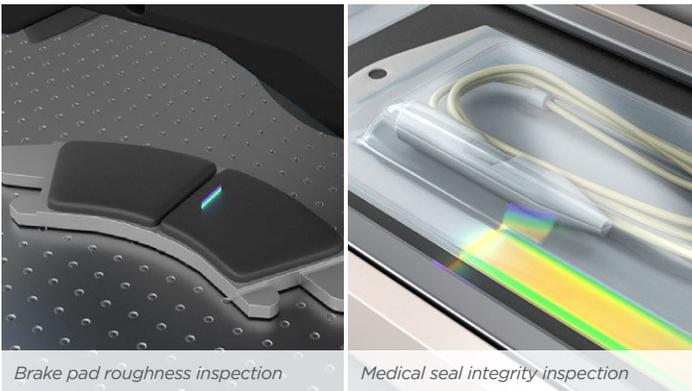
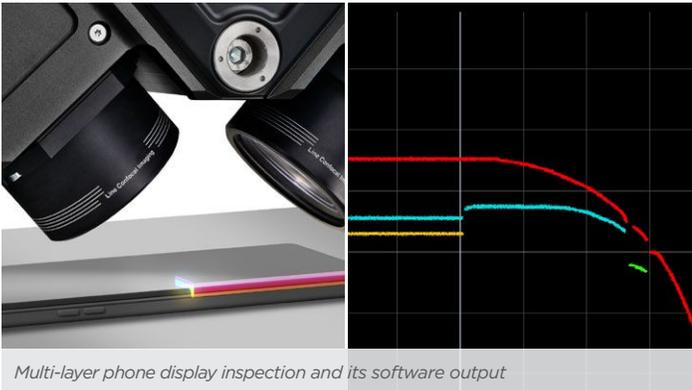


# Gocator® 5500 Series

## 3D SMART LINE CONFOCAL SENSORS



The Gocator® 5500 series adds patented line confocal imaging (LCI) technology to the Gocator® family of 3D smart sensors. These line confocal sensors deliver high speed, wide coverage line scanning with simultaneous generation of **3D topography**, **3D tomography**, and **2D intensity data**. This allows Gocator® 5500s to scan practically any material type—including multi-layered, transparent/translucent, curved edge, shiny/specular, high-contrast textured, mixed, and many more—with submicron precision, and at a level of quality and speed that outperforms competing confocal technologies.

- Simultaneous Generation of Multiple Profiles from Multi-Layer Structures
- Generates 1792 Data Points per Profile
- Scan Rates Up to 40 KHz (with Acceleration)
- Handles Wide Variety of Material Types
- Dual-Axis Optical Design Provides Higher Signal Quality
- Runs LMI's Next Generation Measurement and Inspection Software



### DUAL-AXIS OPTICAL DESIGN TO DETECT FINER FEATURES

Gocator 5500 Sensors use a dual-axis optical system that improves noise immunity and provides higher signal quality. This makes it possible to scan difficult surfaces and very fine features.

### GENERATES 3D TOMOGRAPHY, 3D TOPOGRAPHY, AND 2D INTENSITY DATA

Gocator® 5500 sensors simultaneously generate 3D tomography, 3D topography, and 2D intensity data for each layer of a material, making it possible to measure the thickness of individual layers or detect defects on secondary layers.

### HIGH SPEED. HIGH RESOLUTION

Gocator® 5500 sensors feature a custom high-speed imager and high-performance electronics to deliver metrology-grade inspection at speeds up to 40 kHz (with GoMax or PC acceleration), with scaling fields of view, X resolutions up to 2.5 microns, and Z repeatability up to 0.05 microns.

