



GMS Software

### Product Description

The MBR5 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 MBR5 is a practical choice for both single fiber and multifiber testing.

The MBR5 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 MBR5 achieves ultra-stable backreflection measurements at very low values with accuracy typically at  $\pm 0.4$  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 MBR5 can be used with our GMS software to help automate short and long term testing. All our MBR5 meters come standard with our GMS Software at no additional cost. The multimode option of the MBR5 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

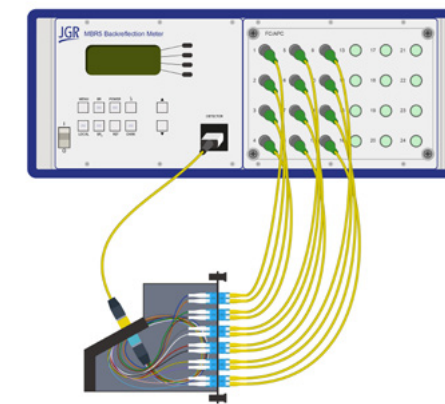
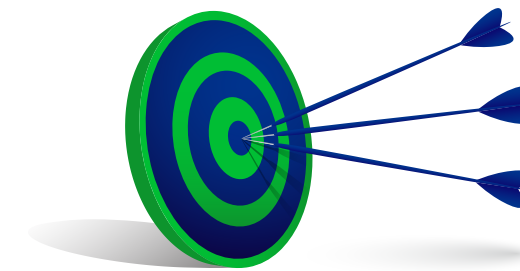
- Component testing
- Ribbon fiber testing
- Simultaneous testing with multiple connector types
- Incoming inspection
- QA testing

### 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 MBR5, especially for high-volume manufacturing. JGR's switches are repeatable to within  $\pm 0.005$  dB so their influence is negligible. This makes the MBR5 a great multi-channel tester for many applications.

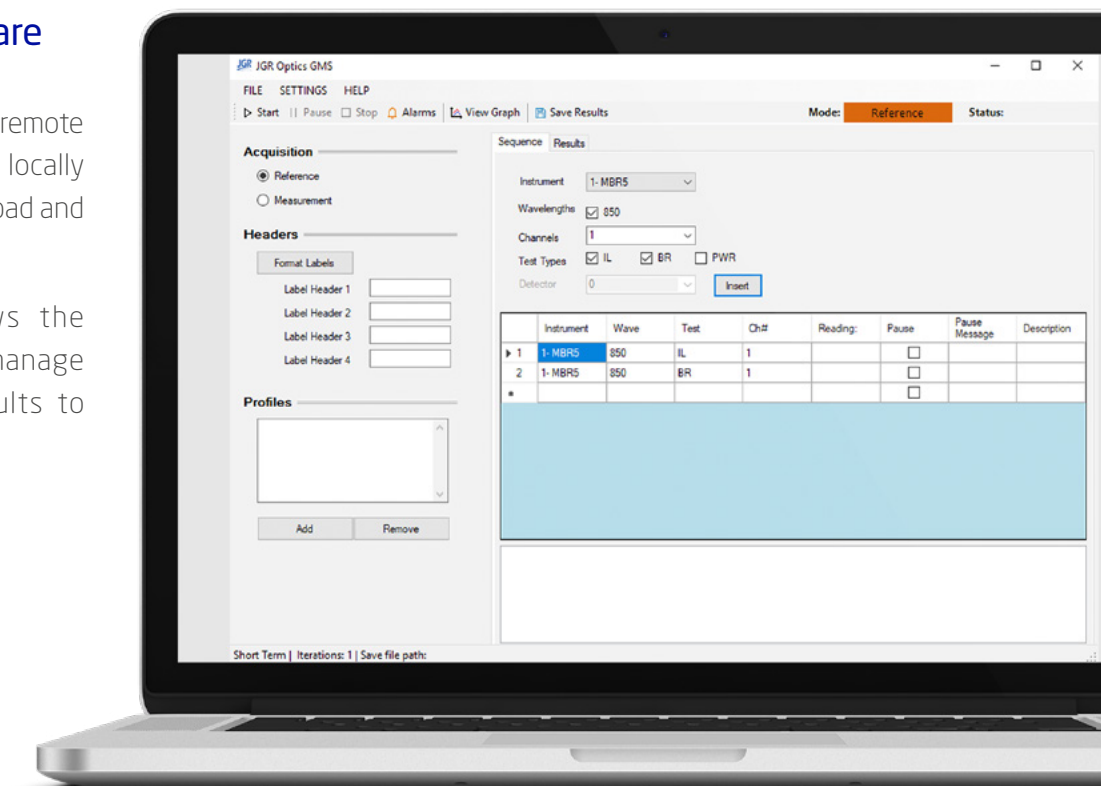
### Cassette Testing

Testing short devices can be difficult and time consuming. By using the MBR5 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 interface (GPIB, RS232, or USB\*) or locally via the user-friendly front panel keypad and display.

