

MICROTRAK™ 4

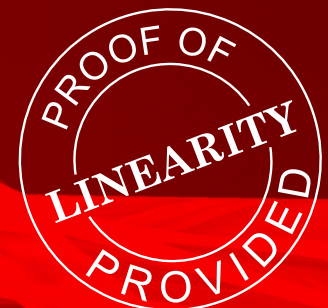
HIGH SPEED DIGITAL LASER DISPLACEMENT SENSOR



RANGES FROM
• 2mm
•
•
• to
• 20mm

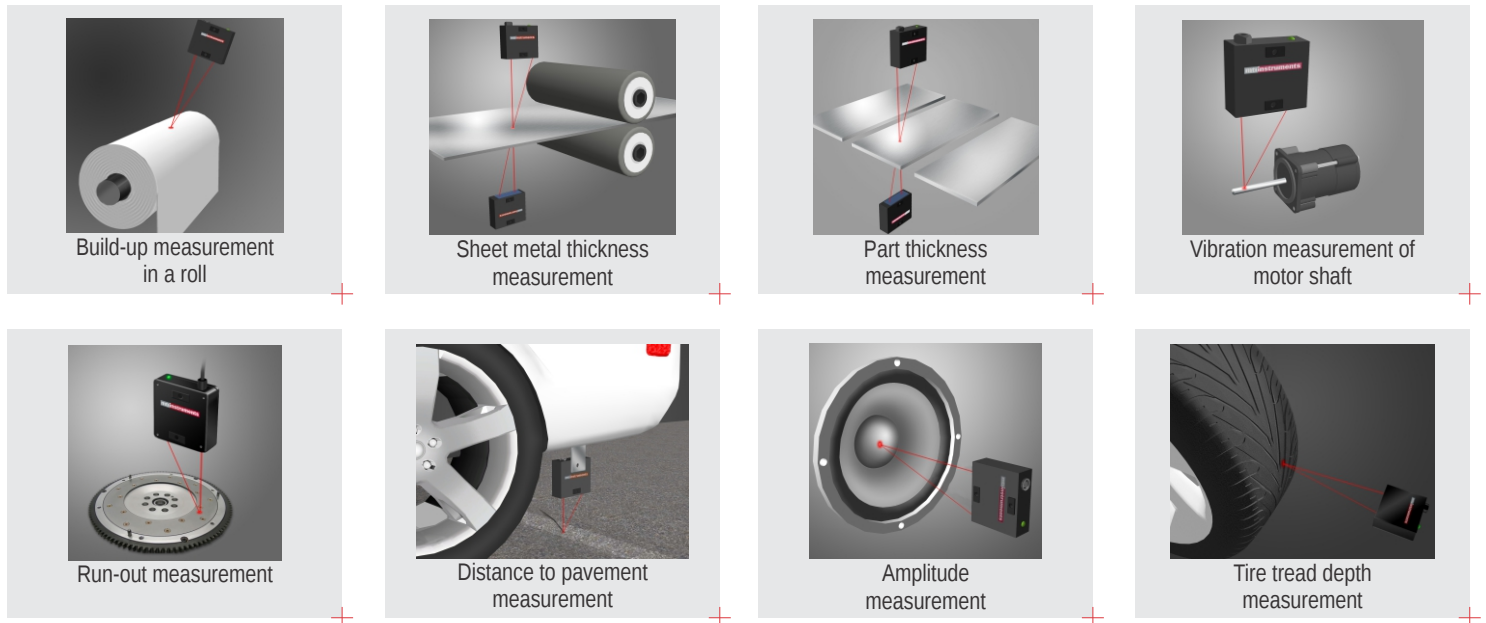
- Direct power from USB port
- ~40kS/sec. CMOS sensor full frame rate
- Included Software Development Kit (DLL and .NET)

Accurate and repeatable measurements from highly reflective to dull surfaces



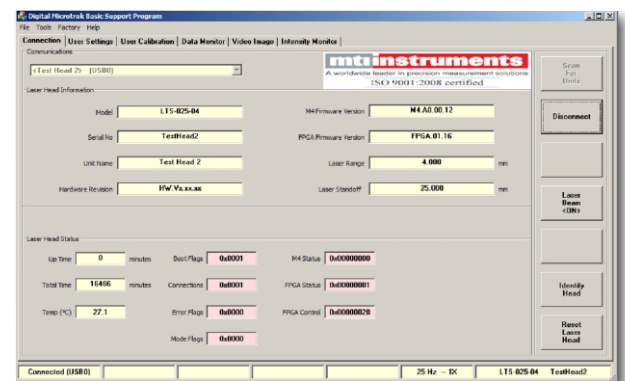
with every system shipped!


