# Nix Spectro 2 (2 mm)

**Product specifications – v3.2**

## Form factor

<table>
<thead>
<tr>
<th><strong>Dimensions</strong></th>
<th>45 mm X 60 mm X 60 mm (1.77&quot; X 2.36&quot; X 2.36&quot;)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Materials</strong></td>
<td>Durable, matte black powder coated metal enclosure</td>
</tr>
<tr>
<td><strong>Haptics and visuals</strong></td>
<td>Vibration and RGB feedback for charging, connection, and measurement state</td>
</tr>
<tr>
<td><strong>Features</strong></td>
<td>Scratch-resistant glass lens  &lt;br&gt; Dust and water-resistant  &lt;br&gt; Hard point for braided aircraft cable attachment</td>
</tr>
</tbody>
</table>

## Performance

<table>
<thead>
<tr>
<th><strong>Measurement speed</strong></th>
<th>1 reported scan/second</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Optical resolution</strong></td>
<td>True 31 channel measurement (diffraction grating with 288 pixel diode array)</td>
</tr>
<tr>
<td><strong>Spectral visible range</strong></td>
<td>400 – 700 nm, 10 nm resolution reporting</td>
</tr>
<tr>
<td><strong>Repeatability</strong></td>
<td>0.1 ΔE&lt;sub&gt;00&lt;/sub&gt; on white (D50, 2°, to mean of 10 measurements every 3 s on white, at a temperature of 23 °C)</td>
</tr>
<tr>
<td><strong>Inter-instrument agreement</strong></td>
<td>0.5 ΔE&lt;sub&gt;00&lt;/sub&gt; average, 0.8 ΔE&lt;sub&gt;00&lt;/sub&gt; max., on 12 CERAM CCS-II tiles (deviation from Nix Sensor Ltd. standard unit at a temperature of 23 °C (D65, 10°))</td>
</tr>
<tr>
<td><strong>Temperature range</strong></td>
<td>10 °C – 35 °C</td>
</tr>
<tr>
<td><strong>Humidity</strong></td>
<td>0% – 80% non-condensing</td>
</tr>
</tbody>
</table>

## Optics

<table>
<thead>
<tr>
<th><strong>Measurement geometry</strong></th>
<th>45°:0° ring illumination optics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Illumination spot size</strong></td>
<td>2 mm (0.08&quot;) diameter</td>
</tr>
<tr>
<td><strong>Measurement aperture</strong></td>
<td>2 mm (0.08&quot;) diameter</td>
</tr>
<tr>
<td><strong>Light source</strong></td>
<td>High CRI, broad spectrum LED light source (white, violet and UV)</td>
</tr>
<tr>
<td><strong>Optional Adapters</strong></td>
<td>Liquids, powders, gels, and soft surface adapters available</td>
</tr>
</tbody>
</table>
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## Product specifications

### Calibration
- Each unit individually factory calibrated
- Integrated/automatic temperature compensation
- In-field normalization: manual on included external ceramic reference

### Density data
- Evaluated according to ISO 5-3:2009
- Density status: A, E, I, T
  - Note: Particular density data availability may differ based on application used.

### Reflectance measurement
- Measurement conditions:
  - M0 – UV included – ISO 13655:2017
  - M1 – D50 – ISO 13655:2017
  - M2 – UV excluded – ISO 13655:2017
  - Note: Particular reflectance measurement mode availability may differ based on application used.

### Colorimetry data
- Evaluated according to ASTM E308-18
- CIEXYZ, CIELAB, LCH(ab), RGB, CMYK, and more
- Illuminant: A, C, D50, D55, D65, D75, F2, F7, F11
- Observer: 2°, 10°
  - Note: Particular colorimetry data availability may differ based on application used.

### Battery life + charging
- USB-C charging of internal lithium polymer battery
- 90 day (3 month) standby time per charge (device advertising on BLE)
- 1,000+ scans per charge

### Packaging + accessories
- Impact-resistant, waterproof carrying case, ideally suited for field operations
- USB-C charging cable
- Ceramic reference tile
- Inspection certificate
- Nix lanyard
- Microfiber carrying pouch
- Microfiber cloth
- 2mm positioning jig

### Software development kit
- Features device connectivity routines, commands to request measurements, and utilities to perform color conversions.
- For an up-to-date list of features and supported platforms, visit: nixsensor.com/nix-software-development-kit/

### Connectivity
- Bluetooth Low Energy
- Legacy USB CDC Serial

### Warranty + expected product lifespan
- 12 months from date of sale, warranty for manufacturer’s defects (does not cover user damage).
- Premium service plan available for purchase.
  - For details, visit: nixsensor.com/premium-service-plan/

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For more information on the Nix Spectro 2, visit nixsensor.com or email sales@nixsensor.com