mtiinstruments

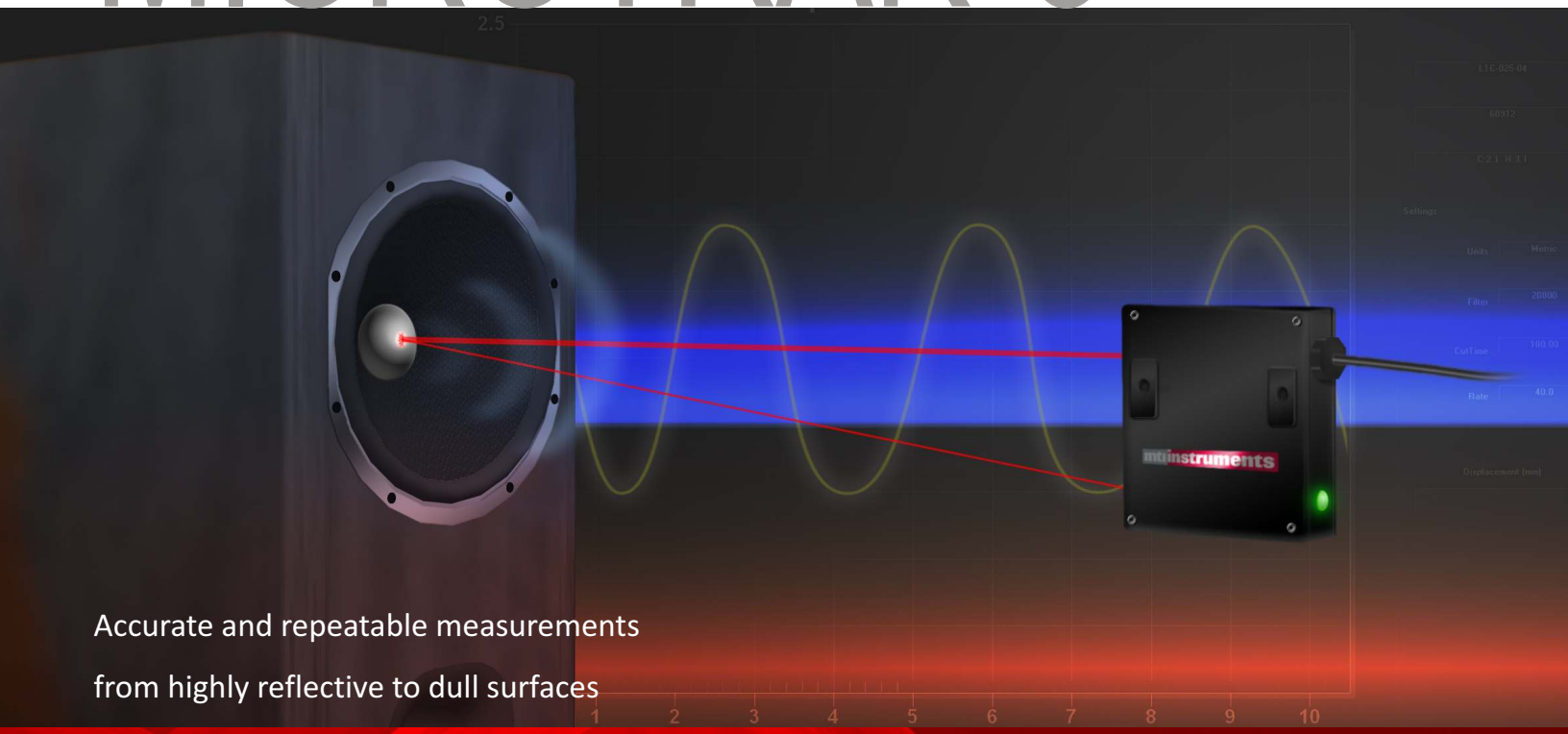
A worldwide leader in precision measurement solutions