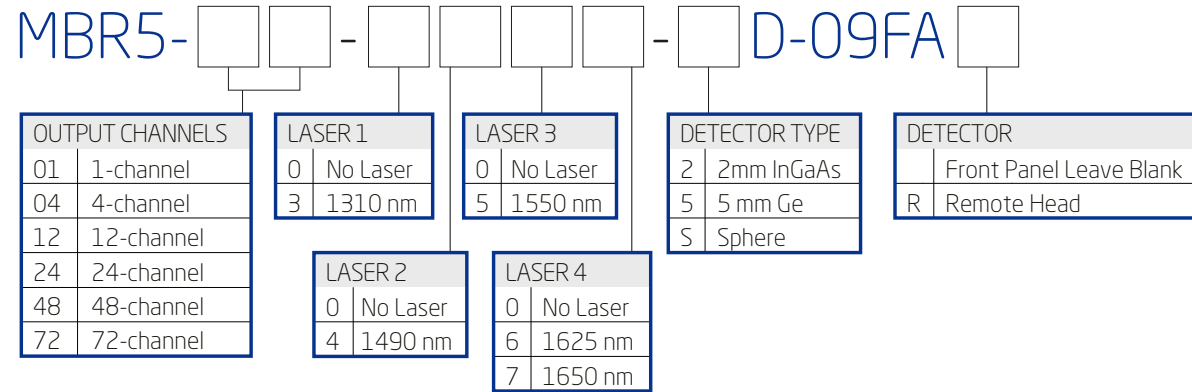
The free GMS Software allows the user to configure test profiles, manage test sequences, and export results to preconfigured templates.



Ordering Scheme

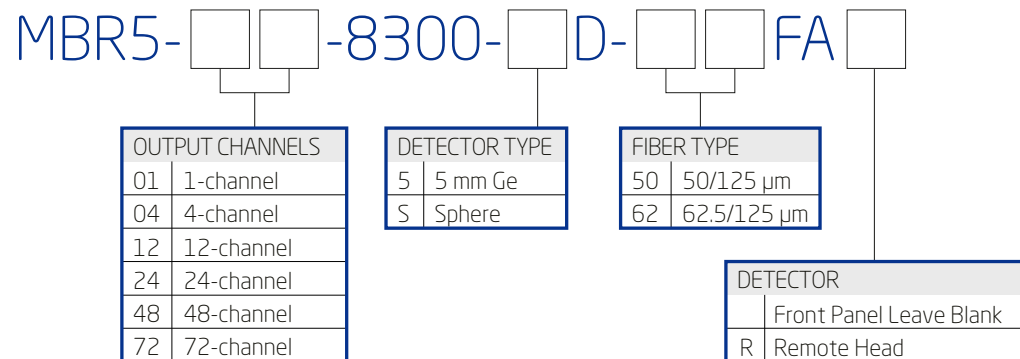
1 - Configure Multi-Channel Backreflection meter

Single-mode Version



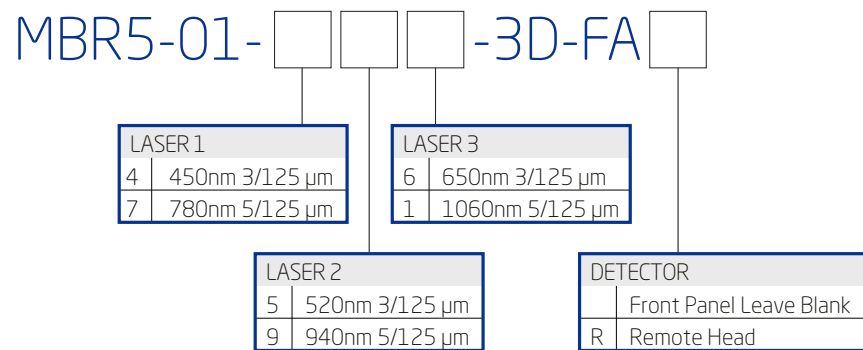
- Up to four lasers may be selected the single-mode version

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.

2 - Add accessories

Slide Detector adapters



SD [ ] [ ]

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

More detectors available upon request. See more details on pg 78.

USB to RS232 Converter



USB-DB9

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 -80	0 to -60		0 to -60
Backreflection Accuracy (dB) <sup>1,2</sup>	± 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) <sup>3</sup>	± 0.25			
Relative Power Accuracy (dB)	± 0.05 (< 5 dB loss)			
	± 0.15 (> 5 dB loss)			
Remote Interface	GPIB / RS232 / USB <sup>4</sup>			
Input Voltage	100 - 240 V AC, 50 - 60 Hz			
Power Consumption (VA)	80 maximum			
Display	4 lines, 16 character per line, LCD			

Notes:  
<sup>1</sup> Add 0.1 dB to the spec for every 1dB below -60dB (single-mode).  
<sup>2</sup> Add 0.1dB to the spec for every 1dB below -45dB (multimode).  
<sup>3</sup> Measured at -10 dBm.  
<sup>4</sup> USB interface via USB-DB9 adapter.

Mechanical/Environmental Specifications

Parameter	Specification
Unit Dimensions W x H x D (cm)	36 x 15 x 34
Shipping Box Dimensions W x H x D (cm)	43 x 27 x 47
Unit Weight (kg)	7
Total Shipment Weight (kg)	8
Operating Temperature (°C)	0 to 40
Storage Temperature (°C)	-40 to 60
Humidity (Non-condensing)	Maximum 95% RH from 0 to 40°C

