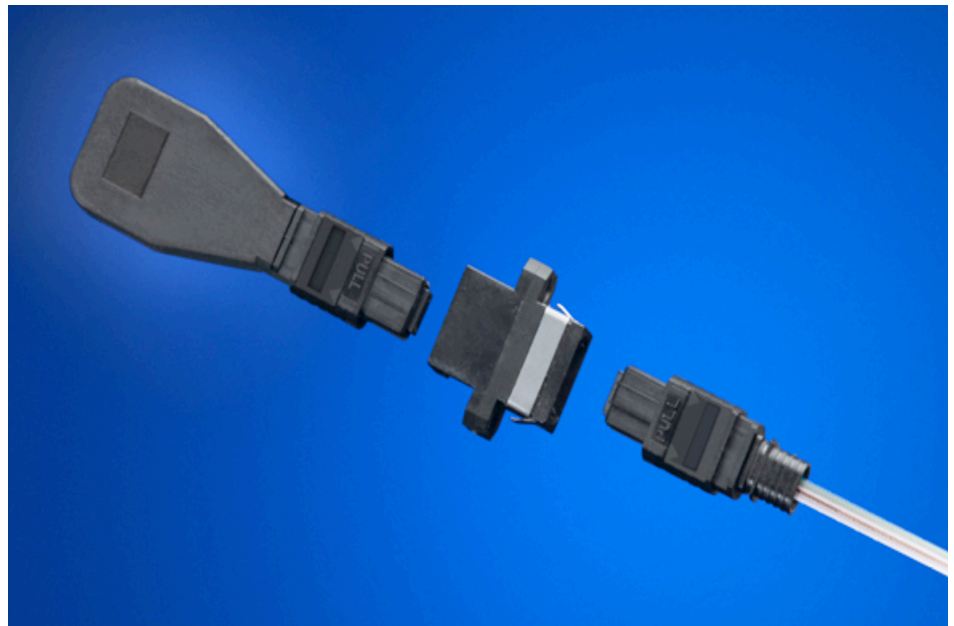
Molex's Loopback offers a female MTP-connector end that mates to any MPO or MTP adapter or device port. The Loopback also can be mated directly to a parallel optical device such as a Quad Small Form-factor Pluggable (QSFP) transceiver with a 4-lane configuration. For multimode applications, an attenuated version of the MPO Loopback is available to simulate longer links in a network, with up to 5dB attenuation. With standard or custom pinouts available for 8- to 12-fiber MT ferrules, the Loopback can accommodate specific optical-routing needs. The

small and compact housing design allows side-by-side mounting in dense board applications and tight spaces. This design makes it ideal for blades with multiple optical components on a face plate.

For burn-in and testing of MPO network components, Molex's MPO loopback offers a stable and compact solution for telecom and datacom requirements. Molex also offers a LC loopback (Series 106052) and will soon release a CXP loopback assembly. For more information on Molex's loopback offerings, visit: [www.molex.com/link/loopbacks.html](http://www.molex.com/link/loopbacks.html).

### Features and Benefits

- Small, compact housing design allows side-by-side mounting in dense board applications
- Ruggedized enclosed body for easy removal protects the ribbon fibers when engaged repeatedly
- Available in attenuated versions for multimode applications offers the ability to simulate network distances within the device
- Offering pinouts for 8-and 12-fiber MT ferrules or QSFP transceivers provides a Loopback with pinouts that is factory ready to mate to components with appropriate routing
- Identification labels that provide data on return loss, mode (single or multi) and fiber type provides quick customer identification of device parameters for evaluation



## SPECIFICATIONS

### Reference Information

Packaging: PolyBag with test data

Mates With: MPO or MTP adapter (Series 106181 and 106114) with a male mating connector interface and any parallel optical device that uses an MTP/MPO interface

Use With: Any Molex MTP adapter (Series 106181 and 106114) and other manufacturers' optical devices

Designed In: Millimeters

### Optical

Insertion Loss:

Single mode: .5dB per fiber

Multimode: .75 dB per fiber

### Mechanical

Connector Insertion Force: 10N (2.250 lbf) typical  
QSFP fiber-count compliant on part number 106005-1100 4TX, 4RX with 12 channel ferrule

### Physical

Housing: PEI, UL94-V0

Connector: Female MPO interface 8 or 12 fiber

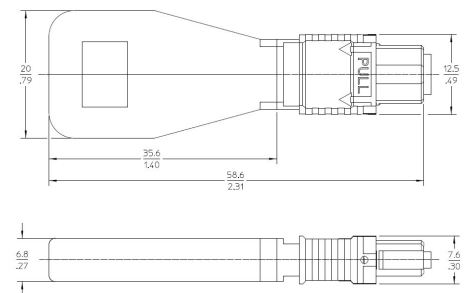
Operating Temperature: -5 to +40°C

Rear Housing:

Height: 6.80mm (.268")

Length: 35.60mm (1.402")

Width: 20.00mm (.787")





**MPO Fiber Optic Loopback Assemblies**

**106005 Multi-Fiber Loopback Assemblies**

- Telecommunications
  - Loopback testing for network cards
  - Testing on QSFP Modules



MPO Loopback with QSFP transceiver

**ORDERING INFORMATION**

Order No.	Fiber Count	Mode	Fiber Type	Attenuation	Plant No. for Samples
106005-1100	8	Multimode	50/125µm, QSFP pin out	-	8501
106005-1500		Single mode	9/125µm	-	
106005-1501		Multimode	50/125µm	-	
106005-1502			62.5/125µm	-	
106005-1503			50/125µm	5dB	
106005-1000	12	Single mode	9/125µm	-	
106005-1001		Multimode	50/125µm	-	
106005-1002			62.5/125µm	-	
106005-1003			50/125µm	5dB	

[www.molex.com/link/mpoloopback.html](http://www.molex.com/link/mpoloopback.html)

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