OV-1000 V2 Optical Time Domain Reflectometer

A Corning Cable Systems Product

features and benefits |

Windows® XP technology	Up to 20x faster processing capability allowing faster trace acquisition and analysis
USB ports	Portable file transfer
PDF file conversion on unit	Improves file management satisfying many customers' requests
Retro-compatible	Older OV-1000 modules will work with the V2 mainframe

OV-1000 OTDR Kit | Photo LAN730

OV-1000 OTDR | Photo LAN731

Corning Cable Systems OV-1000 V2 Optical Time Domain Reflectometer (OTDR) provides testing flexibility by combining a rugged platform with field-interchangeable multimode, single-mode and advanced testing modules. Designed for testing and troubleshooting of LAN, Telco, CATV and FTTx networks, all OTDR modules can be used as continuous wave (CW) light sources. A video inspection probe, power meter and visual fault locator (VFL) are available as options on the mainframe.

The OV-1000 V2 also has an internal 8 gigabyte flash memory that stores at least 1500 traces and eliminates the need for a hard drive, which can fail under extreme field conditions. For extra storage capacity, the unit offers 3 USB ports for portable file transfer. The OV-1000 V2 OTDR product line offers a wide variety of multimode and single-mode modules and has the capacity to hold up to two modules at the same time. Modules can be easily switched out in the field in just a matter of seconds, without the use of tools.

The touchscreen keyboard eliminates the need for an external keyboard and has a rugged, splash-proof mainframe allows for testing in harsh conditions. The 6.4-in color touch screen is resistant to shock, water and most common chemicals used in the field. It is large enough to view both the trace and the event table simultaneously, which eliminates the need to toggle back and forth between the two. The unit accommodates up to two field interchangeable modules eliminating the need to change modules as often and offers instantaneous AutoSync USB for easier, faster file transfers and software upgrades. With four test modes — auto, advanced, template, and fault-finder — the OV-1000 V2 is future-ready with the ability to accept protocol testing modules, such as Gigabit Ethernet.

Note: This test equipment is classified as a category 9 item under RoHS (Directive 2002-95-EC) and is exempt from the restriction.

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specifications |

OV-1000 V2 OTDR Mainframe[1]

Display	Color touch screen; 640 x 480 TFT, 163 mm (6.4 in)
Interfaces	USB A main, USB B remote, compact flash, fiber inspection probe connector port (video)
Storage	8 gigabyte internal memory, USB stick 2 GB (optional)
Batteries[2]	Rechargeable Li-ion
Battery Operating Time	8 hrs as per Bellcore TR-NWT-001138
Power Supply	AC/DC adapter; input: 100 to 240 V, 50 to 60 Hz, 2 A max; output: 24 V DC, 90 watts
Operating Temperature	-5º to +50ºC (+23º to +122ºF)
Storage Temperature[3]	-40º to +70ºC (-40º to +158ºF)
Relative Humidity	0% to 95% non-condensing
Size (H x W x D)	32.2 x 19.7 x 10.9 cm (12.6875 x 7.75 x 4.3125 in)
Weight	2.5 kg (5.4 lb)
Vibration	< 1.5 g at 10 to 500 Hz (on 3 main axes)
Mechanical Shock	< 760 mm on 6 sides and 8 main edges (according to GR-196-CORE)

Power Meter - Optional

Calibrated Wavelengths (nm)	850, 1300, 1310, 1490, 1550, 1625, 1650
Detector	InGaAs
Power Range	10 to -86 dBm
Power Uncertainty[4]	± 5 % ± 3 pW
Display Resolution	0.01 = max to -76 dBm; 0.1 = -76 dBm to -86 dBm; 1 = -86 dBm to min
Automatic Offset Nulling Range[5]	Max to -63 dBm
Tone Detection	270 Hz, 1 kHz, 2 kHz

Visual Fault Locator - Optional

Central Wavelength	Laser, 650 ± 10 nm
Pulse	Continuous wave (CW), 1 kHz
Typical Power Output[6]	3 dBm (2 mW)
Safety	Class 3R Laser Product

Notes:
[1]All specifications valid at 23ºC ± 2ºC.
[2]Standard recharge time is three hours. Recharge temperature: 0º to 35ºC (32º to 95ºF).
[3]Not including internal batteries. Battery maximum storage temperature: 60ºC (140ºF).
[4]Up to 5 dBm.
[5]For ± 0.05 dB, from 18º to 28ºC.
[6]Typical values when coupled to detector with air gap.