High Speed,

High Resolution,

Laser Triangulation System

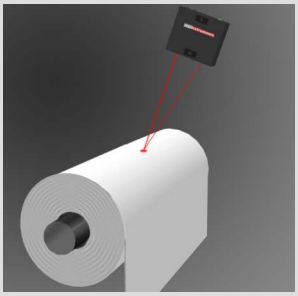
MICROTRAK™3



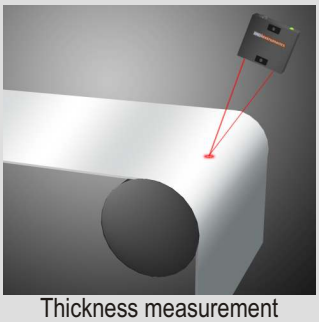
Accurate and repeatable measurements

from highly reflective to dull surfaces

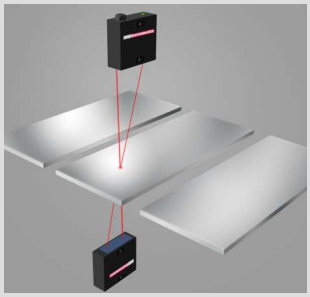
Unmatched Features for Different Types of Applications



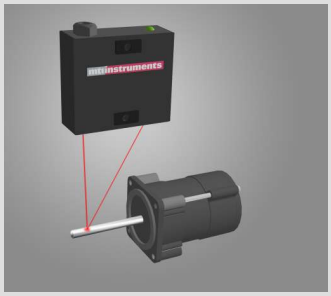
Build-up measurement in a roll



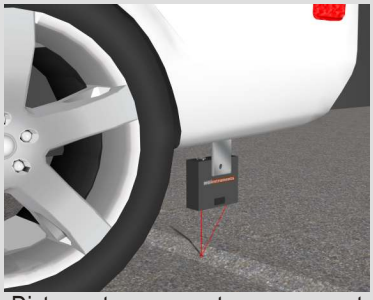
Thickness measurement



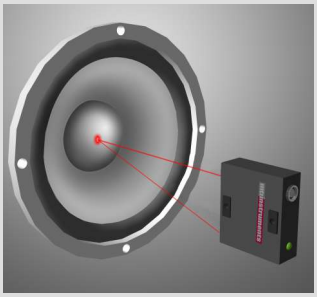
Part thickness measurement



Vibration measurement of motor shaft

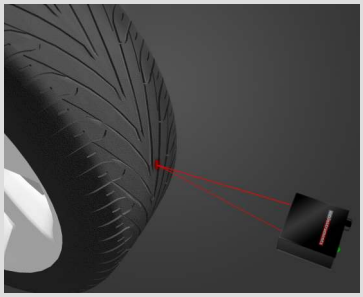


Distance to pavement measurement

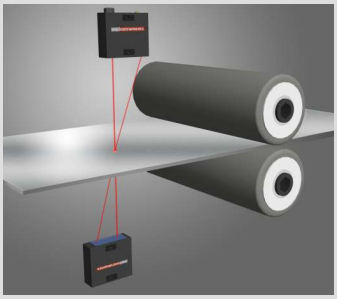


Amplitude measurement

Run-out measurement



Tire tread depth measurement



Sheet metal thickness measurement

Do you have a special application in mind?
Ask us! We can help you figure it out.

Microtrak™ 3 - High Quality, Compact and Reliable Non-contact Measurement

The Microtrak™ 3 laser displacement sensor head is the ideal solution for quality and process control applications. Using the latest CMOS sensor technology, the Microtrak™ 3 precisely monitors the intensity of light received on a pixel array and optimizes itself to the sensed conditions. This makes Microtrak™ 3 ideal for even for the most difficult measurement challenges such as, black, colored, metallic, wood, ceramic, steel, or plastic surfaces.

