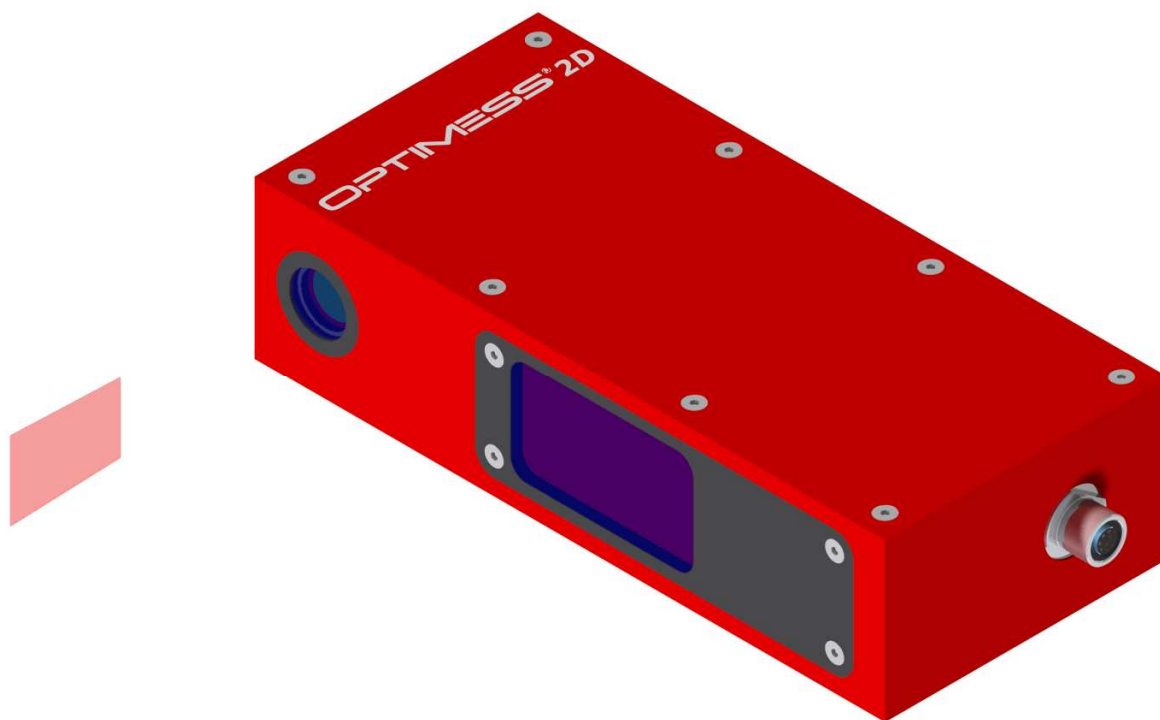# Non-contact Laser Measuring System

## OPTI*mess* 2D - 300



The non-contact operating, dimensional light section sensor **OPTI*mess* 2D** is a special version of a punctiform **OPTI*mess*** sensor.

In the **OPTI*mess* 2D** sensor, the laser beam is projected as a line on the target by an optical system. This line is deflected to a high resolution CCD matrix by the receiver optic. The integrated controller reads out this projection and calculates X/Y c-ordinates from it. These are output on the CAN-bus interface.
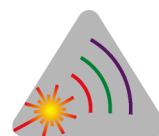
By simple parameterisation with the enclosed PC software, the measuring field of the **OPTI*mess* 2D** can be extended or limited so that an optimum ratio between the resolution and the scan frequency is always achieved. The software integrated in the measuring head enables pre-processing of the measured profile for various standard applications such as gap measurement, weld measurement, angle measurement, step and height measurement etc. The parameterisation also takes place with the enclosed PC program.
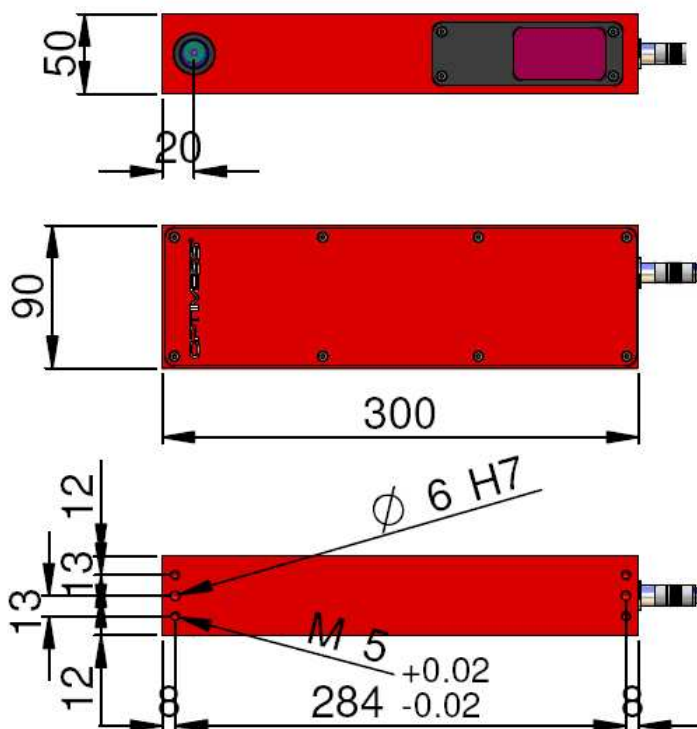
Typical applications for the **OPTI*mess* 2D** are:

- Inspection of welds
- Profile measurements
- Geometry measurement
- Gap dimension determination
- Robot positioning and robot control

**Dr. D. Wehrhahn**
Meßsysteme für die Qualitätssicherung

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| Technical data OPTI*mess* 2D | 300 | Unit |
|---|---:|---|
| | | |
| **Basic data** | | |
| Measuring range | 300 | mm |
| Basic distance | 400 | mm |
| | | |
| **Max. measuring field** | | |
| Line length start of range | 114.8 | mm |
| Line length centre of range | 150 | mm |
| Line length end of range | 185.2 | mm |
| | | |
| **Resolution, accuracy** | | |
| Theoretical resolution measuring range | 0.067 | mm |
| Accuracy | 0.133 | mm |
| Theoretical resolution line length | 0.146 | mm |
| | | |
| **Measuring frequency** | | |
| Meas. field 1280x1024 pixels (max. res.) | 27 | Hz |
| Meas. field 500x500 pixels | 120 | Hz |
| Meas. field 100x100 pixels | 3000 | Hz |

The technical data above refer to measurement on white, diffusely reflecting surfaces.

The laser protection class can be specified with 2M, 3R or 3B. This is given by the respective application and is determined mainly by the surface to be measured and the implemented measuring frequency.

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