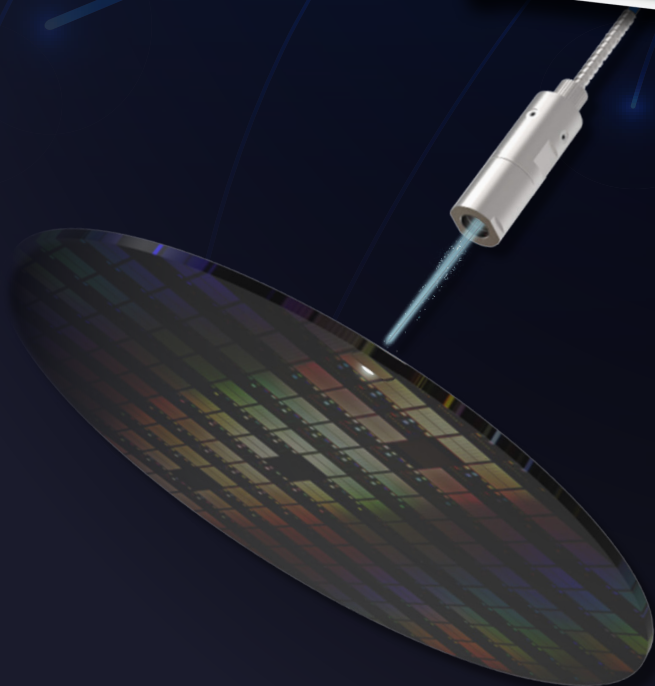


# HORIZON

## INTERFEROMETRIC GAUGE FOR MULTILAYERED MATERIALS



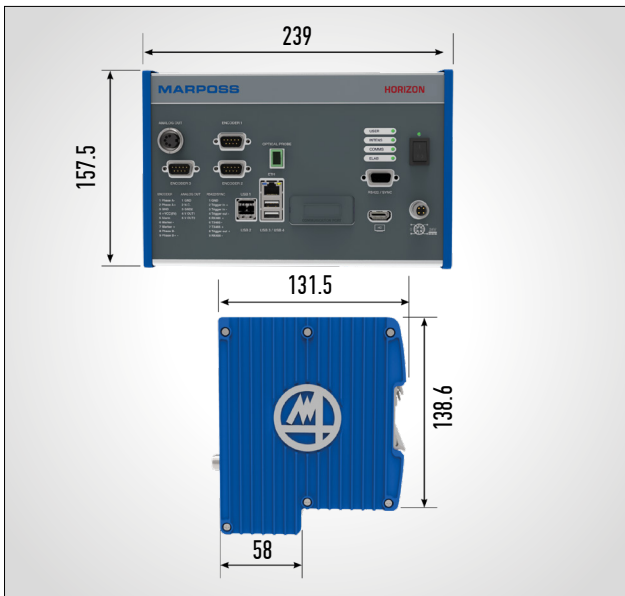
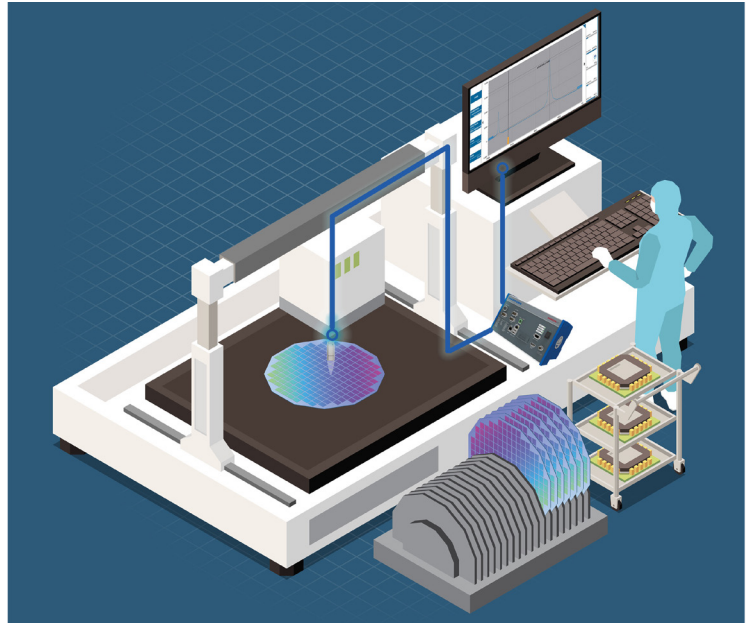
**MARPOSS**

