The experience gained over many years in the field of optical measurement has resulted in a new, economical range of high-quality, rugged and reliable instruments.

The instruments are pocket-sized and fit in a handy belt pouch so they can be used anywhere as an everyday tool.

The simple three-button operation, easy to read display and instrument characteristics have all been optimized for measuring absolute level and loss on optical fibers.

Automatic recognition by the level meter of the wavelength transmitted by the level generator means that measurement errors are eliminated. The reference level for attenuation measurements conforming to IEC-874-1 (method 6) is stored for each wavelength separately at the press of a key. The reference value remains stored even when the instrument is switched off so that no battery power is wasted between making the reference measurement and the on-site measurement.

This storage of a reference level for each wavelength coupled with the two laser modules built in to the OLS-6 means that dual-wavelength measurements at 1310/1550 nm or 780/1300 nm can be made quickly and easily.

Individual fibers in a fiber optics cable can be identified rapidly and simply by transmitting modulated signals down the required fiber. The OLP-6 automatically detects the modulation frequency and indicates the correct fiber.
Economical, easy to handle and operate, yet highly reliable and robust.

Dual Laser Source WG OLS-6
WG OLS-6 1310/1550 nm
WG OLS-6 780/1300 nm

- One FC/PC connector for each wavelength
- Connectors can be removed from the casing for cleaning
- Excellent short- and long-term stability thanks to level-stabilized laser source
- Reduces the need for time-consuming reference measurements
- High output level for attenuation measurements over long distances (−7 dBm)

“Intelligent” laser beam makes life easier
- Measurement errors are avoided with automatic detection of the standard wavelength
- High-contrast easy-to-read display
- For IEC 874-1 (method 6) attenuation measurements, the attenuation is shown directly in dB without further calculation after the reference measurement.

- Automatic display of battery capacity in % whenever the ON/OFF key is pressed.
- BAT icon displayed during measurement to indicate the need to replace the batteries.

- Simple 3-button operation
- Long operating time (> 130 h)
- Uses low-power components
- Automatic power down activated after approx. 20 minutes
- Uses two standard AA size (Mignon) 1.5 V batteries / NiCd – available worldwide

Different connectors? No problem!
- No more tiresome, time-consuming adapter changes
- Simple push-pull mechanism
- All common 2.5 mm connectors can be used
Economical, easy to handle and operate, yet highly reliable and robust.

Designed from start to finish with users in mind.

- All-round shock protection
- Robust and reliable
- Optimum protection of optical connectors with built-in cover
- "Intelligent" laser beam makes life easier
  - Measurement errors are avoided
  - Automatic detection of the standard wavelength
- Single-wavelength mode or dual-wavelength mode
  - Automatic modulation frequency detection ideal for testing correct fiber connection
- Ergonomic design
- Simple 3-button operation

- One FC/PC connector for each wavelength
- Connectors can be removed from the casing for cleaning
- Excellent short- and long-term stability thanks to level-stabilized laser source
- Reduces the need for time-consuming reference measurements
- High output level for attenuation measurements over long distances (~7 dBm)

- High-contrast easy-to-read display
- For IEC 874-1 (method 6) attenuation measurements, the attenuation is shown directly in dB without further calculation after the reference measurement.
- Automatic display of battery capacity in % whenever the ON/OFF key is pressed.
- BAT icon displayed during measurement to indicate the need to replace the batteries.
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Dual Laser Source WG OLS-6
WG OLS-6 1310/1550 nm
WG OLS-6 780/1300 nm

- Single-wavelength mode
- Automatic modulation frequency detection ideal for testing correct fiber connection

Actual size

OLP-6 Optical Power Meter

ST SC E2000 FC DIN
The ideal pair for everyday measurements on single-mode fibers (1310/1550 nm) now available all in one as the WG OMK-6 Optical Test Kit

