OLP-55 SMART Optical Power Meter

A SMART, Future-Proof Optical Power Meter

Key features

- **Industry's first auto-zeroing function provides outstanding accuracy with no manual zeroing necessary. The OLP-55 offers the highest accuracy on the market.**
- **Auto-lambda function provides automatic wavelength detection to speed up testing and avoid instrument setting failures.**
- **TWINtest and new TRIPLEtest allows for simultaneous testing at multiple wavelengths.**
- **Illuminated graphical user interface (GUI) displays all necessary parameters and up to three test results simultaneously.**
- **Reflection trap reduces multiple reflections between adapter and photo diode, allowing for increased accuracy (adapter BN 2014/00.xx).**
- **FTTx ready**

JDSU's SMART optical handhelds go beyond the basics

With more than 100,000 optical handhelds already in use, JDSU continues the success story with the SMART optical handhelds . The SMART class help your network move to the next level of performance. JDSU's SMART optical handhelds encompass a new, intelligent, and next level product line for testing all optical signals and systems, including broadband, PONs, and Gigabit Ethernet.

All of JDSU's SMART optical handhelds provide:

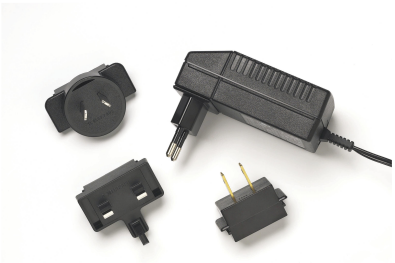
- Up to 900 calibrated wavelengths for the highest performance range in the industry.
- A large storage capability for up to 1000 results with automatic date/time stamp.
- An illuminated graphical display which shows up to 3 measurements simultaneously.
- A USB port for remote operation as well as easy Microsoft Excel™-based report generation and analysis.
- A unique power supply management system on the market with 4 different ways of powering the unit.
- Quick start operation, requiring no warm-up time and reducing testing time.
- A robust, shock-proof, and splash-proof design for field operation.

The **OLP-55 SMART Optical Power Meter** is a high-performance power meter for testing, installing, and maintaining singlemode and multimode cables and networks. It creates a new industry standard in accuracy with its unique built-in auto-zeroing function for auto dark current compensation, allowing for increased accuracy in measurements.

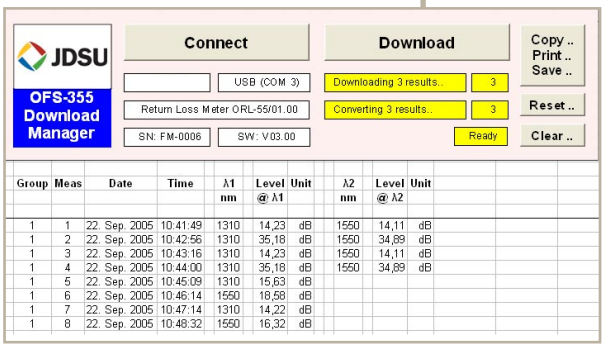
OCK-10 Optical Connector Cleaning Kit (accessory)

OVF-1 Visual Fault Locator (accessory)

Optical adapters (BN 2014) for laser source output



Worldwide compatible AC adapter (SNT-121A)



Group	Meas	Date	Time	λ1 nm	Level @ λ1	Unit	λ2 nm	Level @ λ2	Unit
1	1	22. Sep. 2005	10:41:49	1310	14,23	dB	1550	14,11	dB
1	2	22. Sep. 2005	10:42:56	1310	35,18	dB	1550	34,89	dB
1	3	22. Sep. 2005	10:43:16	1310	14,23	dB	1550	14,11	dB
1	4	22. Sep. 2005	10:44:00	1310	35,18	dB	1550	34,89	dB
1	5	22. Sep. 2005	10:45:09	1310	15,63	dB			
1	6	22. Sep. 2005	10:46:14	1550	18,68	dB			
1	7	22. Sep. 2005	10:47:14	1310	14,22	dB			
1	8	22. Sep. 2005	10:48:32	1550	16,32	dB			

OFS-355 Optical Fiber Assistant Software –
Free PC documentation software

Specifications

	General purpose BN 2277/01	High sensitivity BN 2277/02	High power (26 dBm) BN 2277/03	Ultra high power (30 dBm) BN 2277/04
Wavelength range	780 to 1650 nm in 1 nm increments	800 to 1700 nm in 1 nm increments	800 to 1700 nm in 1 nm increments	800 to 1700 nm in 1 nm increments
Number of calibrated wavelengths	870	900	900	900
Photo diode	Germanium (GE)	InGaAs	filtered InGaAs	filtered InGaAs
Fiber type	9/125 to 100/140 µm	9/125 to 50/125 µm	9/125 to 50/125 µm	9/125 to 50/125 µm
Display range	**-70 to +20 dBm**	**-80 to +15 dBm**	**-60 to +26 dBm**	**-60 to +30 dBm**
Max. permitted level	+20 dBm	+15 dBm	+26 dBm	+30 dBm
Intrinsic uncertainty(1)	± 0.13 dB (± 3%)	± 0.13 dB (± 3%)	± 0.13 dB (± 3%)	± 0.13 dB (± 3%)
Overall measurement uncertainty	-60 to +18 dBm 850 nm ± 0.25 dB ± 0.8 nW 1300, 1310 nm ± 0.2 dB ± 0.2 nW 1550 nm ± 0.4 dB ± 0.2 nW 1625 nm(3) ± 1.5 dB (typ.) ± 0.6 nW	-70 to +11 dBm 850 nm ± 0.3 dB ± 0.15 nW 1300, 1310 nm ± 0.2 dB ± 0.02 nW 1550 nm ± 0.2 dB ± 0.02 nW 1625 nm ± 0.4 dB ± 0.02 nW	-47 to +26 dBm 850 nm ± 0.33 dB ± 25 nW 1300, 1310 nm ± 0.25 dB ± 4 nW 1550 nm ± 0.25 dB ± 4 nW 1625 nm ± 0.5 dB ±4 nW	-47 to +30 dBm 850 nm ± 0.33 dB ± 25 nW 1300, 1310 nm ± 0.25 dB ± 4 nW 1550 nm ± 0.25 dB ± 4 nW 1625 nm ± 0.5 dB ± 4 nW

