

# EddyCus® TF lab 2020MT – Metal Thickness Tester

P\_T\_2020MT\_21



## Highlights

- ▶ Contact-free and realtime
- ▶ Accurate single-point measurement
- ▶ Manual mapping guided by easy-to-handle software
- ▶ Measurement of encapsulated layers
- ▶ Characterization of multilayer materials upon request

## Device Series

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

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## Applications

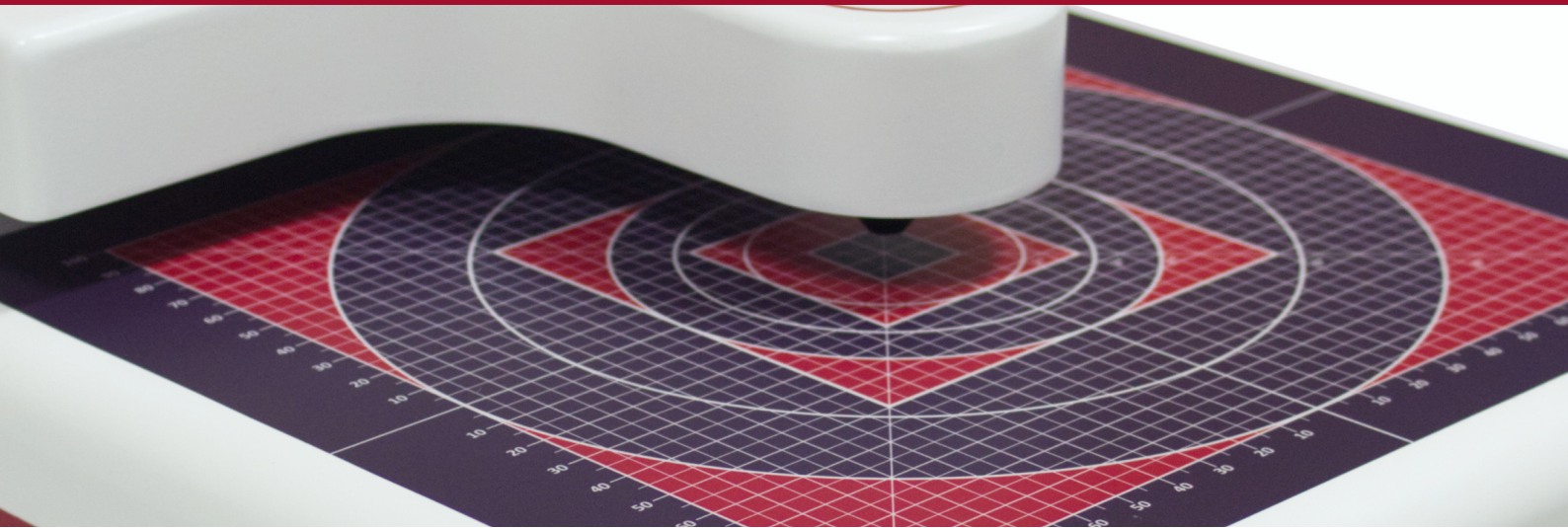
- ▶ Semiconductor industry
- ▶ Electronic industry
- ▶ Metallization in photovoltaics
- ▶ Batteries, fuel cells, capacitors
- ▶ Boards and panels (PCB, WLP, PLP)
- ▶ Mirrors and lenses
- ▶ Barrier films
- ▶ EMC/EMI Shielding
- ▶ Heating and de-icing films
- ▶ Medical applications

## Materials

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

Engineered and Made in Germany 





Measurement technology	Non-contact eddy current sensor
Substrates	Foil, glass, wafer, etc.
Substrate area	8 inch / 204 mm x 204 mm (open on three sides)
Max. sample thickness/ sensor gap	3 / 5 / 10 / 25 mm (defined by the thickest sample)
Metal thickness range	Low 1 – 10 nm; 2 – 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; 1 – 3 % accuracy
Metal thickness calibration	High 1 – 100 μm; 0.5 – 3 % accuracy
Device dimensions (w/h/d) / weight	Direct thickness calibration / sheet resistance conversion
Further available features / other tool configurations	11.4" x 5.5" x 17.5" / 290 mm x 140 mm x 445 mm / 10 kg
	Sheet resistance measurement / conductivity / resistivity / electrical anisotropy / permeability (beta)

## Device Control and Software

The software interface includes a menu bar (File, Measurement, Info), status indicators (Measuring, TempOk, CalOk), and a SURAGUS logo. The main display shows a large 'Thickness' value of 2.11 μm. Below this is a graph showing a flat line. The 'Mapping' dialog box has a grid with the following values:

	1	2	3	4	5	6
1	2.12e-6	2.11e-6	2.12e-6	2.11e-6	2.11e-6	2.11e-6
2	2.10e-6	2.10e-6	2.10e-6	2.10e-6	2.10e-6	2.12e-6
3	2.11e-6	2.11e-6	2.12e-6	2.11e-6	2.11e-6	2.13e-6
4	2.13e-6	2.11e-6	2.10e-6	2.11e-6	2.11e-6	2.11e-6
5	2.11e-6	2.11e-6	2.12e-6	2.11e-6		
6						

The 'Data Tracker' window shows a list of measurements with columns for Id, Time, Coating, and units.