

3532 Seagate Way, Suite 100,  
Oceanside, CA 92056, USA  
http://www.sumix.com  
E-mail: info-team@sumix.com  
Tel.: +1 (877) 233-3385

# Manta HM

High Magnification

Automated microscope for inspection of single and multi-fiber patch cords, bulkhead and QSFP modules

Up to 96 fibers  
in one screen  
(FOV: 4.2 × 2.8 mm)

360× magnification

Autofocus

Pass/Fail  
verdict per IEC  
standards



20 MP sensor inside

## Compact in size, big on capability

### Unsurpassed optical performance\*

High-contrast precision optics, optimal axial illumination and 20MP sensor provide for accurate measurements of small anomalies.

\*among handheld microscopes for multi-fiber inspection with a similar FOV.

### Large field of view

Pass/Fail analysis of an MPO connector is done in a single scan taking just 3 seconds (for MPO12/16).

Guide holes and ferrule surface are inspected at the same magnification as fibers.

### Versatility from bench to patch panel

Manta HM can be used as a handheld probe for testing transceivers and bulkhead connectors in patch panels, as well as a benchtop solution for production lines and labs.

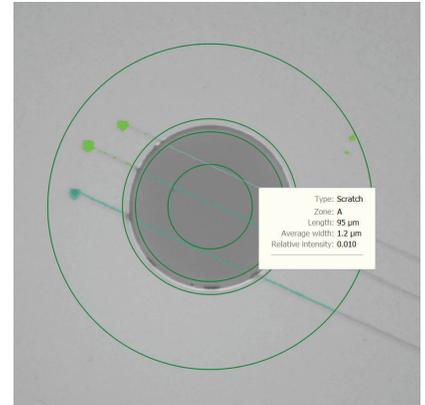


**Application:** production lines, laboratories, incoming inspection, maintenance in data-centers.

**Recommended for:** high-power laser applications, single mode connector inspection, final verification, and other cases where small details matter.

# Specification

|  |   |
|--|---|
| <b>Connectors inspected:</b>                                     | Male and female MPO connectors (SM and MM), MT ferrules, LC, FC, SC, E2000™, QSFP, ARINC, MIL-38999, High-power SMA, Avim, mini-Avim, 3M™ Expanded Beam Optical Connector, ODC®, Q-ODC®, MXC®, HMFOC, CS®, SN® and more |
| <b>Measurement time*:</b><br>* doesn't include autofocusing time | 2.6 sec for MT12, 3.5 sec for MT16, 4.5 sec for MT24, 10 sec for MT72   |
| <b>Field of view:</b>  | 4.2 × 2.8 mm  |
| <b>Defect size detection:</b>                                    | 0.5 μm  |
| <b>Effective resolution:</b>                                     | 1.5 μm (based on MTF calculations)  |
| <b>Magnification:</b>  | 0.75 μm/px or 360× (for a 24" display 1920x1080)  |
| <b>Focus:</b>  | Autofocus   |
| <b>Camera type:</b>  | CMOS, 20MP, monochrome  |
| <b>Power source:</b>   | USB 3.0 port of PC  |
| <b>Dimensions (H × W × L):</b>                                   | 77 × 36 × 246 mm (3 × 1.4 × 9.8 inches)   |
| <b>Weight:</b>   | 491 g (1.08 lbs)  |
| <b>Material:</b>   | aluminum housing, stainless steel barrel  |
| <b>Compatible with:</b>  | desktop PC, laptop, tablet, Android phone   |
| <b>Operating system:</b>   | Windows 10, Windows 11  |
| <b>Software integration tools:</b>                               | Excel/CSV, SQL, WebSocket API   |
| <b>Centralized data-base connectivity:</b>                       | Yes   |
| <b>Compliance with IEC requirements:</b>                         | Yes   |



Scratches detected on SF end face

Measurement result for a 24-fiber MPO connector