(1) Under reference conditions: -20 dBm (CW), 1310 nm ± 1 nm, 23°C ± 3K, up to 75% relative humidity, 9 to 50 µm test fiber with DIN connector

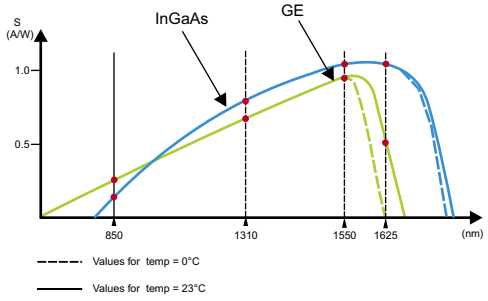


Photo diodes are used for conversion. They have different spectral characteristics, depending on the type of semiconductor. Germanium (GE) and Indium Gallium Arsenide (InGaAs) diodes, are suitable for broadband signaling in the second, third and fourth optical window, where their sensitivity is highest. Ge diodes, which are used as a low-cost variant in all four windows, are the most sensitive to temperature. Choosing the correct wavelength and a sufficiently large dynamic range for the optical laser source and receiver are crucial to the precision of the measurement results.

General specifications

Modulation detection (fiber detection)	270 Hz, 1 kHz, 2 kHz
Auto-lambda (λ) detection:	850 nm to 1650 nm (with any JDSU Optical Laser Source)

Memory

Data memory	1000 measurement results
Data readout/remote control	via USB interface

Display

Illuminated graphical display, resolution of 128 × 64 dots, displays up to three power readings simultaneously

Resolution	0.01 dB/0.001 µW
Results displayed in	dBm, dB, mW, µW

Backlight function switchable via a separate key

Optical connector

Optical connector interchangeable adapter from BN 2014/00.xx range is suitable for measurements on flat or angled physical contact systems

2.5-mm plugs: FC, ST, SC, DIN, E2000, SMA

1.25-mm plugs: LC, MU adapter

Power supply

Four dry batteries Mignon/AA, 1.5 V or NiMH rechargeable cells Mignon/AA, 1.2 V

Operating time from dry batteries	>100 h

Batteries/NiCd/NiMH power saving:
The instrument switches off automatically after ~20 min (can be disabled)

AC line operation via separate AC adapter

Integrated fast battery charging function (2 hours)

External 12 V DC operating via an AC adapter or a 12 V car battery adapter

Electromagnetic compatibility

Corresponds to IEC 61326 (CE conformance)

Calibration

Suggested calibration interval	3 years

Ambient temperature

Nominal range of use	–10°C to +55°C
Storage and transport	–40°C to +70°C

Dimensions and weight

W × H × D approximately	95 × 60 × 195 mm (3.74 × 2.36 × 7.68 in)
Weight approximately	500 g (1.1 lb)

Ordering Information

Ordering number	Instrument
BN 2277/01	OLP-55 GE diode, general purpose
BN 2277/02	OLP-55 InGaAs diode, high sensitivity
BN 2277/03	OLP-55 InGaAs diode, high power (26 dBm)
BN 2277/04	OLP-55 InGaAs diode, ultra high power (30 dBm)

OFS-355 Optical Fiber Assistant Software

Free PC documentation software (available from http://www.jdsu.com/global/customer_care/Software_Updates/index.html)

Included with the OLP-55

Interchangeable adapter from BN 2014/00.xx range ; four dry batteries Mignon/AA, 1.5 V; operating manual ; MT-1S Belt bag

Ordering number	Accessories
BN 2014/00.21	Optical adapter ST type
BN 2014/00.24	Optical adapter SC type
BN 2014/00.09	Optical adapter FC type
BN 2014/00.17	Optical adapter DIN type
BN 2014/00.26	Optical adapter E-2000 type
BN 2014/00.27	Universal push/pull adapter for DIN, FC, SC, ST
BN 2014/00.28	Universal push/pull adapter for LC, MU
BN 2252/01	OVF-1 Visual Fault Locator
BN 2229/90.21	OCK-10 Optical Connector Cleaning Kit
BN 2229/90.07	Optical cleaning tape
BN 2229/90.08	Spare tape for optical cleaning tape
BN 2237/90.02	NiMH cells, Mignon/AA, 1.2 V (4 required per instrument)
BN 2277/90.01	SNT-121A Worldwide compatible AC adapter
K804	USB connection cable
BN 2277/90.02	MT-1S belt bag for one instrument
BN 2126/03	MT-2S soft bag for two instruments
BN 2126/04	MT-3S soft bag for three instruments
BN 2093/31	MK-3S hard case for three instruments
BN 2277/90.03	Calibration Report

Detailed information regarding test adapters, cables, and fiber optic sleeves can be found in a separate datasheet entitled "JDSU Fiber Optic Test Adapters and Cables".

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