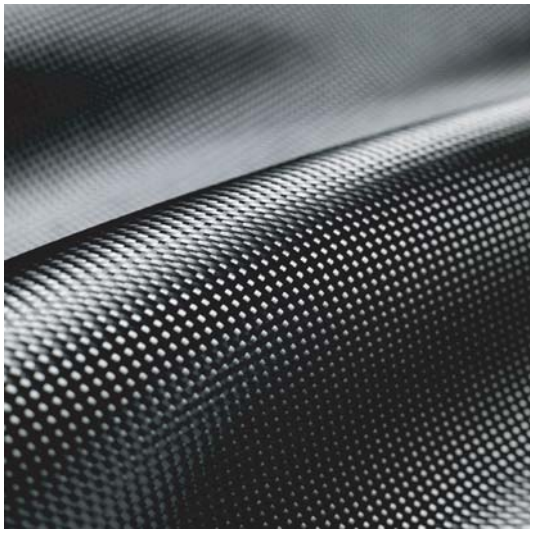
OptoMET

Digital SWIR Laser Doppler Vibrometer

The Best Performance Single-Point Vibrometer

- ✔ *Best Signal-to-Noise ratio on all surfaces*
- ✔ *Sub-picometer resolution*
- ✔ *Complete Digital Signal Processing*
- ✔ *High-Speed Digital and Analog Outputs*

Application



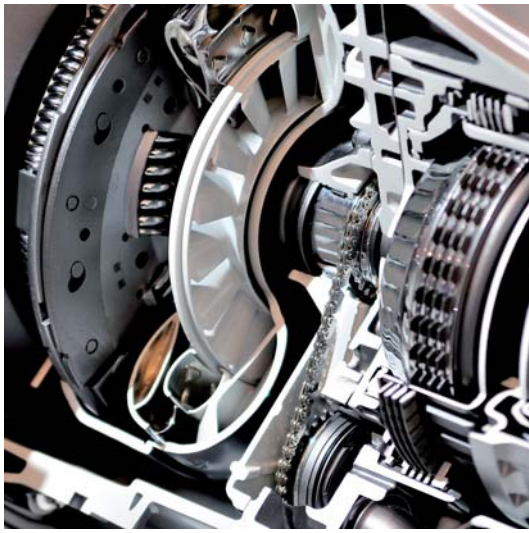
Features:

- SWIR Laser, <10 mW, eye-safe, class I
- Stabilized Single Mode Laser
- Wide bandwidth: DC - 10 MHz
- Sub-picometer resolution
- Very high sample rate
- Max. velocity: 24.5 m/s
- Ethernet Digital output
- Ethernet Remote Control Feature
- Working distance: up to >300 m
- Software package for data acquisition / analysis

Applications:

- Material research of composite materials
- Crack detection
- Measurements on very hot surfaces
- Ultrasonic testing and tooling (welding, cutting...)
- Long-Distance measurements on Bridge, Building...
- Automotive electrical drives analysis
- Measurements of piezoelectric transducers
- Impact / Shock tests
- High-Speed valve or injector measurements

Application



Visualize your vibrations!

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Technical data

Measured quantity	Velocity, Displacement, Acceleration
Frequency bandwidth	0 Hz - 10 MHz
Signal processing	Digital (OptoMET UltraDSP)
Source impedance	50 Ohm
Working distances	Variable working distance up to >300 m
Laser wavelength	Measurement laser: 1550 nm, Targeting laser: 510-530 nm
Laser safety class	Measurement laser: output power: <10 mW, class I Targeting laser: output power: <1 mW, class II
Optics	Auto- and manual focusing
User interface output	Color screen 3.5" + 20 segment LED bargraph
User interface input	Touch screen, knobs with push-button, key switch (power)
Operating temperature range	+5 to 40°C
Dimensions	Length x width x height (excluding handle and lens): 380 x 180 x 148 mm
Weight	8 kg + objective lens
Power supply	110 -240 V AC (50-60Hz) or 12 V DC
Analog output	- Up to 3 BNC analog outputs - Data rate: 160 MSamples/s @ 16-bit - Output voltage range: ± 2 V
Ethernet digital output	- Data rate: 1 GBit (53.3 MSamples/s @ 16-bit) - With data acquisition and analyse software - Remote control feature

Configuration

Specification	Nova-Basis	Nova-Sense	Nova-Remote -Sense	Nova-Speed	Nova-HF	Nova-Master
Frequency range	DC - 500 kHz	DC - 1 MHz	DC - 25 kHz	DC - 2.5 MHz	DC - 10 MHz	DC - 10 MHz
Velocity measuring ranges	24.5 mm/s - 5 m/s	2.45 mm/s - 5 m/s	2.45 mm/s - 5 m/s	24.5 mm/s - 24.5 m/s	24.5 mm/s - 12 m/s	2.45 mm/s - 24.5 m/s
Number of velocity measuring ranges	8	11	11	11	9	14
Velocity-Decoder Displacement-Decoder Acceleration-Decoder	D-VD-1N D-DD-1N (optional) D-AD-1N (optional)	D-VD-2N D-DD-2N D-AD-2N (optional)	D-VD-2N-R D-DD-2N-R D-AD-2N-R (optional)	D-VD-3N D-DD-3N D-AD-3N (optional)	D-VD-4N D-DD-4N D-AD-4N (optional)	D-VD-5N D-DD-5N D-AD-5N
Number of Displacement measuring ranges	19	19	19	19	19	19
Displacement high pass filter	25 Hz / 20 kHz	25 Hz / 20 kHz	0.16 Hz / 7 Hz / 50 Hz	25 Hz / 20 kHz	25 Hz / 20 kHz	25 Hz / 20 kHz
Trackingfilter	slow / fast					
Low pass filters	2.5, 5, 10, 20, 50, 100 kHz					