WDM900 Lightwave Test Set
US Patent # 9,515,726

Features
- Health Meter summarizes channel performance in less than 3 seconds
- Detail Display provides one-touch diagnosis of any performance issue
- Automatic compensation for monitor tap ratio
- Onboard report generation
- IEC 61280-2-9 OSNR measurement
- Meets stringent GR-2952-CORE mechanical design criteria

Applications
- Testing node splits in PON and broadband networks
- Testing DWDM overbuilds of CWDM networks
- Commissioning CWDM/DWDM mobile backhaul networks
- DAS installation and troubleshooting
- Restoration of Metro-E wavelength services
- Troubleshooting live mobile backhaul network
- Headend and CO signal path checks

The WDM900 is a rugged, portable and easy-to-use optical test set that simplifies in-service testing of live DWDM and CWDM networks. Within just seconds of connecting to a network port, WDM900 users know the status of each channel, which channels require attention and exactly what action is required.

The WDM900 is engineered to perform under the harsh conditions typically found in a central office, headend, network node and other outside plant locations. Its highly-integrated solid state design features a hermetically-sealed optical path and no moving parts. An internal wavelength reference and temperature-stabilized measurement circuits eliminate long warm-up periods and accuracy drifts induced by sudden temperature and humidity changes. The WDM900 is the only portable WDM measurement system that satisfies Telcordia GR-2952-CORE environmental specifications.

The WDM900’s innovative Health Meter is protected by US Patent # 9,515,726.

Two different models of WDM900 are available.
- WDM900-40 – designed for commissioning, testing and troubleshooting of DWDM Access/Metro network links
- WDM900-60 – designed for commissioning, testing and troubleshooting of CWDM and DWDM Access/Metro network links

Ordering Information

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>AFL NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Includes a WDM900 Lightwave Test Set configured for 50 or 100 GHz DWDM C-band operation, SC/FC/LC (UPC) test port adapters, SC/FC/LC input attenuators, (2) One-Click Cleaners, AC adapter, user’s guide and soft carry case.</td>
<td>WDM900-40</td>
</tr>
<tr>
<td>Includes a WDM900 Lightwave Test Set configured for CWDM, 50 GHz and 100 GHz DWDM C-band operation, SC/FC/LC (UPC) test port adapters, SC/FC/LC input attenuators, (2) One-Click Cleaners, AC adapter, user’s guide and soft carry case.</td>
<td>WDM900-60</td>
</tr>
</tbody>
</table>
# WDM900 Lightwave Test Set

## Specifications

### OPTICAL

<table>
<thead>
<tr>
<th></th>
<th>DWDM (nm)</th>
<th>CWDM (nm)</th>
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</thead>
<tbody>
<tr>
<td>Usable Channel Spacing</td>
<td>50 GHz, 100 GHz</td>
<td>20 nm</td>
</tr>
<tr>
<td>Optical Return Loss</td>
<td>30 dB</td>
<td>30 dB</td>
</tr>
<tr>
<td>Adjacent Channel Rejection Ratio, ORR @50 GHz</td>
<td>48 dB (typical)</td>
<td>25 dB</td>
</tr>
<tr>
<td>Measurement Time</td>
<td>3 sec</td>
<td>3 sec</td>
</tr>
</tbody>
</table>

### WAVELENGTH MEASUREMENT

<table>
<thead>
<tr>
<th>Wavelength Coverage (ITU Channels)</th>
<th>WDM900-40</th>
<th>WDM900-60</th>
</tr>
</thead>
<tbody>
<tr>
<td>1527.99 nm to 1568.77 nm</td>
<td>CWDM 1–18</td>
<td></td>
</tr>
<tr>
<td>196.2 THz to 191.1 THz</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### POWER MEASUREMENT

<table>
<thead>
<tr>
<th>Range</th>
<th>WDM900-40</th>
<th>WDM900-60</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolute Accuracy</td>
<td>±0.8 dB</td>
<td>±0.8 dB</td>
</tr>
<tr>
<td>Display Resolution</td>
<td>±1.2 dB</td>
<td></td>
</tr>
</tbody>
</table>

### ENVIRONMENTAL RESILIENCE

- Dust Resistance Hermetically-sealed Light Path
- Shock Resistance, Intended Use: GR-2952-CORE, O4-14: 30 in drop onto hard surface, base on 3 principal axes
- Vibration Resistance: GR-2952-CORE, R4-15: 30 °C (≥95% relative humidity)
- Operating Environment: GR-2952-CORE, R4-19: 5 °C to 50 °C (≥95% relative humidity)
- Non-operating Environment: GR-2952-CORE, R4-18: modified to 30 °C (≥95% relative humidity)
- Electromagnetic Emissions: GR-2952-CORE, R4-1 & GR-1089-CORE and EN 5510

### ELECTROMAGNETIC SUSCEPTIBILITY

- GR-2952-CORE, R4-22 and GR-1089-CORE and EN 61000-4-6

### GENERAL

- Display: 6.5 in, high brightness, outdoor enhanced, 640 x 480 color TFT
- Touchscreen: Resistive technology, unaffected by moisture or water droplets
- Connectivity: 2 x USB 2.0 Host, 1 x USB 2.0 Client, RJ-45 LAN port (hardware only), IEEE 802.11 b/g/n (hardware only), Bluetooth 2.0 (hardware only)
- Internal Memory: 4 GB Flash
- External Storage: Removable USB Flash drive
- Report Formats: .csv and .pdf
- Battery Type: User replaceable Li-ion, rechargeable
- Battery Life: 8 hours minimum
- AC Adapter: Universal 100 to 240V AC, 47–63 Hz input, 18V DC output

### NOTES

1. All specifications valid at 23°C ±2°C (73.4°F ±3.6°F).
2. Channel power <-4 dBm, total input power <9 dBm for WDM900-40 model. Channel power <-1 dBm, total input power <12 dBm for WDM900-60 model. When mixed 2.5 Gb/s, 10 Gb/s and 40 Gb/s signals are at non-adjacent channels (power imbalance < 10 dB).
3. Same as (b) - When mixed 40 Gb/s signals are in adjacent channels (power imbalance <5 dB).
4. Between CWDM and DWDM operating modes within 1530, 1550, and 1570 nm spectral regions.
5. When signal OSNR within the range of 8 dB to 25 dB for 10 Gb/s or lower data rate within 50 GHz channel spacing.