

## EddyCus<sup>®</sup> TF map 5050MT – Metal Thickness Imaging Device

P\_T\_5050MT\_21



### Highlights

- ▶ Contact-free imaging
- ▶ High resolution imaging (25 to 1,000,000 points)
- ▶ Defect imaging
- ▶ Mapping of encapsulated layers

### Applications

- ▶ Semiconductor industry
- ▶ Electronic industry
- ▶ Metallization in photovoltaics
- ▶ Batteries, fuel cells, capacitors
- ▶ Boards and panels (PCB, WLP, PLP)
- ▶ Mirrors and lenses
- ▶ Barrier films
- ▶ EMC/EMI Shielding
- ▶ Heating and de-icing films
- ▶ Medical applications

### Device Series

- ▶ Metal layer thickness (nm,  $\mu\text{m}$ )
- ▶ Metal substrate thickness ( $\mu\text{m}$ )
- ▶ Sheet resistance (Ohm/sq)
- ▶ Conductivity / resistivity (mOhm cm)
- ▶ Electrical anisotropy (%)
- ▶ Weight ( $\text{g}/\text{m}^2$ ) and drying status (%)
- ▶ Permeability (H/m) *Beta*

### Materials


- ▶ Metal films
- ▶ Metal meshes
- ▶ Metal substrates
- ▶ Alloy films
- ▶ Alloy substrates

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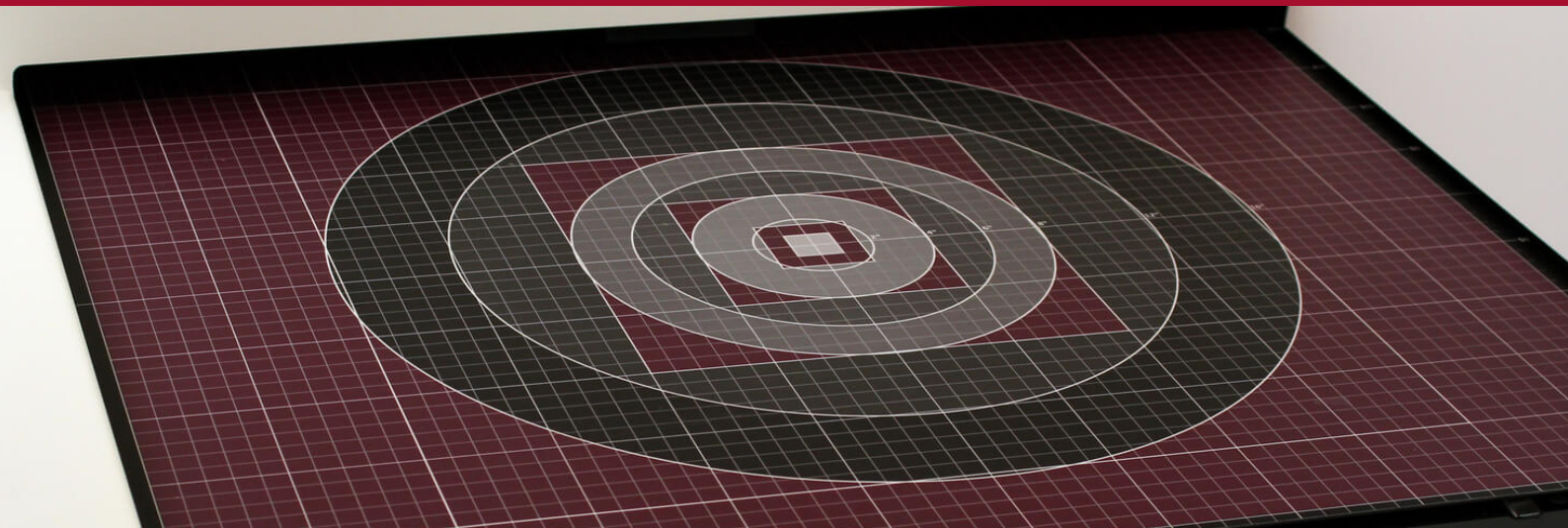
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Engineered and Made in Germany 





Measurement technology	Non-contact eddy current sensor
Substrates	Wafer, glass, foil, etc.
Max. scanning area	20 inch / 508 mm x 508 mm (larger on request)
Edge effect correction / exclusion	2 – 10 mm (depending on size, range, setup and requirements)
Max. sample thickness / sensor gap	3 / 5 / 10 / 15 / 25 mm (other upon request)
Metal thickness range	Low 1 – 10 nm; < 5 % accuracy
Accuracies depend on the selected setup and the type / conductivity of the metal (e.g. copper, aluminum, silver)	Standard 10 – 1,000 nm; < 3 % accuracy High 1 – 100 μm; < 3 % accuracy
Metal thickness calibration	Direct thickness calibration / sheet resistance conversion
Sheet resistance range (optional)	0.1 mOhm/sq – 100 Ohm/sq (in 5 ranges)
Parameter conversions	Sheet resistance, emissivity
Scanning pitch (x, y)	1 / 2 / 5 / 10 mm (other on request)
Scanning time	8 inch / 200 mm x 200 mm in 0.5 to 5 minutes (1 – 10mm pitch) 12 inch / 300 mm x 300 mm in 1.5 to 15 minutes (1 – 10mm pitch)
Device dimensions (w/h/d) / weight	46.5" x 11.4" x 35.4" / 1,180 mm x 290 mm x 900 mm / 120 kg
Further available features / other tool configurations	Sheet resistance measurement / conductivity / resistivity / anisotropy / permeability ( <i>beta</i> )

## Device Control and Software

- ▶ Pre-defined measurement and product recipes (sizes, pitches, thresholds)
- ▶ Line scan, histogram and area analysis
- ▶ Black and colored image coding
- ▶ Csv & pdf export
- ▶ SPC summary and export
- ▶ 3 user levels
- ▶ Material database for parameter conversion
- ▶ Edge effect compensation
- ▶ Storage and import of data
- ▶ Export of data sets (e.g. to EddyEva, MS Excel, Origin)