# HORIZON

Materials used in the assembly of various electronic and electromechanical products are increasingly made by superimposing layers with different chemical-physical properties. Such layers are often not transparent to white light and can in some cases be very thin down to values of a few microns.

HORIZON represents the ideal solution for measuring thin layers without touching the part that in most cases is very delicate. Thanks to the availability of different sources it is possible to identify the most suitable HORIZON model depending on the thickness and type of material layers are made of.

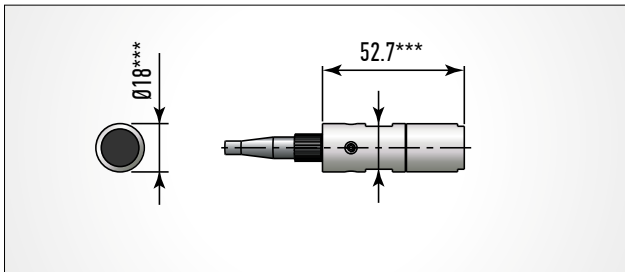
Furthermore MARPOSS designed sensors with different foot print and operating distance, to facilitate the measurement. HORIZON system can even be integrated into complex measuring machines thanks to different communication protocols Ethernet-based or Fieldbus-based



|   |   |
|---|---|
| LIGHT SOURCE                            | SLED / LED  |
| STANDARD MEASURING MODE                 | Thickness / Distance **   |
| MEASUREMENT RANGE*                      | S1 = 37 ÷ 1850 µm<br>S2 = 74 ÷ 3700 µm<br>T1 = 15 ÷ 850 µm<br>L2 = 60 ÷ 3000 µm<br>W1 = 2,25 ÷ 225 µm |
| ACCURACY                                | ≤ 0,5 µm (W1) / ≤ 2 µm (S2) / ≤ 1 µm (others)   |
| AXIAL RESOLUTION                        | 30 nm   |
| CHANNELS                                | 1   |
| INTERFACES                              | Ethernet (10/100 Mbit)<br>RS232 / RS422 as option   |
| FIELDBUS                                | Optional  |
| POWER SUPPLY / CONSUMPTION              | 12 ÷ 24 Vdc (+20%/-15%) / 30 W  |
| PROTECTION DEGREE<br>Standard IEC 60529 | IP40  |
| WEIGHT                                  | 2,8 Kg  |

\* = range at refractive index n=1. To obtain the measure range for other materials, divide the range for the refractive index of that material. The measure range could be limited in case of rough surfaces with Ra > 0.1.

\*\* = Special application, please refer to product catalogue for detailed information



\*\*\* = dimensions of standards S1 probes. Please refer to main catalogue for the complete probes set

|                                       |                    |
|---------------------------------------|--------------------|
|                                       |                    |
| STANDARD MEASURING MODE               | Thickness          |
| WORKING DISTANCE (WD)****             | 10, 28, 50, 100 mm |
| SPOT DIAMETER                         | 18 ÷ 30 µm         |
| LATERAL RESOLUTION                    | 9 ÷ 15 µm          |
| ANGLE TO SURFACE                      | 90° ± 2°           |
| OPTICAL FIBER LENGTH / BENDING RADIUS | 3 - 4 m / 30 mm    |
| INDOOR ARMORED FIBER                  | standard           |
| PROTECTION DEGREE                     | IP40               |
| WEIGHT<br>without cable               | 80 g               |

\*\*\*\* = 1.6 mm focus distance is for IP68 optical pen (this probe can be used in presence of DI water)

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