Semiconsoft,Inc

WINDOWS PORT ADAPTER.

SUMMARY.

Windows Port adapter (WPA) is used with MProbe in-situ system. WPA is a kinematic mount with a focusing lens and Fiberoptics adapter. It is intended to be attached to an optical port of a deposition chamber.
There are 2 configurations that can be used with WPA:
1. Normal incidence (the optical port is above the sample)
   In this case WPA is used with reflectance probe
2. Oblique incidence (Optical ports are located at an angle to the sample).
   In this case, 2 adapters are used: one for illumination/light source, another as a receiver of reflected light. Fiber optics patch cable is used with the WPA in this configuration.

SPECIFICATION
1. Flange compatibility: KF63
   Connecting holes: 8 holes $\varnothing$0.25" (thru), 0.49x90°(counter sink) on $\varnothing$3.62
2. Lens diameter: 2"
3. Fiber connector: SMA 905
4. Image Distance: 150mm to 300mm (see Table below)
5. Transmittance range:
   UVVisNIR: 200-1700 nm quartz lens
   Vis : 400-1000 nm glass lens
6. Angle ajustement (2 axis) : ±3°

Image distance	Object(fiber) distance	
300 mm	131 mm (5.15")	Use 5" tube Two sections: 2" One section: 1"
270 mm	137 mm (5.39")	Use 5" tube Two sections: 2" One section: 1"
250 mm	143 mm (5.63")	Use 5.5" tube Two sections: 2" One section: 1" One section: 0.5" Adjust position of the SMA connector fixture as necessary
200 mm	165 mm (6.5")	Use 6.5" tube Three sections: 2" One section: 0.5"

Image distance: the distance from the lens to a measurement spot on the sample.
Object distance: the distance from SMA connector (fiber end) to the lens
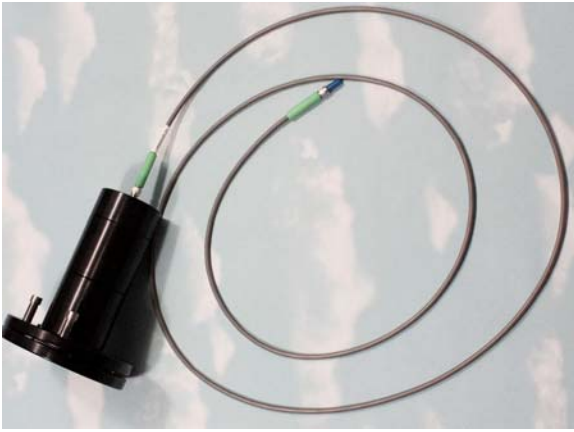Distances are listed for quartz lens.

DETAILS AND ASSEMBLY.

Fig. 1. Components of WPA:
      a). 2" section – 2pcs.
      b). 1" section – 1 pc.
      c). Connector with SMA adapter – 1pc.
      d). Kinematic mount (for KF63 flange) – 1pc.
      e). Adjustment screws – 2 pcs.

Fig. 2. WPA assembled

Fig. 3 WPA assembled with 2m patch cable attached.

Ordering information:

WPA-LLL-MMM-XXX-RR
1. LLL – minimum distance from the port to sample in mm
2. MMM – maximum distance from the port to sample in mm
3. XXX –wavelength range type: UV, Vis, UVVisIR, VisNIR
4. RR – fiber type and length. P2m – patch cable 2m length, RP1m – reflectance probe 1m long

Example:
WPA-250-270-Vis-P2
Image distance from 250 to 270mm, Visible patch cable , 2m long