

## EddyCus® lab 2020SR – Sheet Resistance Tester

P\_2020SR\_24



### 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

### 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

### 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

### Materials

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

SURAGUS GmbH  
Maria-Reiche-Strasse 1  
01109 Dresden  
Germany

For further questions:  
+49 351 32 111 520

[sales@suragus.com](mailto:sales@suragus.com)

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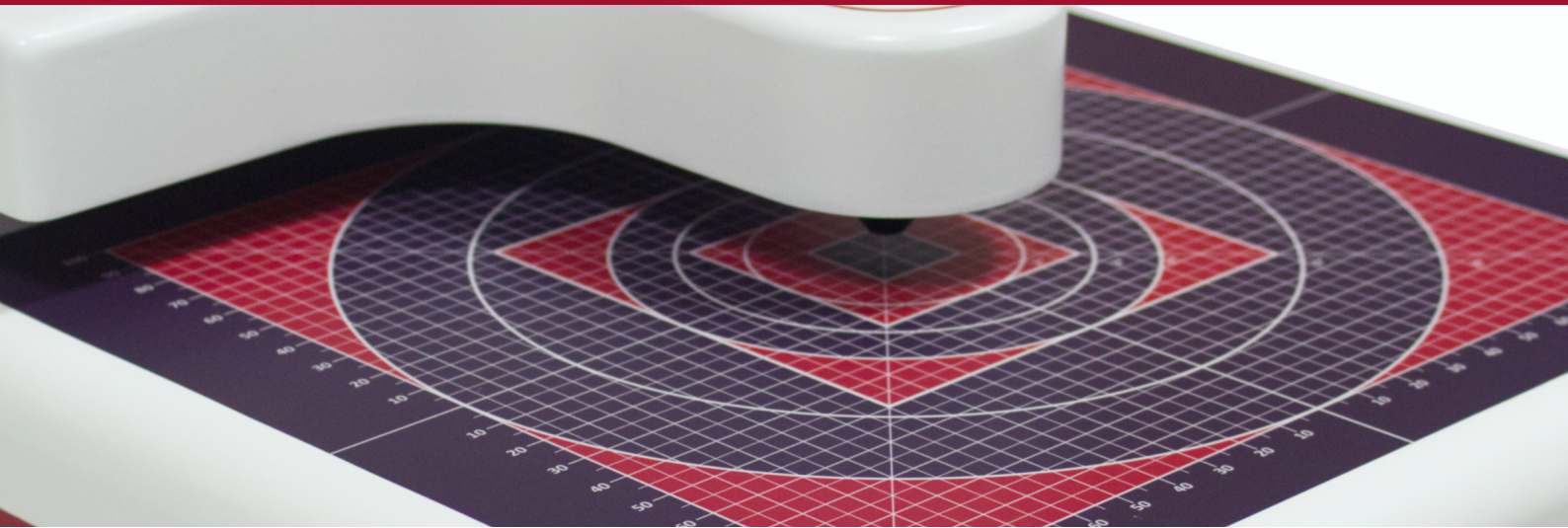
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Engineered and Made in Germany 





Measurement technology	Non-contact eddy current sensor				
Substrates	Foils, 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)				
Thickness measurement range of metal films (e.g. copper)	2 nm – 2 mm (in accordance with sheet resistance)				
Device dimensions (w/h/d) / weight	11.4" x 5.5" x 17.5" / 290 mm x 140 mm x 445 mm / 10 kg				
Further available features	Sheet resistance measurement / metal thickness monitor				
	<b>VLSR</b>	<b>LSR</b>	<b>MSR</b>	<b>HSR</b>	<b>VHSR</b>
	6 decades are measurable by one sensor, but with slightly affected accuracy				
Range [Ohm/sq]	0.0001 – 0.1	0.01 – 10	0.1 – 100	10 – 2,000	1,000 – 200,000
Accuracy / Bias		± 1%		± 1 – 3%	± 3 – 5%
Repeatability (2σ)		< 0.3%		< 0.5%	< 0.3%

VLSR – Very Low Sheet Resistance , LSR – Low Sheet Resistance , MSR – Medium Sheet Resistance , HSR – High Sheet Resistance , VHSR – Very High Sheet Resistance

## Device Control and Software

**Sheet Resistance**  
19.83 Ohm/Sq

**Mapping**

1	19.87	19.92
2	20.00	19.83

**Data Tracker**

Id	Time	Series N.	Value	Unit
1	11:41:50	glass ser...	1.99e+01	Ohm/Sq
2	11:42:07	glass ser...	1.99e+01	Ohm/Sq
3	11:42:24	glass ser...	1.99e+01	Ohm/Sq
4	11:42:41	glass ser...	1.99e+01	Ohm/Sq
5	11:42:58	glass ser...	1.99e+01	Ohm/Sq
6	11:43:15	glass ser...	2.00e+01	Ohm/Sq
7	11:43:32	glass ser...	1.99e+01	Ohm/Sq
8	11:43:50	glass ser...	1.99e+01	Ohm/Sq
9	11:44:07	glass ser...	1.99e+01	Ohm/Sq
10	11:44:24	glass ser...	1.98e+01	Ohm/Sq
11	11:44:41	glass ser...	1.99e+01	Ohm/Sq
12	11:44:58	glass ser...	1.99e+01	Ohm/Sq
13	11:45:15	glass ser...	1.99e+01	Ohm/Sq
14	11:45:32	glass ser...	1.99e+01	Ohm/Sq
15	11:45:49	glass ser...	1.99e+01	Ohm/Sq
16	11:46:06	glass ser...	1.99e+01	Ohm/Sq
17	11:46:23	glass ser...	1.99e+01	Ohm/Sq
18	11:46:40	glass ser...	1.99e+01	Ohm/Sq