

MBR1

Multi-Channel Backreflection Meter



Product Description

The MBR1 Multi-Channel Backreflection Meter is an instrument developed with extremely stable optics for precise measurement of backreflection, insertion loss, and power.

Available with 4, 12, 16, 24, 32, 48 or 72 output channels, the MBR1 is a practical choice for both single fiber and multifiber testing.

The MBR1 features up to four built-in laser sources at wavelengths of 450, 650, 780, 850, 1060, 1300, 1310, 1490, 1550, 1625 or 1650 nm (depending on fiber type). Custom configurations available per request.

The MBR1 achieves ultra-stable backreflection measurements at very low values with accuracy typically at ± 0.4 dB and measurement sensitivity is to -80 dB. In addition, the cavity option is particularly useful for multi-fiber connectors with large fiber counts. The MBR1 can be used with our GMS software to help automate short and long term testing. All our MBR1 meters come standard with our GMS Software at no additional cost. The multimode option of the MBR1 meets IEC 61280-4-1 Encircled Flux standard.

KEY FEATURES

- Stable BR measurements at low values
- Up to 72 output channels
- IL and BR measurements
- Up to 4 internal lasers

APPLICATIONS

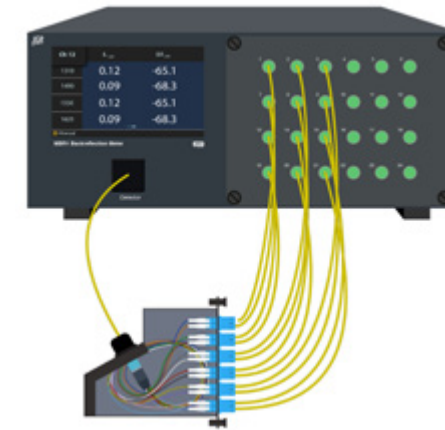
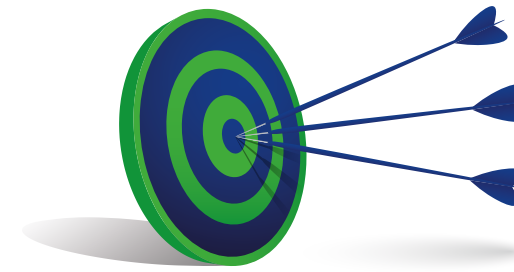
- Component testing
- Ribbon fiber testing
- Simultaneous testing with multiple connector types
- Incoming inspection
- QA testing

COMPLIANCE

- MM meets IEC 61280-4-1 Encircled Flux standard
- UL/CSA 61010
- IEC 61010
- IEC 60825-1 (Class 1)
- FCC Part 15 (Class A)
- EN 61326 (Class A)

IN THE BOX

- MBR5
- AC power cord
- Calibration certificate
- Calibrated jumper
- Hybrid test jumper
- Detector cap
- FC detector adapter
- MW3 mandrel wrap



Switching Technology

JGR uses opto-mechanical switches because of their superior stability in all environments. This is a key factor for an insertion loss and backreflection measurement system such as the MBR1, especially for high-volume manufacturing. JGR's switches are repeatable to within ± 0.005 dB so their influence is negligible. This makes the MBR1 a great multi-channel tester for many applications.