Belt pouch
- The practical solution
- One with each instrument
- Always at hand

WG OMK-6 Optical Test Kit:
- Optimized for attenuation measurements with a dynamic range of up to approx. 58 dB in CW mode, corresponding to
  \[\approx 120 \text{ km fiber at 1310 nm}\]
  \[\approx 190 \text{ km fiber at 1550 nm}\]
- The dynamic range in Auto-\(\lambda\) or Modulation mode is around 40 dB, corresponding to
  \[\approx 90 \text{ km fiber at 1310 nm}\]
  \[\approx 130 \text{ km fiber at 1550 nm}\]
### Specifications

<table>
<thead>
<tr>
<th>OLS-6 Optical Laser Source</th>
<th>OLS-6: 1310/1550 nm</th>
<th>OLS-6: 780/1300 nm</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Optical source type</strong></td>
<td>FP laser</td>
<td>FP laser</td>
</tr>
<tr>
<td><strong>Wavelength range</strong></td>
<td>1310 nm typ. ± 20 nm</td>
<td>1310 nm typ. ± 20 nm</td>
</tr>
<tr>
<td></td>
<td>1550 nm ± 20 nm</td>
<td>1300 nm typ. ± 20 nm</td>
</tr>
<tr>
<td><strong>FWHM spectral width</strong></td>
<td>&lt; 7 nm / &lt; 7 nm</td>
<td>&lt; 7 nm / &lt; 7 nm</td>
</tr>
<tr>
<td><strong>Output power</strong></td>
<td>Class 1 laser</td>
<td>Class 3A laser</td>
</tr>
<tr>
<td>(9/125 μm fiber)</td>
<td>~7 dBm typ. ± 1 dB</td>
<td>(780 nm)</td>
</tr>
<tr>
<td><strong>CW Modulated output level</strong></td>
<td>typ. ~10 dBm</td>
<td>~7 dBm ± 1.5 dB</td>
</tr>
<tr>
<td><strong>Modulation frequencies</strong></td>
<td>270 Hz, 1 kHz, 2 kHz</td>
<td>270 Hz, 1 kHz, 2 kHz</td>
</tr>
<tr>
<td><strong>Output signal stability</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Short-term</strong></td>
<td>±0.02 dB</td>
<td>±0.05 dB</td>
</tr>
<tr>
<td><strong>Long-term</strong></td>
<td>±0.2 dB</td>
<td>±0.3 dB</td>
</tr>
<tr>
<td><strong>Modes:</strong></td>
<td>Unmodulated light</td>
<td></td>
</tr>
<tr>
<td>CW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AUTO-λ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FMOD</td>
<td>Modulation for fiber identification</td>
<td></td>
</tr>
<tr>
<td>DUAL</td>
<td>Both wavelengths active</td>
<td></td>
</tr>
<tr>
<td><strong>Optical connector</strong></td>
<td>2 outputs (1 for each wavelength); 2 × FC/PC</td>
<td></td>
</tr>
<tr>
<td><strong>Power supply / operating time</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dry batteries</td>
<td>2 × Mignon (AA) 1.5 V / typ. 60 h</td>
<td>2 × Mignon (AA) 1.5 V / typ. 45 h</td>
</tr>
<tr>
<td>NiCd batteries</td>
<td>2 × Mignon (AA) 1.2 V / typ. 20 h</td>
<td></td>
</tr>
</tbody>
</table>

**OLP-6 Optical Power Level Meter OLP-6**

- **Wavelength range**: 780 to 1700 nm
- **Photodiode**: Germanium
- **Fiber type**: 9/125 to 100/140 μm
- **Standard wavelength, switchable**: 780 nm, 850, 1300, 1310, 1550 nm
- **Display range**: ~65 to +10 dBm
- **Maximum permitted level**: +10 dBm
- **Intrinsic measurement error**: ±0.13 dB (±3 %)
- **Linearity**: ±55 to +5 dBm, ±0.06 dB
- **Wavelength detection**: automatic switch-over to and display of nominal wavelength
- **Modulation detection**: 270 Hz, 330 Hz, 1 kHz, 2 kHz