Key Features

- Simple Software Interface - Intuitive and straight forward buttons make configuring and acquiring data a breeze.
- Visible Laser Spot - Allows for easy positioning and alignment of the laser head.
- No Controller Needed - With the built-in 5-color position indicator, there is no need for an external controller to determine the laser mounting location and attain the precise distance placement.
- Auto Gain Circuitry - Automatically determines and adjusts the ideal laser power needed for accurate and repeatable measurements on different surface types.
- Dual Output - Analog (0-10V) and Digital (RS-485 and USB).
- Built-in Low Pass Filter
- Cut-Time Feature - Ignore holes and cutouts with its bridging function.

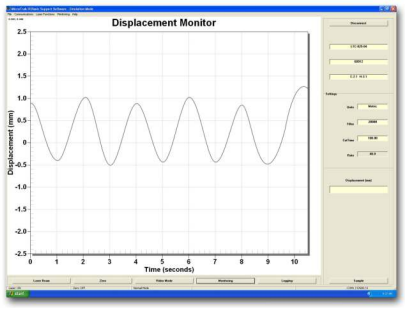
8 Highly Accurate Models to Choose From

Model	LTS 25 - 02	LTS 25 - 04	LTS 50 - 10	LTS 50 - 20	LTS 120 - 20	LTS 120 - 40	LTS 200 - 100	LTS 300 - 200
Range (mm)	2	4	10	20		40	100	200
Extended Range (mm)	2.5	5	12.5	25		50	125	250
Close Extended Range (mm)	23.75	22.5	43.75	37.5	107.5	95	137.5	175
Close Range (mm)	24	23	45	40	110	100	150	200
Standoff (mm)	25		50		120		200	300
Far Range (mm)	26	27	55	60	130	140	250	400
Far Extended Range (mm)	26.25	27.5	56.25	62.5	132.5	145	262.5	425
Linearity	0.04 % FSR							
Dynamic Noise[1] µm	0.12	0.25	1.25	2.5		5	9	20
Analog Out Sensitivity[2] µm/mV	0.25	0.5	1.25	2.5		5	12.5	25
Spot Size[3] µm	30		25	36	100			130
1 LSB Resolution[4] µm	0.0381	0.0763	0.1907	0.3815	0.3815	0.7630	1.9074	3.8148

[1] ±Peak noise at the center range of white photo paper with frame rate of 40kHz.
[2] Extended Range / 10V.
[3] Major diameter measured at standoff.
[4] Extended Range / 65535.

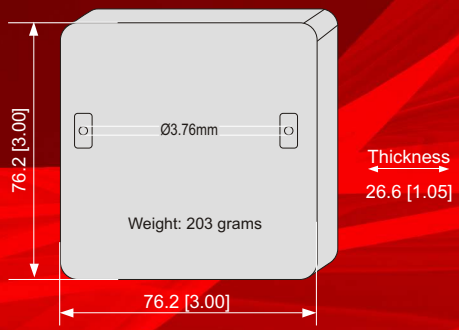
Simple Software Interface

Bundled with the Microtrak™ 3 Basic Support Software, users are presented with graphical displays of displacement signal. Acquired data can also be stored as a widely supported (.csv) format for further analysis. Compatible with Windows® XP, Vista and Windows® 7.

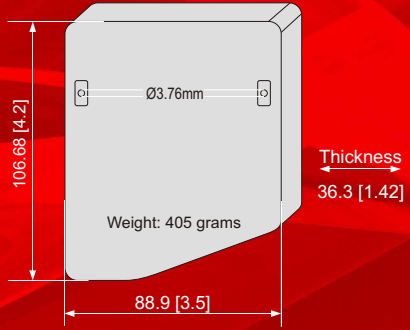


Highly Compact with an IP67 Intrusion Rating

25 and 50mm Standoff Models



120, 200, and 300mm Standoff Models



Applications

- Thickness
- Warpage
- Alignment
- Displacement
- Vibration
- Step Height
- Shaft Run-out
- Road Profile
- Presence
- Fill Height
- Flatness
- Profiling
- Thermal Expansion/ Contraction
- Structural Dynamics