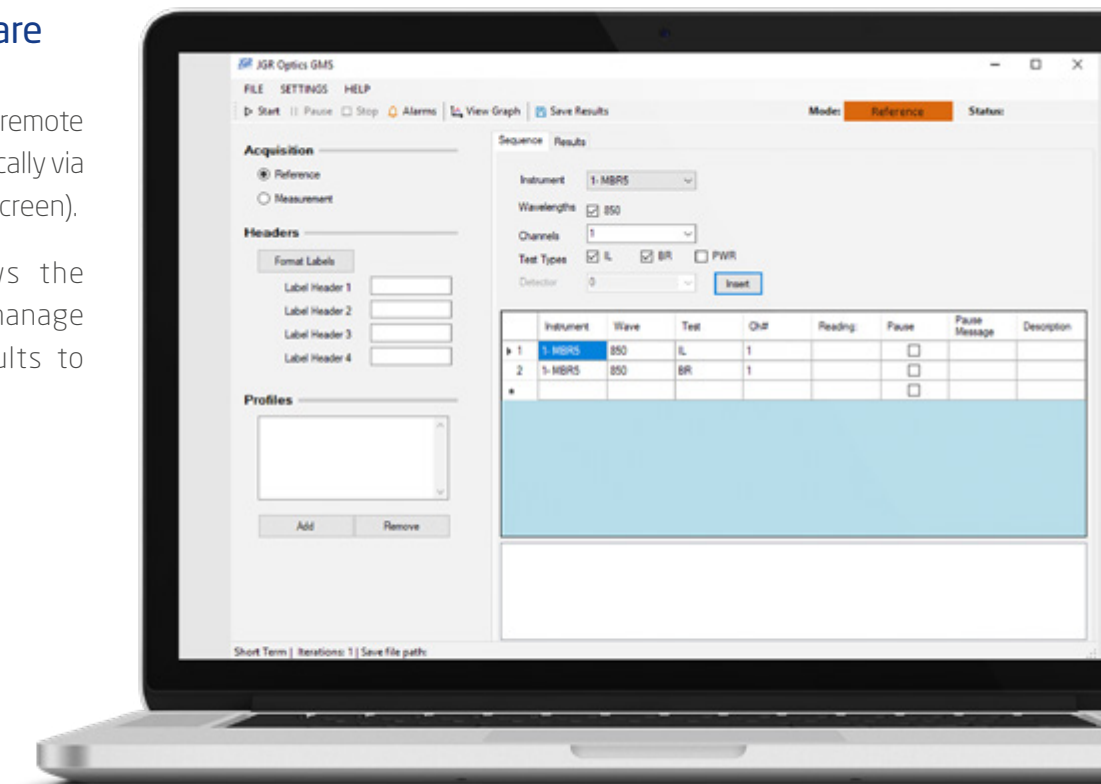
Cassette Testing

Testing short devices can be difficult and time consuming. By using the MBR1, testing of IL/BR can be completed faster than any other solution while maintaining measurement accuracy. Results can be saved and test sequences can be automated by using the GMS Software.

Production Friendly Software

The meter may be controlled through remote control interface (USB, Ethernet) or locally via the user-friendly front panel touch screen.

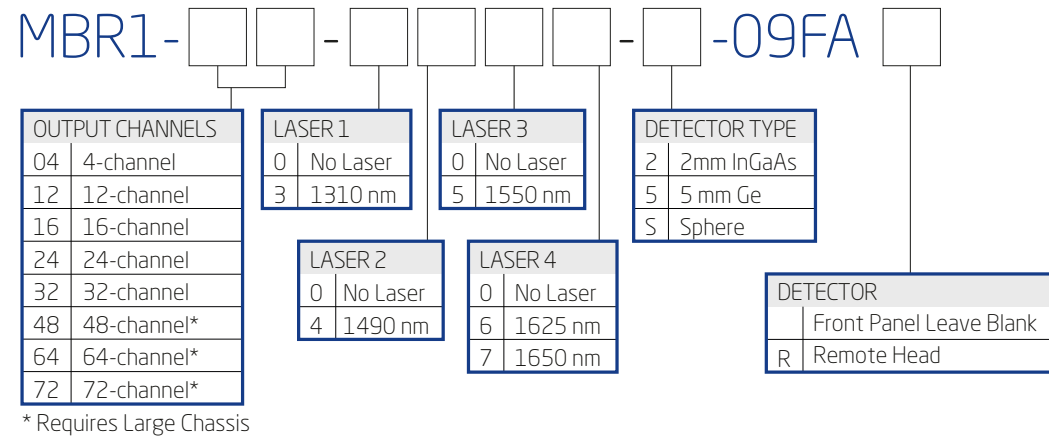
The free GMS Software allows the user to configure test profiles, manage test sequences and export results to preconfigured templates.



Ordering Scheme

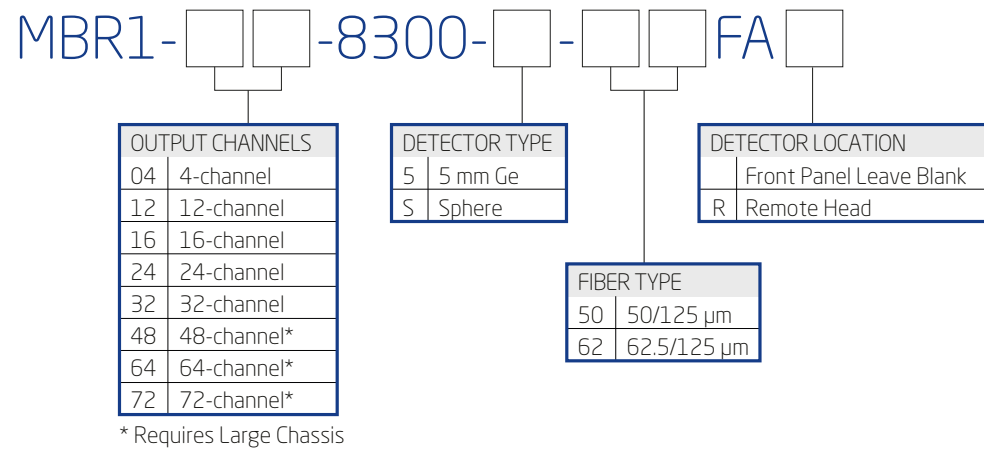
1 - Configure Multi-Channel Backreflection meter

