

EddyCus® TF lab 4040SR-OT-OR-H Hybrid Spectral

P_T_40HS_10



Highlights

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

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, μm)
- ▶ Metal substrate thickness (μm)
- ▶ Optical transparency (%)
- ▶ Optical reflectance (%)
- ▶ Haze (%)
- ▶ Anisotropy
- ▶ Defects
- ▶ 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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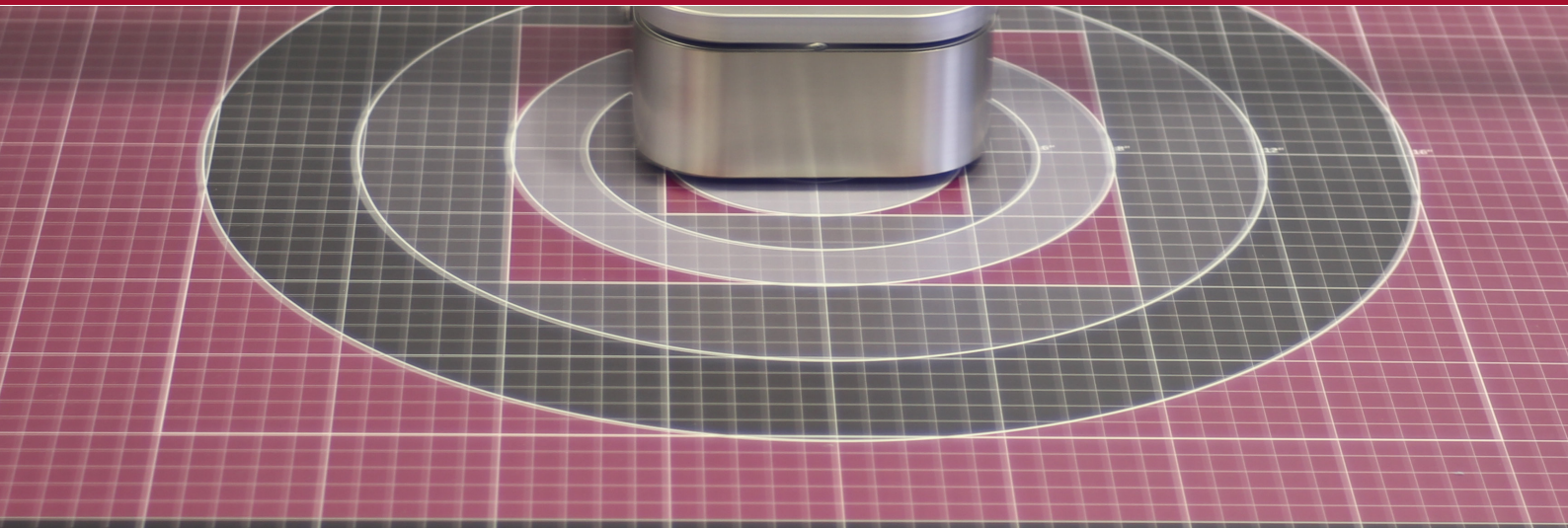
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Made and Engineered in Germany

Innovation Award by
Free State of Saxony 2013
1st Place





Measurement technology	Non-contact eddy current sensor
Substrates	E.g. Foils, glass, wafer, etc.
Substrate area	29.5 x 26.5 inch / 750 x 650 mm (for 400 x 400 mm samples)
Edge effect correction / exclusion	2 - 5 mm edge exclusion for standard sizes
Max. sample thickness / sensor gap	1 / 2 / 5 / 10 mm (defined by the thickest 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 - 890 nm or 220 - 1,100 nm (2,500 nm on request)
Integration time	1 s or 1.1 ms - 10 minutes
Device dimension (w/l/h) / weight	30 x 12 x 26 inch / 760 x 310 x 660 mm / 30 kg
Available features	Spectral haze measurement in transmission One wavelength transmission or reflectance

* depending on optical options

Benefits of All In One Measurement

- ▶ Effective use of laboratory space
- ▶ ALL IN ONE measurement:
- ▶ Spectral optical transmission/ 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