Technical Specifications

- Laser Power[1]: <5mW
- Laser Class (IEC 60825): 3R
- Frequency Response: Up to 20kHz
- Sampling Frequency: 40kHz
- Operating Temperature Range: 0°C to 40°C
- Storage Temperature Range: -20°C to 70°C
- Humidity Range: 10 to 95% Non-Condensing
- Temperature Stability: 0.05% FSR/°C
- Digital Interface: RS-485/USB (Half Duplex)
- Supplied Cable Length: 1.5 meters (other cable length optional)
- Supply Voltage: SELV[2]: 15 to 28VDC
- Nominal Supply Voltage: SELV[2] 24VDC
- Maximum Power Draw: 2.8W
- Output Impedance: 50Ω
- Nameplate Range Voltage Output: 1 to 9V
- Extended Range Voltage Output: 0 to 10V
- Software Selectable Filters: 0.1Hz, 1Hz, 25Hz, 200Hz, 1kHz, 4kHz, 20kHz
- Nominal Laser Wavelength[3]: 670nm

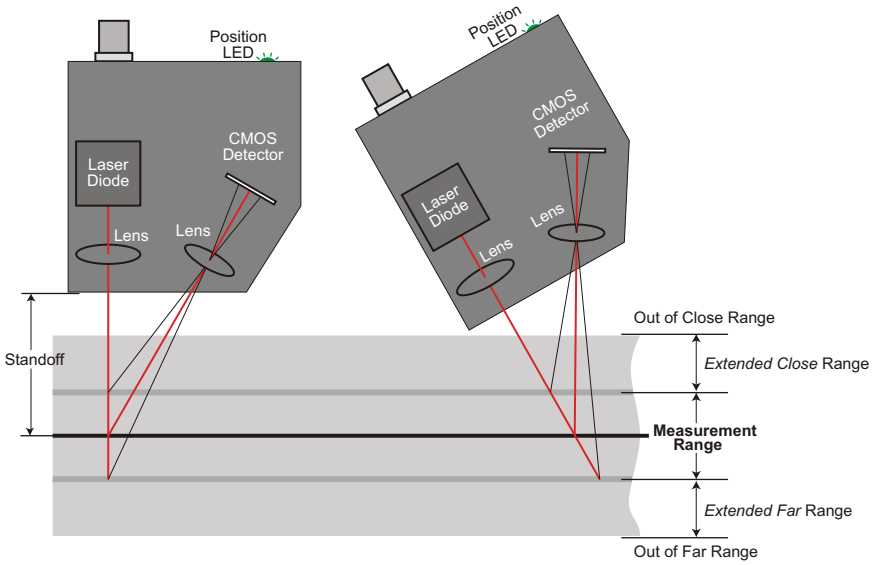
[1] Laser power is based on standard products.
*[2] **S**afety **E**xtra **L**ow **V**oltage*
[3] Nominal laser wavelength is based on standard products.

MTI Instruments is a worldwide supplier of precision non-contact physical measurement solutions, condition based monitoring systems, portable balancing equipment and semiconductor wafer inspection tools.

For more information about other measurement products, _____

Diffused Mode

Specular Mode
(recommended for shiny surfaces)



Optional Accessories

Description	Product Number
Laser Side Connector	2100-2085
Mating Connector	2100-2086
Multifunction ADC	2025-5160
FS6-1 Right Angle Bracket (25/50)	8000-6431
FS6-2 Right Angle Bracket (120/200/300)	8000-6432
FS-5 Laser Head Mount and Positioner	8000-6725
RS-232 to RS-485 Converter Assembly	8000-6924
BNC to Ferrule Converter	8000-6782
Universal input power supply (DIN Mount) Assembly	8000-6925
Extension cable 1m	8000-6923-001
Extension cable 2m	8000-6923-002
Extension cable 5m	8000-6923-005