Single-mode version



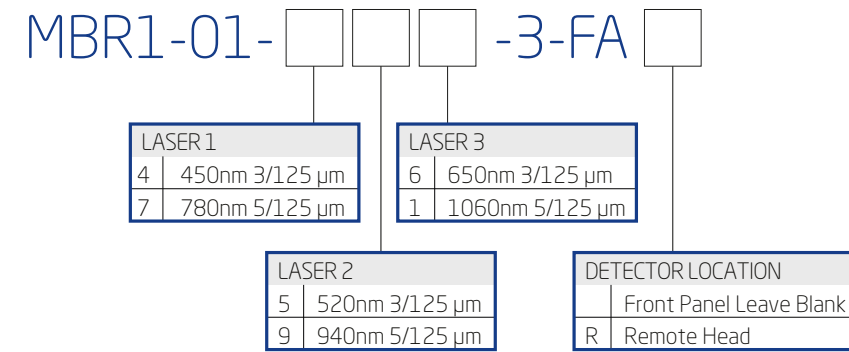
- Up to 4 lasers may be selected for the single-mode version

Multimode version



- The standard multimode version contains two lasers at 850 and 1300 nm.
- Other wavelengths are available upon request

Short wavelength single-mode version



- Up to 3 wavelengths may be selected of the same core size.
- Other wavelengths and core sizes available upon request.

2 - Add accessories

Slide detector adapters



SD

TYPE					
00	Cap	14	MU	20	DA113 Barrel
01	FC	15	E2000	21	BFA3000 Barrel
02	ST	16	Universal 2.5.	26	Universal 1.6
03	SC	17	MTP/MPO	34	LC Duplex
04	Universal 1.25.	18	LC	35	Optitap
12	MT	19	MT-RJ	37	MXC
				38	MTP0/MPO-16
				64	CS
				67	SN
				68	MDC

More detector adapters available upon request. See more details on pg 110.

Mandrel wrap 3 diameters



MW3

Index matching block



NTT-Block

Optical/Electrical Specifications

Parameter	Specification				
	Single-mode	Short Wavelength Single-mode		Multimode	
Fiber Type (µm)	9/125	3/125	5/125	50/125	62.5/125
Encircled Flux Standard	N/A			IEC-61280-4-1	
Operating Wavelengths (nm)	1310 / 1490 / 1550 / 1625 / 1650	450 / 520 / 650	780 / 940 / 1060	850 / 1300	
Backreflection Range (dB)	0 to -85	0 to -60			
Backreflection Accuracy (dB) ^{1,2}	± 0.4				
Detector Type	2 mm InGaAs / 3mm Si / 5mm Ge / Cavity				
Power Range (dBm)	0 to -80 / 0 to -60 / 0 to -60 / 0 to -40				
Absolute Power Accuracy (dB) ³	± 0.25				
Relative Power Accuracy (dB)	± 0.03 (< 5 dB loss) ± 0.15 (> 5 dB loss)				
Remote Interface	USB / Ethernet				
Input Voltage	100 - 240 V AC, 50 - 60 Hz				
Power Consumption (VA)	60 maximum				

Notes:
¹ Add 0.1 dB to the spec for every 1dB below -60dB (single-mode).
² Add 0.1dB to the spec for every 1dB below -45dB (multimode).
³ Measured at -10 dBm.

Mechanical/Environmental Specifications

Parameter	Specification	
	Standard Chassis	Large Chassis
Max Channel Count	24	72
Unit Dimensions W x H x D (cm)	13 x 13.4 x 31	
Shipping Box Dimensions W x H x D (cm)		
Unit Weight (kg)	8	14
Total Shipment Weight (kg)	9	15
Operating Temperature (°C)	0 to 55	
Storage Temperature (°C)	-40 to 70	
Humidity (Non-condensing)	Maximum 95% RH from 0 to 40°C	