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specifications | (continued)

Multimode Module[1]				
Model	Wavelength (nm)	Dynamic Range[2,3] (dB)	Event Dead Zone[4] (m)	Attenuation Dead Zone[4] (m)
400-MD26	850 ± 20/1300 ± 2	27/26	1/1	3/4

Single-Mode Modules[1]					
Model	Wavelength (nm)	Dynamic Range[2,3] (dB) at 10 µs (dB)	Dynamic Range[2,3] (dB) at 20 µs (dB)	Event Dead Zone[4] (m)	Attenuation Dead Zone[4] (m)
400-SD34	1310 ± 20/1550 ± 20	35/34	37/35	1/1	4.5/5
400-SD37	1310 ± 20/1550 ± 20	38/37	39/38	1/1	5/6

Multimode Module[1]					
Model	Wavelength (nm)	Dynamic Range[2,3] (dB) at 10 µs (dB)	Dynamic Range[2,3] (dB) at 20 µs (dB)	Event Dead Zone[4] (m)	Attenuation Dead Zone[4] (m)
400-MDSD	850 ± 20/1300 ± 20	27/26		1/1	3/4
	1310 ± 20/1550 ± 20	35/34			

Notes:
[1]All specifications valid at 23ºC ± 2ºC.
[2]Typical dynamic range with longest pulse and three-minute averaging at SNR = 1.
[3]Multimode dynamic range is specified for 62.5 µm fiber; a 3 dB reduction is seen when testing 50 µm fiber.
[4]Typical dead zone of multimode reflectance below -35 dB.
[5]Typical dynamic range with three-minute averaging at SNR = 1.
[6]Typical dead zone of single-mode modules for reflectance below -45 dB, using a 5 ns pulse.

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specifications | (continued)

General

	400-MD26/400-MDSD	400-SD34/400-SD37/400-MDSD
Distance Range (km)	0.1, 0.3, 0.5, 1.3, 2.5, 5, 10, 20, 40	1.25, 2.5, 5, 10, 20, 40, 80, 160, 260
Pulse Width (ns)	5, 10, 30, 100, 275, 1000	5, 10, 30, 100, 275, 1000, 10,000, 20,000
Multimode Launch Conditions	Class CPR 1 or 2	N/A
Linearity	± 0.03 dB/dB	± 0.03 dB/dB
Loss Threshold	0.01 dB	0.01 dB
Loss Resolution	0.001 dB	0.001 dB
Sampling Resolution	0.04 to 2.5 m	0.04 to 5 m
Sampling Points	Up to 128,000	Up to 128,000
Distance Uncertainty[1]	± (0.75 + 0.0025% x distance) m	± (0.75 + 0.0025% x distance) m
Measurement Time	User-defined (60 min. maximum)	User-defined (60 min. maximum)
Real-time Refresh	Guaranteed: ≤ 0.4 sec	Guaranteed: ≤ 0.4 sec, Typical: ≤ 0.3 sec
Stable Source Output Power[2]	-1.5 dBm	-8 dBm (SD34, MDSD), -4.5 dBm (SD37)
Recommended Calibration Cycle	1 year	1 year
Safety	Class 1M Laser Product	Class 1M Laser Product

Notes:
[1]Does not include uncertainty due to fiber index and sampling resolution.
[2]Typical output power is given at 1300 nm for multimode and 1550 nm for single-mode.