Unmatched Features for Different Types of Applications



Key Features

- No External Controller Needed - Out of the box, the MTI basic program runs on your PC to make measurements. Intuitive and straight forward buttons makes configuring and acquiring data simple.
- Software Development Kit Included - for custom programs used by system integrators.
- Visible Laser Spot - Allows for easy positioning and alignment of the laser head.
- Easy Setup - 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.
- Built-in Low Pass Filters
- Auto Gain Circuitry - Automatically determines and adjusts the ideal laser power needed for accurate and repeatable measurements on different surface types.
- Cut-Time Feature - Ignore holes and cutouts with its bridging function.

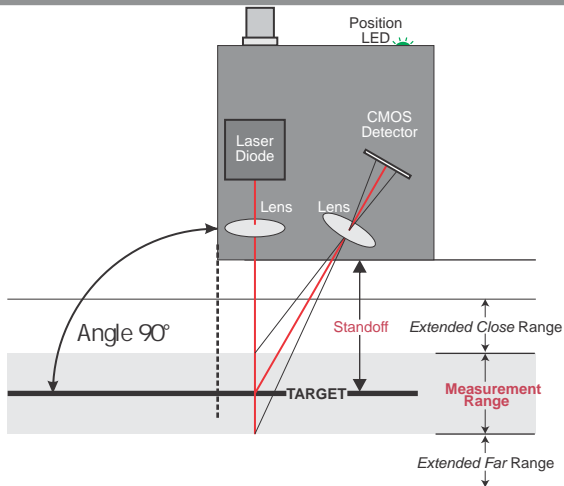


- Reliable measurements for very dark or very shiny (mirror-like) targets - using available 2X exposure function
- Plug and Play USB 
- No separate power supply needed
- All digital output

Applications

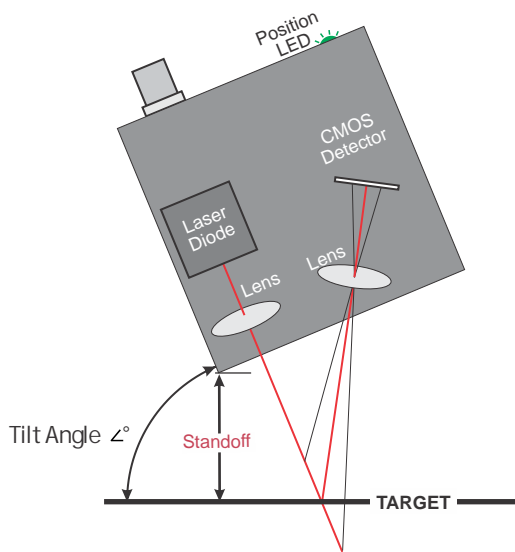
- | | | | |
|----------------|-----------------|---------------|----------------------------------|
| • Thickness | • Vibration | • Presence | • Thermal Expansion/ Contraction |
| • Warpage | • Step Height | • Fill Height | • Structural Dynamics |
| • Alignment | • Shaft Run-out | • Flatness | • Dimensional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

Diffuse Mode Models - recommended for matte surfaces

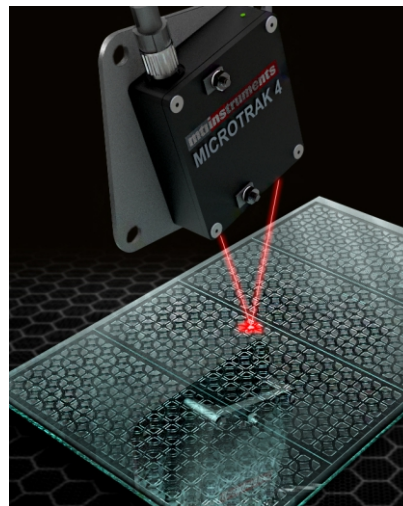


Model		DTS-025-02	DTS-025-04	DTS-050-10	DTS-050-20
Product #		8000-7040	8000-7032	8000-7033	8000-7034
Standard Range	mm	2.0	4.0	10.0	20.0
Stand-o	mm	25.0		50.0	
Displacement					
Standard (close) Range	mm	24.00	23.00	45.00	40.00
Extended (close) Range	mm	23.75	22.50	43.75	37.50
Standard (far) Range	mm	26.00	27.00	55.00	60.00
Extended (far) Range	mm	26.25	27.50	56.25	62.50
Linearity* (standard range)	% FSO	0.03%			
	μm	0.60	1.20	3.00	6.00
Noise (at stand-o to white target)					
1Hz	μm RMS	0.05	0.10	0.25	0.50
500Hz	μm RMS	0.06	0.12	0.30	0.60
Spot Size (major at stand-o)	μm	28.0		40.0	
Angle	∠	90°			

Specular Mode Models - recommended for shiny/glass surfaces



Model		DTS-025-02/S	DTS-025-04/S	DTS-050-10/S	DTS-050-20/S
Product #		8000-7040-001	8000-7032-001	8000-7033-001	8000-7034-001
Standard Range	mm	1.8	3.7	9.7	19.3
Stand-o	mm	16.7		44.0	
Tilt Angle	°	67.5°		75°	



Specular glass head features 2nd surface reject to measure top glass surface.

