

## Microwave Interferometer MWI 2650

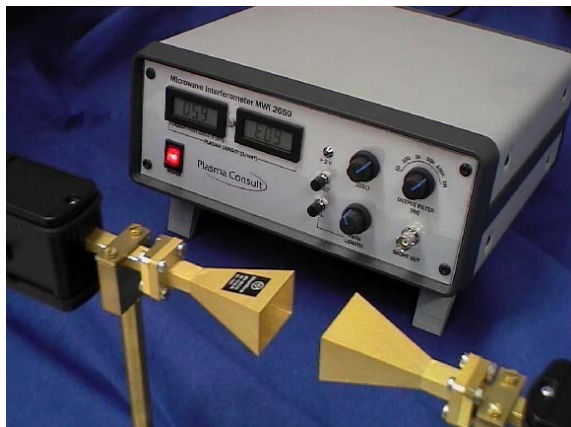


Fig. 1: MWI 2650

### Non-invasive measurements of the electron density in technical plasmas using 26,5 GHz microwave interferometry

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The publication below (in German language) describes features and applications of the MWI 2650 microwave interferometer.

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#### Abstract

Plasma diagnostics using microwave interferometry is discussed in comparison to the more traditional Langmuir probe diagnostics. A newly developed microwave interferometer, MWI 2650, available from JE PlasmaConsult GmbH is presented. This device uses a coaxial cable instead of a rigid wave guide for the reference path, giving more flexibility for different reactor geometries. A direct display of the electron density and a

calibrated output for an oscilloscope make this device easy to operate. Besides measurements in chemically reactive and deposition plasmas, where Langmuir probes often fail, the MWI 2650 allows to measure the electron density in pulsed plasmas with high temporal resolution and high sensitivity. An electron density peak in the afterglow of dusty as well as electronegative plasmas has been detected for the first time using this device. A special version of the MWI 2650 is also suited for the diagnostics of atmospheric pressure plasmas.

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