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ordering information |

Part Number	Description
Basic Kits	Basic Kits include OV-1000 V2 mainframe, power supply, battery, appropriate OTDR port adapters, CD with OTSView PC emulation software and manual, cleaning supplies and hard-shell transit case.
1002BK-SD34	Short-Range Dual Single-Mode OTDR (module 400-SD34) with SC and FC OTDR port adapters
1002BK-SD37	Mid-Range Dual Single-Mode OTDR (module 400-SD37) with SC and FC OTDR port adapters
1002BK-MD26	Dual Multimode OTDR (module 400-MD26) with SC and ST® Compatible OTDR port adapters
1002BK-MDSD	Dual Multimode and Single-Mode OTDR (module 400-MDSD) with SC and ST Compatible OTDR port adapter
Deluxe Kits	Deluxe Kits include OV-1000 mainframe with power meter and VFL, power supply, battery, appropriate OTDR port adapters, CD with OTSView PC emulation software and manual, OTS Reporter processing software, cleaning supplies and hard-shell transit case.
1002DK-SD34	Short-Range Dual Single-Mode OTDR (module 400-SD34) mainframe has power meter and VFL, SC and FC OTDR and meter port adapters, OTS batch software
1002DK-SD37	Mid-Range Dual Single-Mode OTDR (module 400-SD37) mainframe has power meter and VFL, SC and FC OTDR and meter port adapters, OTS batch software
1002DK-MD26	Dual Multimode OTDR (module 400-MD26) mainframe has power meter and VFL, SC and ST Compatible OTDR and meter port adapters, OTS batch software
1002DK-MDSD	Dual Multimode and Dual Single-Mode OTDR (module 400-MDSD) mainframe has power meter and VFL, SC and ST Compatible OTDR and meter port adapters, OTS batch software
Mainframes	Standard components on mainframes include 6.4-in color touch screen, 3 USB ports, and RJ-45 port.
1002-MAINF	OTDR Controller (same frame as basic frame)
1002-MAINF-VPM	OTDR Controller with power meter and VFL (same frame as deluxe frame)

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ordering information | (continued)

Part Number	Description
OV-1000 V2 Modules	(Note: Older OV1000 modules will work with the new mainframe) Includes SC OTDR port adapter(s).
400-MD26	Multimode OTDR Module, 850/1300 nm
400-SD34	Single-Mode Short-Range OTDR Module, 1310/1550 nm
400-SD37	Single-Mode Mid-Range OTDR Module, 1310/1550 nm
400-MDSD	Multimode/Single-Mode Quad OTDR Module, 850/1300/1310/1550 nm
Accessories	
UI-SC	Universal Interface Source / OTDR Connector Adapter, SC
UI-ST	Universal Interface Source / OTDR Connector Adapter, ST® Compatible
UI-FC	Universal Interface Source / OTDR Connector Adapter, FC
OA-SC	Power Meter Connector Adapter, SC
OA-ST	Power Meter Connector Adapter, ST Compatible
OA-FC	Power Meter Connector Adapter, FC
OA-LC	Power Meter Connector Adapter, LC
OA-MTRJ	Power Meter Connector Adapter, MT-RJ
OTSREPORTER	PC Batch Processing Software
CASE-OV-1000	Hard-Shell Transit Case with wheels
PS-OV-1000	Power Supply for 100-240 V AC with US line cord
1000-OV-BATT	Replacement Battery for OV-1000
1000-MEMORY-2G	OV-1000 Memory Stick for 2GB of USB Storage (Windows® CE compatible)
1000-STYLUS	Replacement Stylus for OV-1000
TE-WARRANTY-1	1-Year Extended Warranty, includes all repairs and replacement charges of defective parts excluding freight; does not include normal, yearly calibration
TE-WARRANTY-2	2-Year Extended Warranty, includes all repairs and replacement charges of defective parts excluding freight; does not include normal, yearly calibration

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ordering information | (continued)