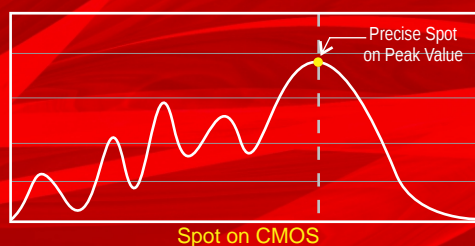
Model		DTS-025-04/G
Product #		8000-7032-002
Standard Range	mm	3.7
Stand-o	mm	16.7
Tilt Angle	°	67.5°

*Linearity is defined as the peak measured variation, using bandwidth limited data, from the best fit linear line constructed from all the points taken over the full scale range.

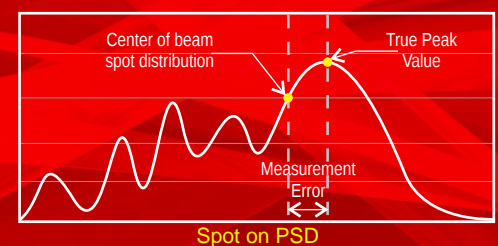
MICROTRAK™ 4 uses Highly Precise CMOS Technology

The Microtrak™ 4 laser displacement sensor head is the ideal solution for quality and process control applications. Using the latest CMOS sensor technology, the Microtrak™ 4 precisely monitors the intensity of light received on a pixel array and optimizes itself to the sensed conditions.

Accurate advanced CMOS sensor



Errors occur using competitive PSD sensors



What's in the box



(1) MICROTRAK 4
Laser Sensor Head



(1) USB drive
Software, Manual & Drivers

NOTE: USB/Power cable is available as a separate item. Please check optional accessories for length selections.

Maximum Sampling Rate (sensor)	40k (38277.5) Frames/s
Exposure Time	
1X	25 μ s
2X	50 μ s

Filter	0.1 to 20kHz
Practical Maximum Output Bandwidth	15kHz
Interfaces Supported	
Digital	USB2.0
Analog	None
Supported Data rates	100, 200, 500, 1k, 5k, 10k, 20k Samples/s

Software	
MicroTrak™ 4 Basic	Windows® 7, 8, 10
Supported Interface Software	
DLL	Windows® 7, 8, 10
.NET	Windows® 7, 8, 10
LabVIEW™	Low-level LabVIEW™ Driver
Laser Wavelength	670nm
Maximum Power Level (factory set)	
Maximum	4.9mW
Typical	3mW
Laser Power Class	3R IEC60825

Nominal Supply Voltage	
SELV from USB2.0	5V
Maximum Supply Ripple	100mVpp
Nominal Supply Current	100mA
Intrusion Protection	IP67 IEC60529
Operational Temperature Range	0 to 40 °C
Storage Temperature Range	-20 to 70 °C
Humidity	5 to 95 % Non-Condensing

Optional Accessories

USB/Power Cable

1 meter	8000-7020-001
2 meters	8000-7020-002
4 meters	8000-7020-004

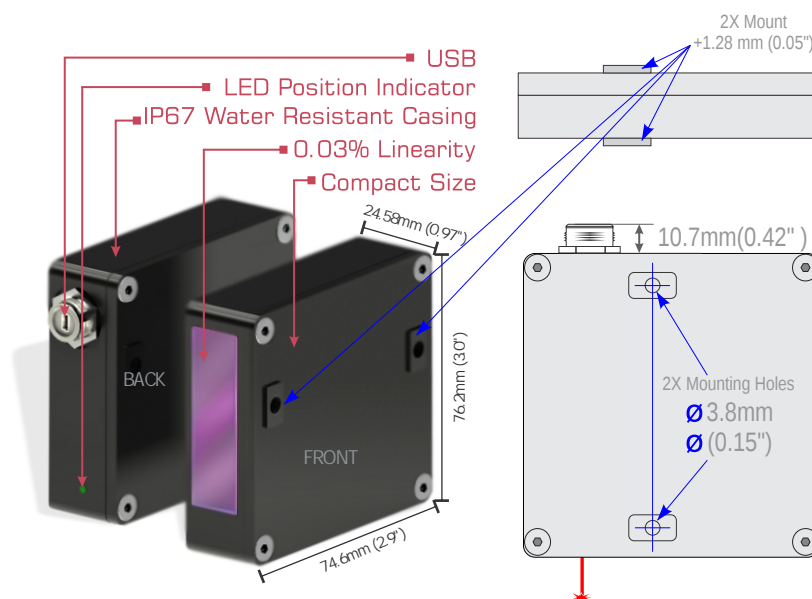


FS-5 Laser Head Mount
and Positioner
P/N: 8000-6725



FS6-1 Right Angle Bracket
(25/50) P/N: 8000-6431

Dimension



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