

DWDM Analyzer v. beta

The Inometrix **DWDM Analyzer v. beta** is a fast, accurate and economical system for characterizing narrowband DWDM optical components such as Fiber Bragg Gratings (FBGs). Based on our patented Single Arm Interferometer Technology, this new system can be used with third party tunable lasers¹ to provide an accurate, fast and stable measurement with a single sweep of a tunable laser.

Features:

- Full characterization in a single sweep
- Higher thermal & vibrational stability
- Higher sensitivity & accuracy
- No need to invest in optical tables or lab space

Applications:

- Fiber/waveguide testing (including PCF, DCF)
- Optical network component test
- Non-linear optical devices
- Fiber lasers
- Quality Assurance Testing

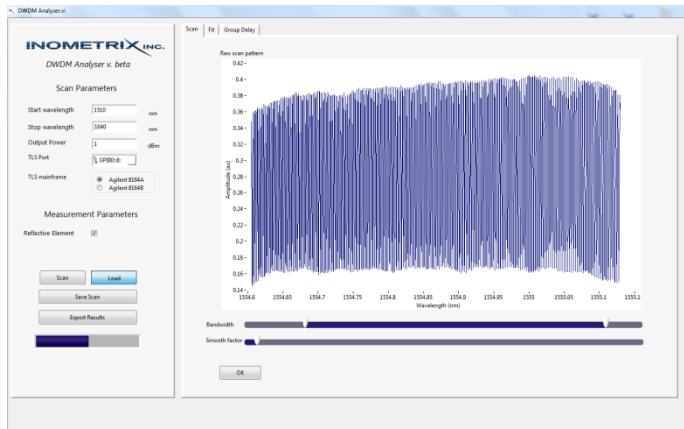
Measurement Capability:

- Group Delay (GD), Group Index², Group Velocity²



Specifications

Parameter	Specification
Measurement parameter	GD
GD Accuracy	< 10 ps
Measurement technique	Single Arm Interferometry
Maximum Device Length	$x + 0.8 \text{ m}^{(3)}$
Typical Laser Sweep Time	~14 seconds ⁽⁴⁾
Typical Experiment time	50 seconds ⁽⁵⁾
Operation modes	Reflection



1. *Coherence length of third party tunable laser must exceed 30 meters. Additionally, laser must contain built in wave-meter with at least 100,000 data points per scan (specs met by Agilent 816XX A or B series tunable lasers.)*
2. *When device length is known*
3. *Where x is an optional reference path length that can be used to extend the maximum measurable device length*
4. *Assumes bandwidth of 140nm and laser sweep rate of 10nm/s.*
5. *Includes data transfer and processing time.*



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Measurement Technique	Single Arm Interferometry	
Operating Range		
Wavelength	1260 – 1640 ⁽¹⁾	nm
Operating Modes	Reflection	
Measurement Parameters		
Group Delay (GD)	< 10	ps
Group Delay Range	0.4 - 4	ns
Measurement Timing		
Typical Measurement Time	<1	min
Calibration Time	0	min
Device Length		
Maximum Device Length [typical]	[0.8] ⁽³⁾	m
Minimum Device Length	N/A ⁽⁴⁾	m
Hardware Required: Tunable Laser ⁽⁵⁾		
Coherence length	> 30	m
Resolution	< 1	pm
Data point storage capacity	>=100,000	points
Physical Specifications		
Weight	~15	kg
Size (W x D x H)	17 x 16.5 x 6.5	inches
Power and Frequency		
CPU	2.93	GHz
DAQ	40	MHz
Power supply (input)	700, 110-240, 5-11, 50-60	W, V, A, Hz
Financial Information		
Warranty	12	months
Extended Warranty Option	Available	
Financing Option	Available	
Leasing Option	Available	

(1) Tunable Laser Sources available in this range from Agilent Technologies

(2) Measurement accuracy is dominated by length measurement accuracy

(3) Depends on laser source wavelength resolution [typ. 0.1 pm]

(4) Depends on laser source bandwidth

(5) Compatible models: Agilent 816XX A/B series tunable lasers

Please visit www.inometrix.com for a video demonstration or contact us for more information

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