SURAGUS
Sensors & Instruments

EddyCus® TF lab 4040HS – Optical and Electrical Measurement

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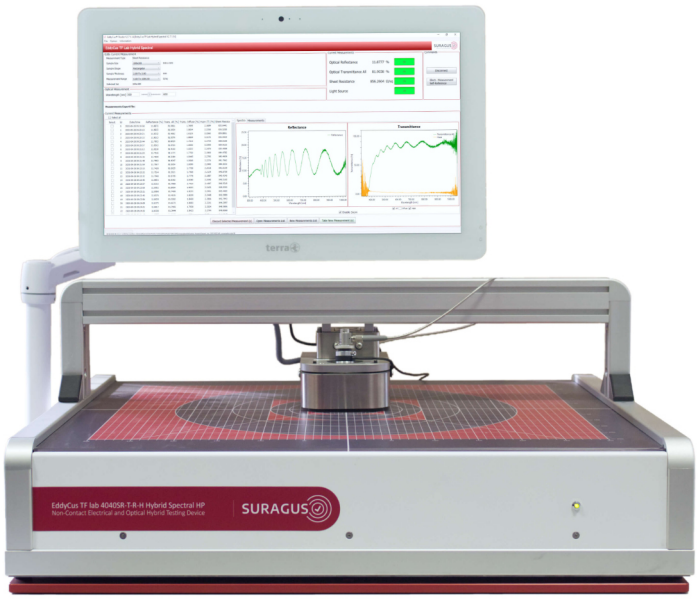

Highlights

- Contact-free & realtime
- Accurate single-point measurement of sheet resistance for conductive thin films (Ohm/sq) and optical transmittance and reflectance
- Precise measurement of:
  - Conventional conductive thin-films
  - Freestanding structures
  - Grid and wire structures

Parameters

- Sheet resistance (Ohm/sq)
- Metal layer thickness (nm, µm)
- Metal substrate thickness (µm)
- Optical transmittance (%)
- Optical reflectance (%)
- Haze (%)
- Anisotropy
- Defects
- Integrity assessment

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

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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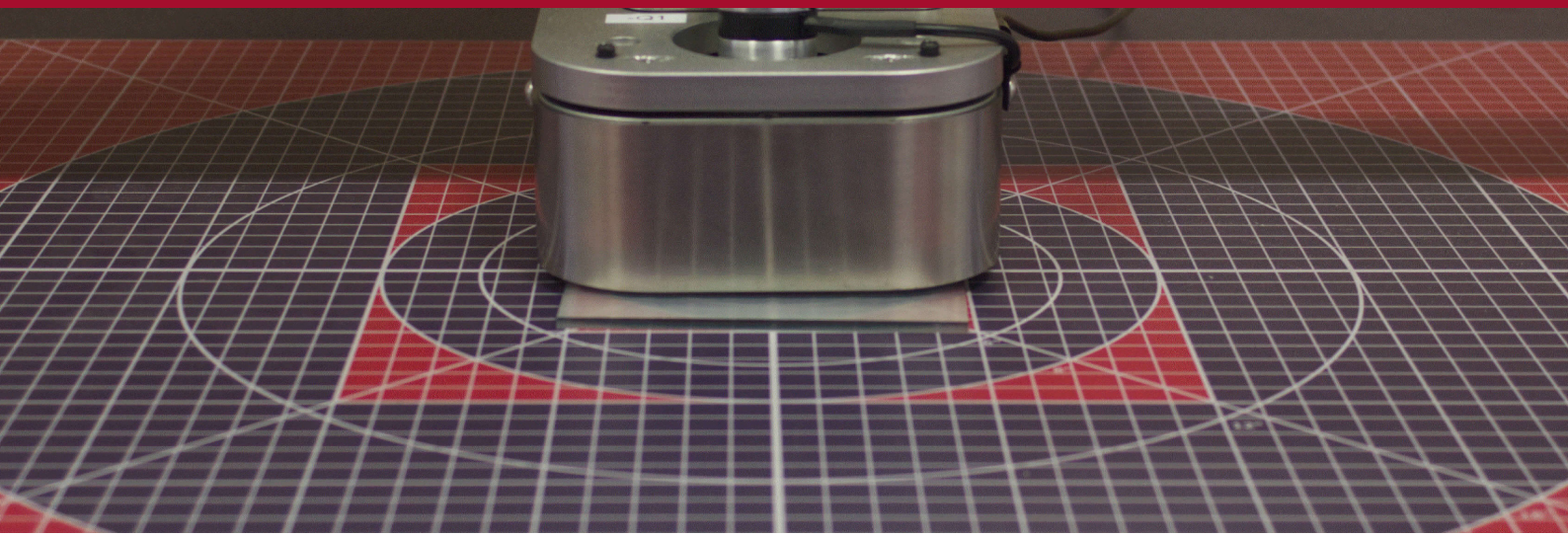
Engineered and Made in Germany

TÜV SÜD ISO 9001

JEC GROUP WINNER OF 2016 INNOVATION AWARD

EddyCus® TF lab 4040HS – Optical and Electrical Measurement Device



Measurement technology	Non-contact eddy current sensor and optical sensor
Substrates	Foils, glass, wafer, etc.
Substrate area	29.5“ x 26.5“ / 750 mm x 650 mm (for 400 mm x 400 mm samples)
Max. sample thickness / sensor gap	1 / 2 / 5 / 10 mm (defined by the thickes sample)
Sheet resistance range	Standard 0.01 – 1,000 Ohm/sq; 1 to 5 % accuracy
Thickness measurement of thin films (e.g. Copper)	2 nm – 2 mm (in accordance with sheet resistance)
Spectral resolution*	0.27 nm
Spectral optical transmittance, reflectance range	0 – 100 % , resolution of 0.1 %
Spectral range*	400 – 1,100 nm or 220 – 2,000 nm
Integration time	1 s or 50 ms – 10 minutes
Device dimensions (w/h/d) / weight	30“ x 12“ x 26“ / 760 mm x 310 mm x 660 mm / 30 kg
Further available features	Spectral haze measurement in transmission

* depending on optical options

Device Control and Software

- Effective use of laboratory space
- ALL IN ONE measurement:
- Spectral optical transmittance/ reflectance/ sheet resistance
- Lower investment costs for up to 4 measurements
- Quick data access for optical and electrical characteristics
- High data integrity by measurement of all parameters at the same spot and same time
- Faster R&D cycles by faster result assessment
- Consistent data assessment by measurement at the same point