Efficient Testing Solutions

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

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

Made and Engineered in Germany

SURAGUS GmbH
Maria-Reiche-Straße 1
01109 Dresden
Germany

+49 351 32 111 520
info@suragus.com

www.suragus.com
www.sheet-resistance-testing.com
www.suragus.com/FAQ
www.suragus.com/EddyCusLab4040

Innovation Award by Free State of Saxony 2013
1st Place

Made and Engineered in Germany
<table>
<thead>
<tr>
<th>Measurement technology</th>
<th>Non-contact eddy current sensor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substrates</td>
<td>E.g. Foils, glass, wafer, etc.</td>
</tr>
<tr>
<td>Substrate area</td>
<td>29.5 x 26.5 inch / 750 x 650 mm (for 400 x 400 mm samples)</td>
</tr>
<tr>
<td>Edge effect correction / exclusion</td>
<td>2 - 5 mm edge exclusion for standard sizes</td>
</tr>
<tr>
<td>Max. sample thickness / sensor gap</td>
<td>1 / 2 / 5 / 10 mm (defined by the thickness sample)</td>
</tr>
<tr>
<td>Sheet resistance range</td>
<td>Standard 0.01 - 1,000 Ohm / sq; 1 to 5 % accuracy</td>
</tr>
<tr>
<td>Thickness measurement of thin films (e.g. Copper)</td>
<td>2 nm - 2 mm (in accordance with sheet resistance)</td>
</tr>
<tr>
<td>Spectral resolution*</td>
<td>0.27 nm</td>
</tr>
<tr>
<td>Spectral optical transmittance, reflectance range</td>
<td>0 - 100 %, resolution of 0.1 %</td>
</tr>
<tr>
<td>Spectral range*</td>
<td>400 - 890 nm or 220 - 1,100 nm (2,500 nm on request)</td>
</tr>
<tr>
<td>Integration time</td>
<td>1 s or 1.1 ms - 10 minutes</td>
</tr>
<tr>
<td>Device dimension (w/l/h) / weight</td>
<td>30 x 12 x 26 inch / 760 x 310 x 660 mm / 30 kg</td>
</tr>
<tr>
<td>Available features</td>
<td>Spectral haze measurement in transmission One wavelength transmission or reflectance</td>
</tr>
</tbody>
</table>

**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