**Display**

- Result display: LCD, 4-digit
- Results shown in: dBm, dB
- Resolution: 0.01 dB
- Battery charge state: in % shown when instrument is switched on/off

**Reference level**

- One measured value per wavelength can be stored

**Optical connector**

- Universal Push-Pull Adapter (UPP) for all common plug connectors with 2.5 mm ferrules, e.g. DIN, ST, FC, SC, E2000

**Power supply / operating time**

- **Dry batteries**: 2 × AA (Mignon) 1.5 V or NiCd batteries: 2 × AA (Mignon) 1.2 V
- **Operating time (dry batteries)**: typically 130 h

**OLP-6 Optical Power Level Meter OLP-6**

1) 780 nm wavelength available from series B onwards
2) Under reference conditions: ~20 dBm (CW), 1310 nm ± 2 nm, 23 °C ± 3 °C, 46 to 75% relative humidity
3) Level range at 1300 to 1550 nm: ±50 to +10 dBm; at 780/850 nm: ±45 to +10 dBm
4) Together with OLS-5, OLS-6 and OLS-15 from series E onwards

**General instrument specifications**

- **Discharge protection**: Instrument powers down automatically after about 20 minutes to conserve battery power (function can be disabled)
- **Ambient temperature**: Nominal range of use: ~10 to +55 °C, Storage and transport: ~40 to +70 °C
- **Dimensions (b × h × t) in mm**: approx. 73 × 28 × 140
- **Weight (including batteries)**: OLS-6: approx. 200 g, OLP-6: approx. 180 g

**Electromagnetic compatibility**

- Meets EN 50081-1 and EN 50082-1 (CE conformance)

**OMK-6 Optical Test Kit**

**OMK-6 contents:**

- 1 × MK-5 Instrument Case complete with inlay
- 1 × OLS-6 Optical Laser Source, 1310/1550 nm
- 1 × OLP-6 Optical Power Level Meter
- 1 × Single-mode cable, FC/PC-FC/PC (9/125 μm), K 3112
- 4 × AA (Mignon) 1.5 V batteries

**Space is provided for OVF-1 (Optical Visible Fault Locator)**

**Dynamic range of Loss Test Kit**

- **CW mode**: 58 dB
- **Modulation or wavelength detection modes**:
  - for 1310 to 1550 nm: 40 dB
  - for 780 to 850 nm: 35 dB
- **Dimensions (b × h × t) in mm**: approx. 265 × 52 × 225
- **Weight (including contents)**: approx. 900 g
Three practical solutions to the problem of measuring the physical parameters of systems and components in optical networks

By combining individual instrument types into customized sets that fit into the MT-32 Instrument Bag, it is possible to always have the right instruments and appropriate accessories for every type of measurement ready to hand. These optimized test solutions mean that the only investment costs are those that are absolutely essential to solving the measurement problem.

The combination of the new pocket-size OLX-5/-6 family with the high-performance OLX-15/-16/-18 range opens up new dimensions in customized test solutions for laboratory and field use.

Example 1:
Economical “TWINtest solution” for level and loss measurements on multimode and single-mode fibers:
Measurement time halved by simultaneous measurement at 850/1300 nm on MM or at 1310/1550 nm on SM fibers.