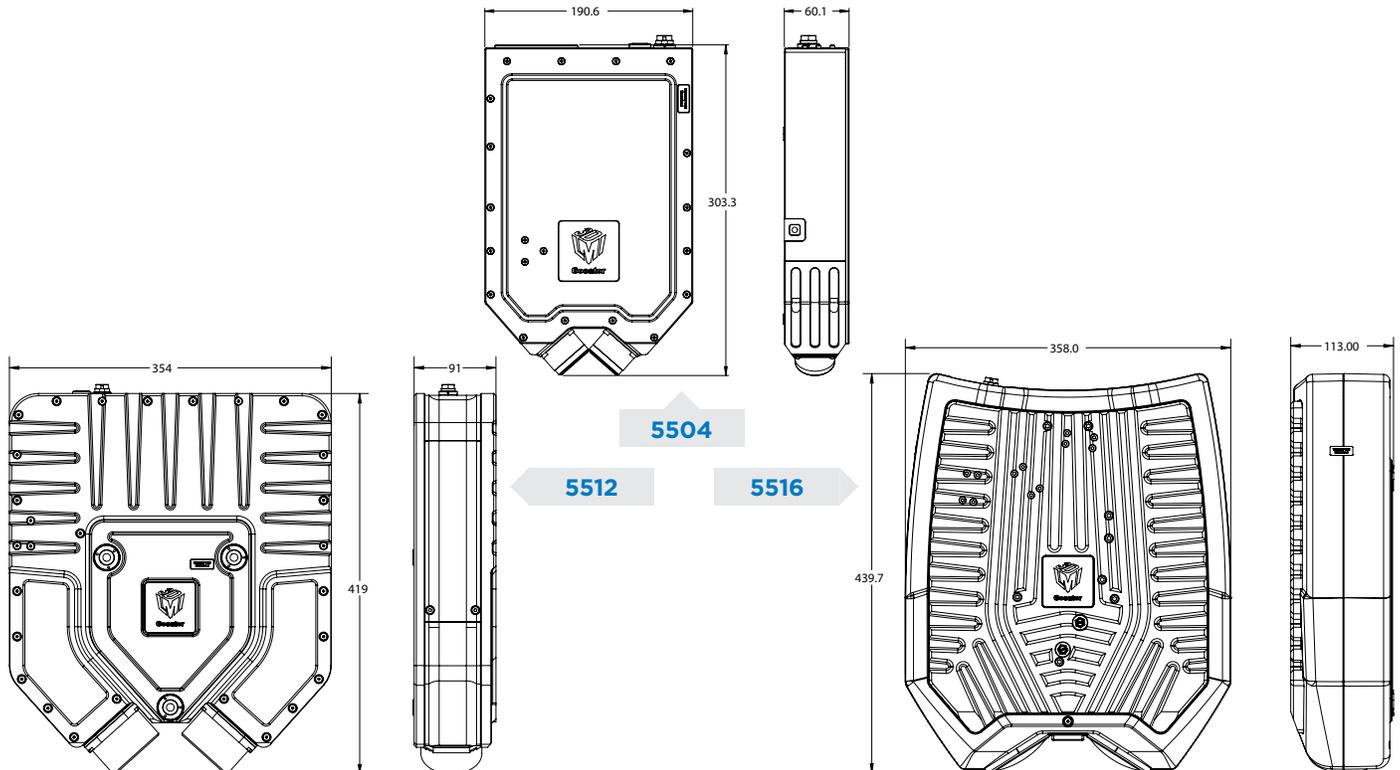
### MEASUREMENT AND INSPECTION SOFTWARE INCLUDED

Gocator® 5500 sensors are built on LMI's leading smart sensor design architecture that includes an easy-to-use web-based interface with built-in measurement tools, I/O connectivity, and multi-layer profiling support accelerated using a PC.

5500 SERIES MODELS	5504	5512	5516
Scan Rate (Hz) <sup>(1)</sup>	2100 - 39 000	4200 - 40 000	3800 - 38 000
Data Points / Profile	1792	1792	1792
Resolution X (µm) (Profile Data Interval)	2.5	6.5	9.9
Linearity Z (+/- % of MR)	0.03	0.07	0.04
Repeatability Z (µm) <sup>(2)</sup>	0.07	0.17	0.42
Resolution Z (µm)	0.15	0.35	0.85
Clearance Distance (CD) (mm)	7.8	19.1	61.3
Measurement Range (MR) (mm)	1.1	3	5.5
Field of View (FOV) (mm)	4.3	11.6	17.0
Max. surface slope on mirror (deg)	± 15.0	± 20.0	± 13.5
Dimensions (mm)	60 x 190 x 303	91 x 354 x 419	113 x 358 x 440
Housing	IP67	IP55	IP50
Weight (kg)	5	19	21

#### ALL 5500 SERIES MODELS

Interface	Gigabit Ethernet	<p>(1) Speed ranges are from default configuration (full field of view and full measurement range) to high speed configuration (optimized imager readout, reduced field-of-view and measurement range).</p> <p>(2) These results are achieved with LMI standard target and optimized sensor configuration.</p>
Inputs	Differential / Single Ended Encoder, Trigger	
Outputs	2x Digital output	
Factory Communication	PROFINET, Modbus, EtherNet/IP, ASCII, Gocator	
Input Voltage (Power)	Gocator 5512/5516: +24-48 VDC (+/- 5%) @ 62 W, Gocator 5504: +24-48 VDC (+/-5%) @ 48 W	
Operating Temperature	15 to 35°C	
Storage Temperature	-30 to 70°C	
Vibration Resistance	10 to 55 Hz, 1.5 mm double amplitude in X, Y, and Z directions, 2 hours per direction	
Shock Resistance	15 g, half sine wave, 11 ms, positive and negative for X, Y, and Z directions	
Scanning Software	Browser-based GUI and open source SDK for configuration and real-time 3D visualization. Open source SDK, native drivers, and industrial protocols for integration with user applications, third-party image processing applications, robots, and PLCs.	



LMI Technologies has sales offices and distributors worldwide. All contact information is listed at [lmi3d.com/contact](https://lmi3d.com/contact)