

# MPO Tester

# User Manual

## REVISION HISTORY

Revision	Date	Change Description
01	30/05/2014	Initial release
02	09/06/2014	Part numbers added
03	11/06/2014	Launch Cable details added
04	03/07/2014	4channel and 8 channel compatibility added

## **1. Description:**

The MPO Tester is designed to check for defects/breaks within a 4-fibre, 8-fibre or 12-fibre MPO/MTP cable. It launches visible red light, wavelength 650 nm, through each fiber with the cable. The red light is refracted wherever there are breaks or defects are in the fiber creating a bright red glow around the faulty area.

## **2. Features:**

- Easy to check fiber faults by visible 650 nm red laser
- Operating range exceeds 3km (SM or MM fiber)
- Can either check all fibre channels simultaneously (in either continuous wave or pulse mode) or select individual channels (CW)
- Efficient laser drive circuit designed for stable laser power
- USB Port for charging internal battery

## 3. Specification

Laser Class	Class 2B
Wavelength	650 nm $\pm$ 10 nm @ 25°C
Spectral Width	< 10 nm
Output Power	> 0.4 mW @ 25°C into 9 $\mu$ m fiber
Emitting Range	3 km
Operating Temp.	0°C ~ 50°C
Storage Temp.	0°C ~ 70°C
Weight	0.65 kg
Dimensions	168mm (W), 128mm (D), 35mm (H)

## 4. Launch Cables

The MPO Tester is supplied with two SM Launch Cables, along with an MPO Adapter. These have two functions; 1. They protect the adapter on the MPO Tester from repeated insertions and 2. They ensure compatibility with the cables being tested – one is female to female and the other is female to male.

Please be aware of the following:

1. We recommend that one of the Launch Cables is always inserted whilst testing. Therefore it is advisable to test cables of the same gender at any one time. This will prolong the life of the MPO Tester.
2. MM cables can be tested in exactly the same way. The mismatch between the angled (APC) surface on the Launch cable and the flat surface of the MM cable being tested will reduce the intensity of light coupled into the test cable, but the 3km range specified will not be affected.

## 4. Controls



1. Power Switch : Turn on / off
2. MPO Adapter : For 12 channel MPO / MTP cable
3. Channel Selector : For selecting the MPO/MTP fiber channel
4. Channel Indicator: Indicates which channel has been selected
5. Mode Switch :

5 Mode Switch	
Continuous Wave	All channels are selected – continuous light output
Pulse	All channels are selected – flashing light output
Selected Channel	Single channel selected – continuous light output Select the fiber channel using 3 Channel Selector

6. USB Port : For charging the internal battery

## 5. Operating Instructions

1. The MPO TESTER must be charged before use. Simply connect USB port **6** to a PC or power socket using the USB cable supplied. The LED alongside the USB port glows RED when power is being supplied.
2. Disconnect the USB cable and turn the Power Switch **1** on. The Power indicator LED glows GREEN. If it glows RED the battery is not fully charged. Note: For long term use maintain the USB power connection.
3. Remove the dust cap of the MPO adapter **2** and insert the female end of the MPO launch cable. Then insert the MPO adapter supplied on the other end of the launch cable.
4. Insert the test cable into the MPO adapter, taking care to match the cable type (SM or MM) and gender (male or female).
5. Use the Mode Switch **5** to select Continuous Wave, Pulse, or Manual Select Mode.
6. For Continuous Wave (CW) mode, the red light lasers will inject the light into all the fiber channels of the MPO cable and maintain a stable optical power. For Pulse mode, the red light lasers will inject the light periodically into all the fiber channels of the MPO cable at a frequency of 2Hz. For Manual Select mode, an individual red light laser will inject the light into the selected channel using the channel selector **3**. The channel number selected will also be displayed on the channel indicator **4**. Once the channel was selected, the optical power of the red light remains stable.
7. When the power is switched on **1** the Power LED shows GREEN to indicate sufficient power, or turns RED to indicate low battery condition. When USB cable is connected, the USB LED shows RED when charging the battery and shows GREEN to indicate fully charged. The USB LED turns off when the USB cable is disconnected. The power switch **1** can be either on or off whilst charging.

## 8. Ordering Information

Standard Items:

Item	Description	Part Number
1	MPO Tester	FIBER-TEST-MPO
2	SM Launch Cable, Female to Female	
3	SM Launch Cable, Female to Male	
4	MPO Adapter	
5	USB Cable	

Additional or Replacement Items:

Description	Part Number
SM Launch Cable, Female to Female	AFT-G-FC-A-J1
SM Launch Cable, Female to Male	AFT-G-FC-A-J2
MPO Adapter	777-1
USB Cable	AFT-G-FC-A-U

USB Cable



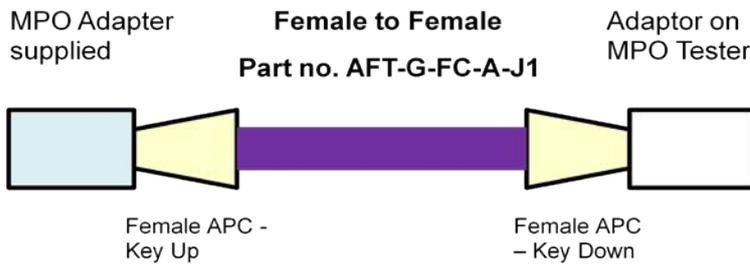
MPO Adapter



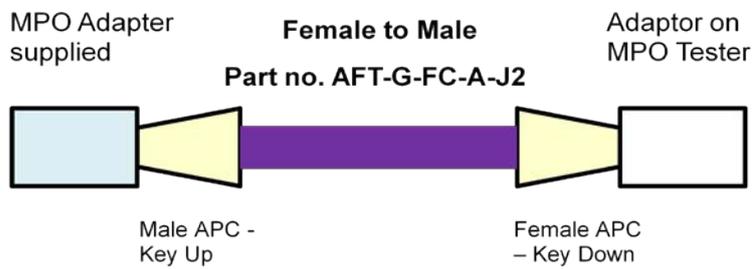
Launch Cables:

Length: 0.5m, Diameter: 3mm, Jacket material: LSZH

Jacket colour: yellow, Fibre type: G.657.A2



## SM Launch Cables



## 9. Packaging