Part Number	Description
OTDR Access Jumpers	
PTF-100-65050	Portable Test Fiber Box, MM 62.5 µm fiber, ST® Compatible to ST Compatible, 100 m
PTF-100-63950	Portable Test Fiber Box, MM 62.5 µm fiber, SC to ST Compatible, 100 m
PTF-100-63939	Portable Test Fiber Box, MM 62.5 µm fiber, SC to SC, 100 m
PTF-100-55050	Portable Test Fiber Box, Pretium® 300 Multimode Solution, ST Compatible to ST Compatible, 100 m
PTF-100-53950	Portable Test Fiber Box, Pretium 300 Multimode Solution, SC to ST Compatible, 100 m
PTF-300-S4458	Portable Test Fiber Box, single-mode fiber, SC UPC to SC APC, 300 m
PTF-300-S5454	Portable Test Fiber Box, single-mode fiber, FC UPC to FC UPC, 300 m
PTF-300-S5858	Portable Test Fiber Box, single-mode fiber, SC UPC to SC UPC, 300 m
PTF-300-S6161	Portable Test Fiber Box, single-mode fiber, ST Compatible UPC to ST Compatible UPC, 300 m
Video Inspection Probe for OV1000	(For more information, please reference EVO-735-EN)
VIPROBE-DUAL	Video Inspection Probe (200x/400x magnification), FC-SC tip for bulkheads, U25M universal patch cord tip for 2.5 mm ferrules, compartmented plastic case for tips

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ordering information | (continued)

Part Number	Description
VIPROBE-DUAL Tips	
VIPROBE-FSE	FC and SC Tip for bulkhead adapter
VIPROBE-FSA	FC and SC/APC Tip for bulkhead adapter
VIPROBE-LC	LC Tip for bulkhead adapters
VIPROBE-LCA	LC/APC Tip for bulkhead adapter
VIPROBE-MTP	MTP® Tip for bulkhead adapter - extended
VIPROBE-MTPA2	MTP/APC Tip for bulkhead adapter - extended, reversible
VIPROBE-ST	ST® Tip for bulkhead adapter
VIPROBE-U12	Universal Patch Cord Tip for 1.25 mm ferrules
VIPROBE-U12A	Universal Patch Cord Tip for 1.25 mm ferrules APC
VIPROBE-U25	Universal Patch Cord Tip for 2.5 mm ferrules
VIPROBE-U25A	Universal Patch Cord Tip for 2.5 mm ferrules APC
VIPROBE-OTAPA	OptiTap® Bulkhead Adapter
VIPROBE-OTIAM-OTIAF	OptiTip® MT Bulkhead Adapter, includes tip plus male and female adapters
VIPROBE-OTIAM	Male Adapter Tube for FIPT-400-OTIP-MT-APC tip
VIPROBE-E2K	E-2000 Tip for bulkhead adapter
VIPROBE-E2KA	E2000 APC Tip for bulkhead adapters
VIPROBE-A	Adapter Tip (allows the user to attach any Westover probe tip that does not include optics to Corning's probe)
OV-1000 Ethernet Module	(For more information, please reference EVO-1147-EN)
1000-GIG-MOD	Gigabit Ethernet Testing Module for OV-1000 platform; module has (2) 10/100/1000BASE-T and (1) Gigabit Ethernet SFP optical port; performs RFC 2544, BERT and frame analysis
1000-SFP-850	1000BASE-SX (850 nm) Optical SFP Transceiver Module with LC connectors for Gigabit testing module (VCSEL source)
1000-SFP-1310	1000BASE-LX (1310 nm) Optical SFP Transceiver Module with LC connectors for Gigabit testing module (FP Laser source)
1000-SFP-1550	1000BASE-ZX (1550 nm) Optical SFP Transceiver Module with LC connectors for Gigabit testing module (DFB Laser source)
1000-DIVERTER	Diverter for Gigabit Ethernet testing; includes Ethernet Network Interface Unit with a loop back testing feature with RJ45 interface; also includes a media converter with SFP interface; power supplies and manual; SFP purchased separately

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