- MT-32 Instrument Bag: BN 2126/32
- OLS-5 LED Source 850/1300 nm for MM fibers; ST adapter
- OLS-15 Laser Source 1310/1550 nm for SM fibers; universal adapter
- OLP-6 Optical Power Level Meter: BN 2256/02 (-65 to +10 dBm); Universal Push Pull Adapter
- OVF-1 Fault Locator for locating kinks and breaks in fibers: BN 2252/01
- Cleaning tape: BN 2229/90.07
- 2 single-mode cables, FC/PC - FC/PC (9/125 μm): K 3112
- FC/FC coupler: S 3101
- 1 Charger Unit for external charging of NiCd batteries: 220 V, Euro-style a.c. line plug: BN 2229/90.03

Example 2:
Economical “Quad-wavelength solution” for qualification of fiber optics cables by means of level and loss measurements in the optical windows of single-mode fibers:

- MT-32 Instrument Bag: BN 2126/32
- OLS-6 Laser Source 1310/1550 nm for SM fibers; FC/PC adapter
- OLS-6 Laser Source 780/1300 nm for SM fibers; FC/PC adapter
- OLP-6 Optical Power Level Meter: BN 2256/02 (-65 to +10 dBm)
- OVF-1 Fault Locator for locating kinks and breaks in fibers: BN 2252/01
- Cleaning tape: BN 2229/90.07
- 2 single-mode cables, FC/PC - FC/PC (9/125 μm): K 3112
- FC/FC coupler: S 3101
- 1 Charger Unit for external charging of NiCd batteries: 220 V, Euro-style a.c. line plug: BN 2229/90.03

Example 3:
Economical “System installation solution” for measuring absolute level and receiver sensitivity in single-mode systems.

- MT-32 Instrument Bag: BN 2126/32
- OLS-6 Laser Source 1310/1550 nm for SM fibers; FC/PC adapter
- OLP-6 Optical Power Level Meter: BN 2256/02 (-65 to +10 dBm); Universal Push Pull Adapter
- OLA-15 Optical Attenuator: BN 2239/01
- Cleaning tape: BN 2229/90.07
- 2 single-mode cables, FC/PC - FC/PC (9/125 μm): K 3112
- 1 Charger Unit for external charging of NiCd batteries: 220 V, Euro-style a.c. line plug: BN 2229/90.03

Ordering information

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WG OLS-6 Optical Laser Source</td>
<td>OLS-6 1310/1550 nm</td>
</tr>
<tr>
<td></td>
<td>OLS-6 1310/1550 nm (pack of 10)</td>
</tr>
<tr>
<td></td>
<td>OLS-6 780/1300 nm</td>
</tr>
<tr>
<td>WG OLP-6 Optical Power Level Meter</td>
<td>BN 2256/02</td>
</tr>
<tr>
<td>WG OMK-6 Optical Test Kit</td>
<td>BN 2126/06</td>
</tr>
<tr>
<td></td>
<td>Comprising:</td>
</tr>
<tr>
<td></td>
<td>1 x MK-5 Instrument Case complete with inlay</td>
</tr>
<tr>
<td></td>
<td>1 x OLS-6 Optical Laser Source, 1310/1550 nm</td>
</tr>
<tr>
<td></td>
<td>1 x OLP-6 Optical Power Level Meter</td>
</tr>
<tr>
<td></td>
<td>1 x Single-mode cable, FC/PC-FC/PC (9/125 μm), K 3112</td>
</tr>
<tr>
<td></td>
<td>4 x AA (Mignon) 1.5 V batteries</td>
</tr>
<tr>
<td></td>
<td>Space is provided for OVF-1 (Optical Visible Fault Locator)</td>
</tr>
<tr>
<td></td>
<td>230 V, Euro-style a.c. line plug</td>
</tr>
<tr>
<td></td>
<td>110 V, US-style a.c. line plug</td>
</tr>
<tr>
<td></td>
<td>MK-5 Transport Case</td>
</tr>
<tr>
<td></td>
<td>(for holding 2 instruments)</td>
</tr>
<tr>
<td></td>
<td>WG MT-32 Transport Case</td>
</tr>
<tr>
<td></td>
<td>(for holding 3 instruments)</td>
</tr>
<tr>
<td></td>
<td>Detailed information on adapters, cables and optical couplers is found in the separate data sheet on “Optical test adapters and adapter cables”</td>
</tr>
</tbody>
</table>

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