

EddyCus® lab 2020SR – Sheet Resistance Tester

P_2020SR_26



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 layer thickness (nm, μm)
- ▶ Sheet resistance (Ohm/sq)
- ▶ Emissivity
- ▶ Conductivity / resistivity (mOhm·cm)
- ▶ Electrical anisotropy (%)
- ▶ Weight (g/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

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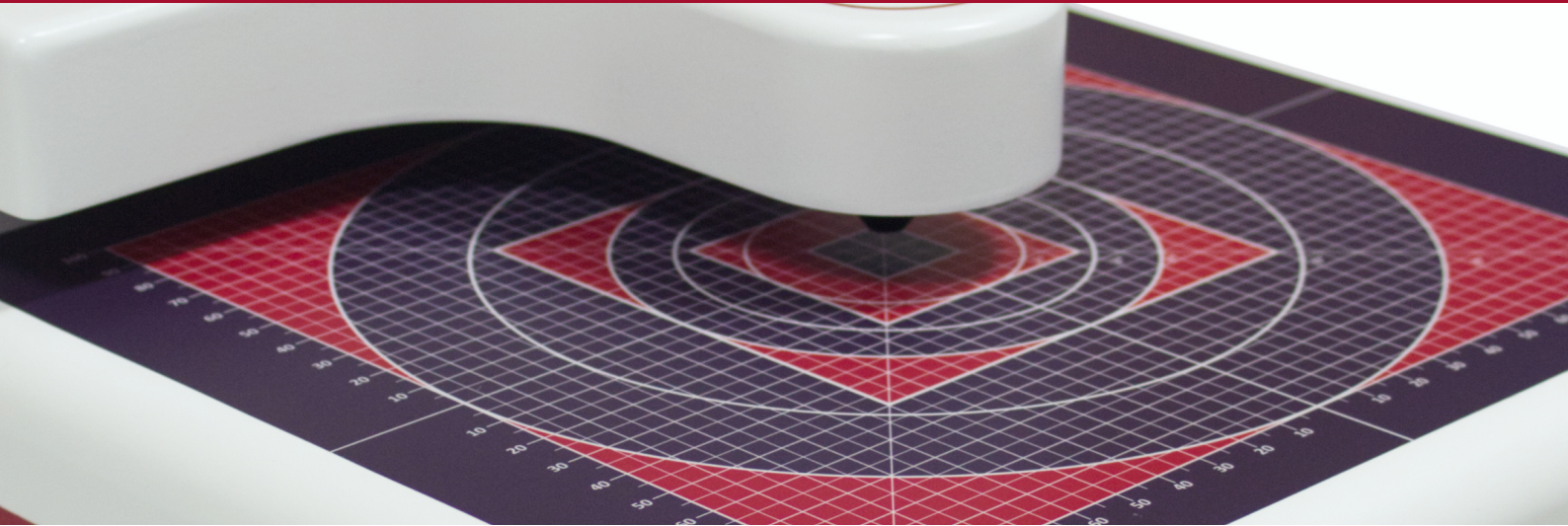
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Engineered and Made in Germany 





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	4 / 10 / 14 / 20 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	Metal layer thickness, resistivity, emissivity conversion			
	VLSR	LSR	MSR	HSR
	6 decades are measurable by one sensor, but with slightly affected accuracy			
Range [Ohm/sq]	0.00005 – 0.3	0.001 – 100	0.001 – 3,000	100 – 300,000
Accuracy / Bias	± 1 – 3%		± 1 – 3%	± 2 – 5%
Repeatability (2σ)	< 0.3 – 1%		< 0.3 – 3%	< 0.5 – 2%

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