

TopLine Quality Control Sensors

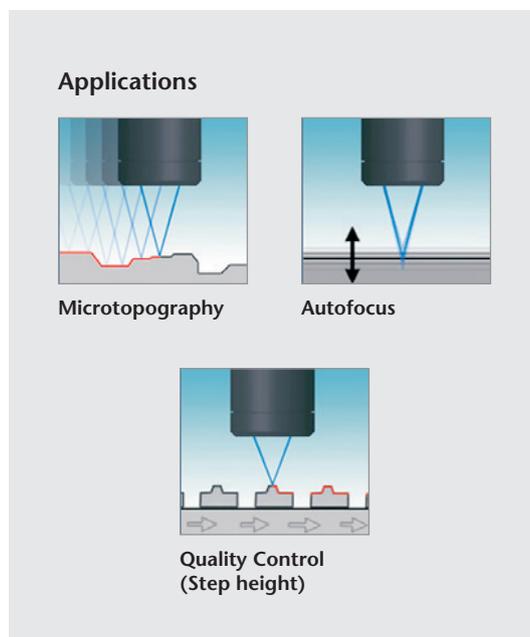
Fast and easy-to-use displacement measurements



TMS Series Optical Surface Profilometers

- TopMap Metro.Lab for Benchtop Convenience
- TopMap In.Line for Industrial Environments
- TopMap μ Lab for Microstructures
- TopLine Series Line Sensors

TopLine Confocal Chromatic Sensors quickly measure height parameters on samples up to ~45 mm width. They are highly accurate, non destructive and easy to integrate into production lines.



Advantages

- ULTRA FAST NON-CONTACT MEASUREMENTS
 - Ultra-high measurement frequency (up to 1800 lines per second)
- FLEXIBLE
 - Works on nearly any kind of material
 - Scanning mirror (optional) for areal measurements
- SIMPLE INTEGRATION
 - Compact sensor head
 - Easy interfacing thanks to delivered DLL toolkit
- LOW-MAINTENANCE
 - Sensor head with no moving parts
- RELIABLE
 - High accuracy measurements
 - Non-contact measurements
 - Insensitive to ambient light

Basic sensor configuration

The TopLine Chromatic Confocal Sensor comprises:

- An Optoelectronic controller including the light source, the spectrographs arrays, the acquisition and processing electronic unit,
- An optical fiber bundle linking the controller with the optical head,
- A Chromatic Confocal Optical head generating the Multi-Point Line.

Optionally, it can be equipped with a scanning mirror to generate a full field measurement.

Specifications

TopLine Optoelectronic Controller	
Modell	TopMPLS-180
Number of measured points along the line	180
Maximum measuring rate	1.800 lines per second x 180 points per line = 324.000 points / sec
Data transmission	USB 2.0 link
Software package	Dedicated DLL for Windows 7
Measurement Synchronization	Input and output TTL trigger signals
Power supply	100 – 240 Vac
Consumption	100 W (Standard) LED light source / 150 W (optional) 12 V / 50 W halogen bulbs
Optional field scanning function	180 x 230 points acquired per field
Field scan duration	0.13 second (at a line frequency of 1800 lines/sec)
Mechanical interface	Table top controller

TopLine Sensor Heads					
TopLine Line Sensor Head		Wavy	Cobra	DeepView	MicroView
Line length (x axis)	mm	44,75	14	4	1,8
Number of points along the line	-	180	180	180	180
Spot size diameter (for each point)	µm	41	38	15	4,8
Pitch (distance between 2 points)	µm	250	78	22	10
Maximum slope angle	deg	11	6,5	20	30
Working distance	mm	40	1	46	10
Measuring range	mm	1,6	15	5	0,5
Axial resolution	µm	0,5	2,5	1,5	0,125
Accuracy	µm	2,5	8	5	0,5
Field scanning (x,y)	mm	44.75 x 45.8 (optional)	14 x 17 (standard)	- Not available	1.8 x 1.8 (optional)

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