

## Data Sheet- EddyCus® TF lab 2020 Series

P\_T\_2020\_11



### Highlights

- ▶ Contact-free and real time
- ▶ Accurate single-point measurement
- ▶ Characterization of multilayer systems on request
- ▶ Manual mapping of sheet resistance guided by an easy-to-handle software

### Applications

- ▶ Architectural glass (LowE)
- ▶ Touch screens and flat monitors
- ▶ OLED and LED applications
- ▶ Smart-glass applications
- ▶ Transparent antistatic foils
- ▶ Photovoltaics
- ▶ Semiconductors
- ▶ De-icing and heating applications
- ▶ Batteries and fuel cells
- ▶ Packaging materials

### Parameters

- ▶ Sheet resistance (Ohm/sq)
- ▶ Metal layer thickness (nm,  $\mu\text{m}$ )
- ▶ Metal substrate thickness ( $\mu\text{m}$ )
- ▶ Anisotropy
- ▶ Defect detection
- ▶ Integrity assessment

### Materials

- ▶ Metal films and meshes
- ▶ Conductive oxides
- ▶ Nanowire films
- ▶ Graphene, CNT, Graphite
- ▶ Printed films
- ▶ Conductive polymers (PEDOT:PSS)
- ▶ Other conductive films and materials

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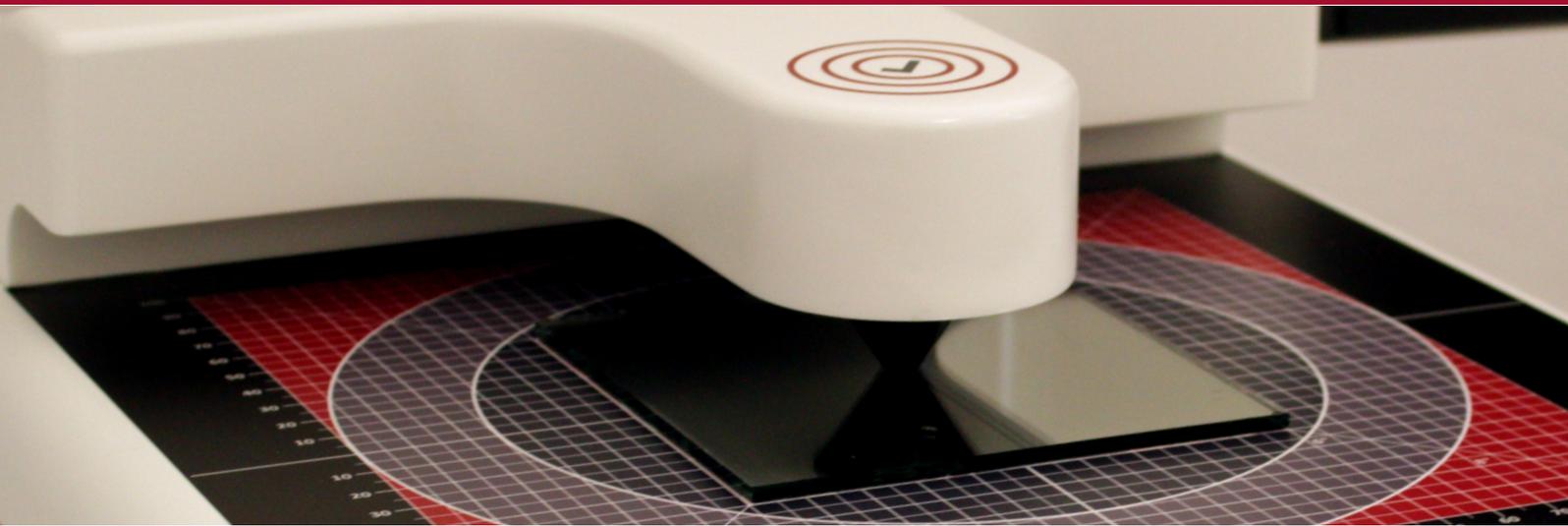
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Made and Engineered in Germany

Innovation Award by  
Free State of Saxony 2013  
1<sup>st</sup> Place





Sheet resistance measurement technology	Non-contact eddy current sensor
Substrates	e.g. foils, glass, wafer, etc.
Substrate area	8 inch/ 204 x 204 mm (open to three sides)
Max. sample thickness/ sensor gap	1 / 2 / 5 / 10 / 25 mm (defined by the thickest sample)
Sheet resistance range accuracy can be optimized over sheet resistance decade within a customer specified range	Low      0.0001 - 10 Ohm / sq; 1 to 5 % accuracy Standard 0.01 - 1,000 Ohm / sq; 1 to 5 % accuracy High      10 - 100,000 Ohm / sq; 2 to 8 % accuracy
Thickness measurement range of metal films (e.g. copper)	2 nm - 2 mm (in accordance with sheet resistance)
Device dimension (w/h/d) / weight	11.4 x 17.5 x 5.5 inch / 290 x 140 x 445 mm / 10 kg
Available features	Sheet resistance measurement / Metal thickness tester

## Software and Handling - Sheet Resistance Analyzer 2.0

**EddyCus® TF Lab Control**

Status: Measuring TempOk CalOk

Configuration:

- Measurement Type: Sheet Resistance
- Sample Size: 50 mm
- Sample Thickness: 0 to 3 mm
- Measurement Range: 0.3 to 300 Ω/sq
- Selected Set: 50@SR

Real Time Measurement: **Sheet Resistance**  
**103.30 Ω/sq**

Automatic

Self Referencing:

Data Tracker:

Id	Time	Series N...	Value	Unit
<input checked="" type="checkbox"/>	1 3:58:42...	Sample...	12.62	Ω/sq
<input checked="" type="checkbox"/>	2 3:58:53...	Sample...	4.13	Ω/sq
<input checked="" type="checkbox"/>	3 3:58:59...	Sample...	27.94	Ω/sq
<input checked="" type="checkbox"/>	4 3:59:10...	Sample...	52.53	Ω/sq
<input checked="" type="checkbox"/>	5 3:59:28...	Sample...	103.56	Ω/sq
<input checked="" type="checkbox"/>	6 3:59:35...	Sample...	189.26	Ω/sq
<input checked="" type="checkbox"/>	7 4:00:06...	Sample...	265.28	Ω/sq

Graph: Sheet Resistance (Ω/sq) vs Id (1-7). The graph shows an increasing trend in sheet resistance across the samples.