



Non-Contact Sheet Resistance & Optical Transmission Tester

DATA SHEET - EddyCus[®] TF lab 4040SR-OT

HIGHLIGHTS

- Contact-free & real-time
- Accurate single-point measurement of sheet resistance for conductive thin films (Ohm/sq) and optical transparency
- Precise measurement without influence of:
 - Passivation/Encapsulation
 - Roughness, Oxidation
- Precise measurement of:
 - Conventional conductive thin-films
 - Freestanding structures
 - Grids and wire structures
 - Multi-layer systems
- Manual mapping of sheet resistance guided by an easy-to-handle software

APPLICATIONS

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



DATA SHEET

EddyCus® TF lab Hybrid – Sheet Resistance & Optical Transmission

EddyCus® TF lab Hybrid	
Sheet resistance measurement technology	Non- contact eddy current sensor
Optical transmission	Wavelength 632 nm
Substrates	e.g. foil, glass and wafer
Substrate area	29.5 x 26.5 inch / 750 x 650 mm (for measurement of 16 inch / 400 x 400 mm samples)
Max. sample thickness/sensor gap (defines distances)	1/ 2 / 5 / 10 / 25 mm (defined by the thickest sample/application)
Sheet resistance range	0.0001 – 10 Ohm/sq; 2 % accuracy & 1 % repeatability 10 – 100 Ohm/sq; 3 % accuracy & 1.5 % repeatability 100 – 500 Ohm/sq; 4 % accuracy & 2 % repeatability 100 – 1,000 Ohm/sq; 5 % accuracy & 2.5 % repeatability 1,000 – 3,000 Ohm/sq; 8 % accuracy & 4 % repeatability
Optical transmission range	0 – 100 % Resolution of 0.1 % Accuracy better 0.2 %
Thickness measurement of thin films (e.g. copper)	2nm – 2mm (in accordance with sheet resistance)
Device size (w/h/d)	30 x 12 x 26 inch / 760 x 310 x 660 mm
Weight	20 kg
Available features	Anisotropy sheet resistance sensor 0.001 – 1,000 Ohm/sq

SOFTWARE & HANDLING – EddyCus® TF lab Hybrid Control

The screenshot displays the EddyCus Studio software interface. The top menu bar includes 'File', 'Option', and 'Information'. The main window title is 'EddyCus TF lab Hybrid Control' with the SURAGUS logo in the top right corner.

Configuration Panel:

- Measurement Type: Sheet Resistance
- Sample Size: 200x200 mm
- Sample Thickness: 0.00 To 2.00 mm
- Measurement Range: 0.50 To 500.00 Ω/sq
- Selected Set: 200@SR

Measurement Status Panels:

- Optical Measurement:** Optical Transmission: 80.2%
- Electrical Measurement:** Sheet Resistance: 195Ω/sq
- Device Status:** Electrical Sensor (green), Optical Sensor (green), System Ready (green). Buttons: Disconnect, No Sample, Optical Transmission Self Reference (With Sample).
- Electrical Measurement Status:** Two green 'OK' buttons.

Actual Measurements Table:

ID	Time Stamp	Sheet Resistance	Unit	Optical Transmission	Unit	
<input type="checkbox"/>	16	6:47:53 PM	198	Ω/sq	80.1	%
<input type="checkbox"/>	17	6:47:54 PM	198	Ω/sq	80.1	%
<input type="checkbox"/>	18	6:47:55 PM	198	Ω/sq	80.1	%
<input type="checkbox"/>	19	6:47:55 PM	198	Ω/sq	80.1	%
<input type="checkbox"/>	20	6:47:55 PM	198	Ω/sq	80.1	%
<input type="checkbox"/>	21	6:47:56 PM	198	Ω/sq	80.1	%
<input type="checkbox"/>	22	6:47:56 PM	197	Ω/sq	80.1	%
<input type="checkbox"/>	23	6:47:56 PM	197	Ω/sq	80.1	%
<input type="checkbox"/>	24	6:47:56 PM	197	Ω/sq	80.1	%

Graphs:

- Sheet Resistance Graph:** Y-axis: Ω/sq (100 to 250), X-axis: ID of Measurement (16 to 24). Shows a horizontal trend line at approximately 195 Ω/sq.
- Optical Transmission Graph:** Y-axis: % (70.0 to 100.0), X-axis: ID of Measurement (16 to 24). Shows a horizontal trend line at approximately 80.2%.

Controls: Start Trend, Stop Trend, Add, Delete, Save List, Open Mapping Window.