



## OLA-15

for single-mode applications  
at 1310 and 1550 nm

- Wide range of applications in systems installation and maintenance, as well as production
- Large, continuously variable attenuation range
- Attenuation settings highly accurate and reproducible
- High return loss
- Universal interchangeable adapter system
- Rugged shock and water-resistant casing
- AC, dry- or rechargeable battery operation

### Wide range of applications in systems installation and maintenance, as well as production

The OLA-15 Optical Attenuator is a handy-sized, rugged instrument for variably attenuating optical signals in single-mode applications at 1310 and 1550 nm. Example applications include the simulation of line loss for BER tests on fiber optics systems, the determination of system margin / receiver sensitivity or the calibration of optical power meters. A complete test set comprising signal source, attenuator and power meter contained in a shock-resistant case is also available.

### Large, continuously variable attenuation range

The large rotary control on the front panel is used to set attenuation quickly and simply within a wide range between 3 and 60 dB.

The optical path is not interrupted when the attenuation is altered. As the OLA-15 is bidirectional, the instrument is very easy to use.

### Attenuation settings highly accurate and reproducible

Reliable measurements demand accuracy and reproducibility of the attenuation setting. Each instrument is individually calibrated, guaranteeing that every OLA-15 meets this requirement. Careful design of the optical components ensures interference-free attenuation settings over the entire temperature range. The attenuation setting is indicated on a large liquid-crystal display.

### High return loss

The OLA-15 is also suitable for measurements on systems sensitive to back-reflection, e.g. those operating at high bit rates. The return loss (reflection attenuation) of more than 40 dB means that the OLA-15 can be looped into the signal path without problems and without affecting the transmission characteristics.

### Universal interchangeable adapter system

The universal system of interchangeable adapters allows matching to all commonly-used fiber optics connector systems, such as FC, SC and DIN. It also ensures easy access to the instrument's internal connectors for the purposes of cleaning and inspection. Special dust caps protect the optical connectors from dirt and damage.

### Rugged shock and water-resistant casing

The instrument is protected against shocks and wear and tear by a well-designed, non-slip, robust casing, giving the OLA-15 the mechanical ruggedness required for field use under often difficult ambient conditions. The foil keypad gives protection against dripping water. A fold-out instrument stand is located on the back panel.

### AC line or long-life battery operation

The Optical Attenuator is designed for use with dry batteries or with NiCd cells. Typical operating time from dry batteries is 45 hours; a set of NiCd cells will run for typically 15 hours, more than a day of uninterrupted operation. When a separate AC adapter is used, the instrument can be AC powered and NiCd batteries fitted in the instrument can also be recharged.

## Specifications for the Optical Attenuator

OLA-15

### Wavelength

Range of use ..... 1260 to 1625 nm  
Calibrated at ..... 1310 and 1550 nm

### Attenuation setting

Attenuation range ..... 3 to 60 dB  
Minimum insertion loss<sup>1)</sup> ..... ≤3 dB  
Linearity ..... ± 0.2 dB  
Repeatability of attenuation setting<sup>2)</sup> ..... ± 0.1 dB  
Total attenuation uncertainty<sup>1)</sup> ..... ± 0.8 dB  
Setting type ..... continuous over  
the entire attenuation range  
Function ..... bidirectional

**Attenuation display** ..... 4-digit liquid-crystal display  
Displayed value ..... absolute attenuation including connector  
Resolution ..... 0.05 dB

### Optical input/output

Interchangeable adapter  
BN 2060/00.xx ..... e. g. DIN, FC, SC, ST  
Fiber type ..... single-mode 9/125 µm  
Return loss at input / output<sup>3)</sup> ..... >40 dB  
Maximum input level ..... +20 dBm

### General specifications

#### Power supply

Dry batteries ..... 2 × Mignon (AA) 1.5 V  
NiCd rechargeable batteries ..... 2 × Mignon (AA) 1.2 V  
Operating time (typical) ..... 45 h (dry batteries) /  
15 h (NiCd cells)  
Battery / NiCd power saving ..... automatic cutoff  
after approx. 20 min (can be disabled)  
AC line operation ..... with separate AC adapter unit NT-20  
Battery charging ..... Batterie charged externally  
with charger unit, internally using NT-20

#### Electromagnetic

compatibility ..... conforms to EN standards  
50 081-1 and 50 082-1 (CE conformance)

#### Ambient temperature

Nominal range of use ..... -5 to +55 °C  
Storage and transport ..... -40 to +70 °C

Dimensions (w × h × d) in mm ..... approx. 95 × 49 × 195

Weight (including batteries) ..... approx. 500 g

1) Including connectors (to IEC 874-1, Method 6)

2) Excluding remating

3) Typical value; depends on the characteristics of the external plug

## Ordering information

### OLA-15 Optical Attenuator<sup>1)</sup>

BN 2239/01

#### Options

Calibration report for OLA-15 ..... BN 2239/90.01

#### Accessories

Test adapters ..... BN 2060/00.xx

NiCd cell, Mignon (AA) type<sup>2)</sup> ..... BN 2229/90.02

Battery Charger (for external charging)

220 V, Euro-style plug ..... BN 2229/90.03

110 V, US-style plug ..... BN 2229/90.09

NT-20 AC Adapter

EURO Version ..... BN 2238/90.02

UK Version ..... BN 2238/90.03

US Version ..... BN 2238/90.04

Australian Version ..... BN 2238/90.05

Carrying Strap

BN 820/00.52

Cleaning tape for optical connectors

BN 2229/90.07

MK-1 Equipment Case

BN 2090/13

(Hard-shell case for 2 instruments plus accessories)

MT-2 Instrument Bag

BN 2126/01

(Soft-carrying bag for 2 instruments plus accessories)

MT-32 Instrument Bag

BN 2126/32

(Soft-carrying bag for 1 × OLX-1x and 2 × OLX-x and accessories)

ABK-30 Storage Case

BN 2126/30

(for storing adapters, cables and other accessories)

Detailed information on adapters, cables and fiber optics couplers is found in the separate data sheet "Fiber Optics Test Adapters and Cables".

1) Two adapters BN 2060/00.xx are included with each instrument (except for bare fiber adapter BN 2060/00.39).

Specify type required when ordering.

2) Two required.

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Communications Test Solutions

