LMI TECHNOLOGIES

Gocator® 3520
3D SMART SNAPSHOT SENSOR

- Pre-calibrated, 74 micron XY resolution 3D data in a single snapshot
- Up to 175 x 282 mm field of view (FOV)
- Accurate 3D measurement with blue LED light projection
- Industrial design for long life
- Removes cost of linear motion systems and minimizes error due to vibration

The latest addition to our industry leading series of 5-megapixel 3D snapshot sensors, the Gocator® 3520 introduces an extended field of view with the same high XY resolutions, short exposure times, and fast data acquisition rates required to achieve metrology-grade inline quality inspection.

The 3520 delivers smart 3D inspection into many new applications in robot-driven quality control and stop-and-go part verification, as well as general factory automation.

PROFINET®   Modbus   EtherNet/IP™   ASCII

LARGE FIELD OF VIEW WITH SHORT CLEARANCE DISTANCE

The sensor's larger field of view and shorter clearance distance allow users to minimize the travel distances of the robot arm, increasing overall inspection coverage as a result. This design also offers a greater range of robot movement to support various scan angles.

### HIGH INTENSITY LED PROJECTOR AND STEREO CAMERA DESIGN

Gocator 3520's high-intensity LED projector delivers the short exposure times and fast scan rates required to generate high quality scans with minimal motion blur caused by target vibration or movement jitter. The sensor's 5-megapixel stereo camera design maximizes data capture by triangulating three ways to minimize occlusion.

HIGH-SPEED SCANNING AND DATA ACQUISITION

Gocator 3520's fast scan rate allows users to generate high quality scans with minimal motion blur caused by target vibration or movement jitter.

RUGGED INDUSTRIAL DESIGN

Deploy the sensor in harsh production environments over extended periods of time without the need for recalibration or extended maintenance. Immediately install the sensor on a UR robot arm and perform hand-to-eye calibration between robot and sensor.
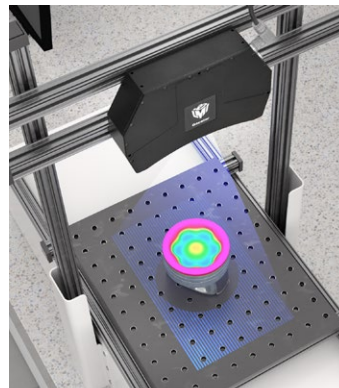
Piston bowl volume inspection
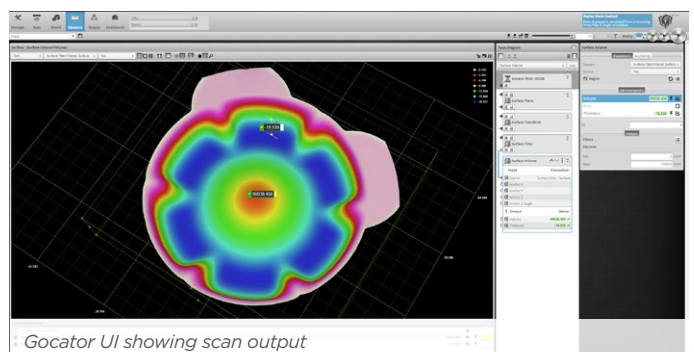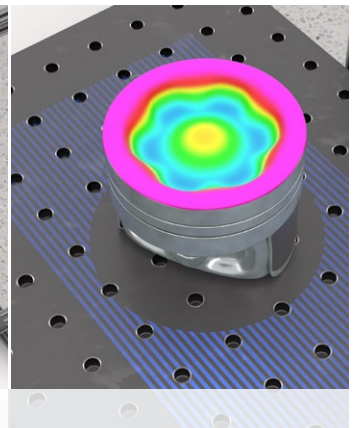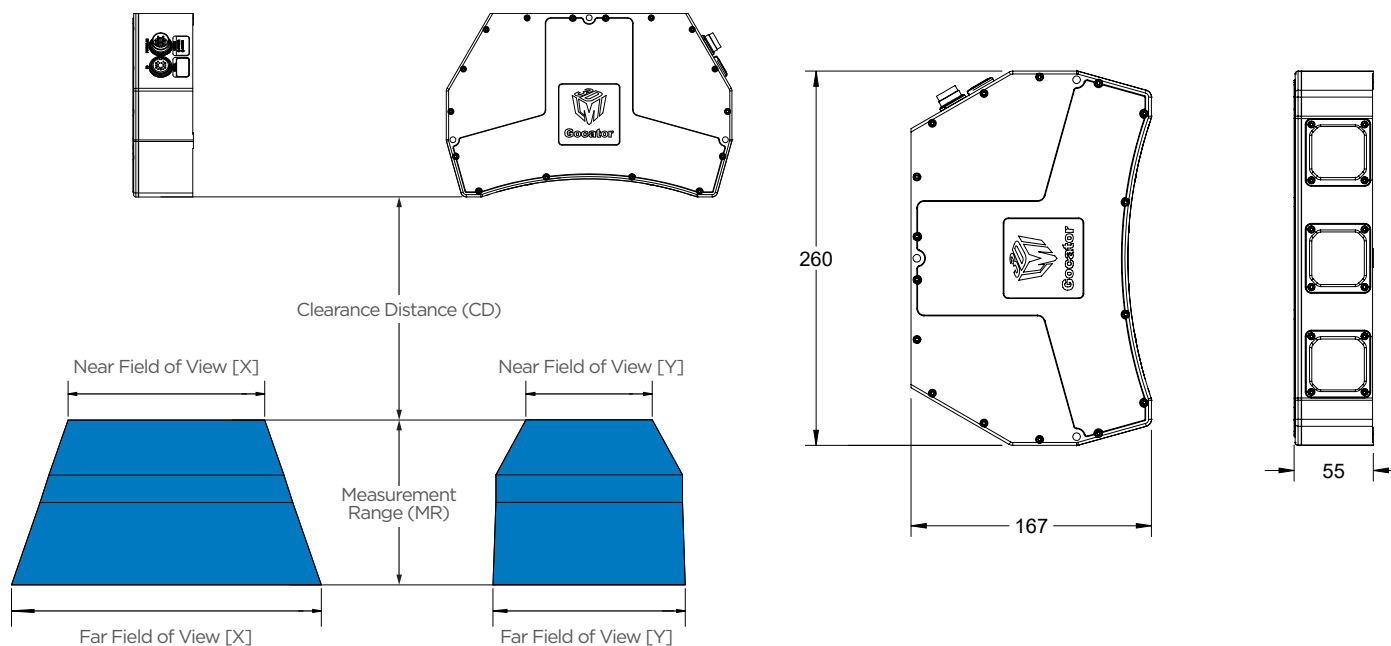
Gocator UI showing scan output

GOCATOR 3520

Scan Rate	3 Hz
Imager	5 megapixels
Clearance Distance (CD)	203 mm
Measurement Range (MR)	150 mm
Field of View (FOV)	179 x 115 - 282 x 175 mm
Z repeatability	4.6 µm
Resolution XY	0.074 - 0.121 mm
VDE Accuracy	0.090 mm[1] - 0.200 mm[2]
Dimensions	55 x 167 x 260 mm
Weight	2.6 kg
Input Voltage	48 VDC (50 Watts); Ripple +/- 10%
Operating temperature	0 to 40 °C
Storage Temperature	-30 to 70 °C
Light Source	Blue LED (465 nm)
Interface	Gigabit Ethernet
Inputs	Differential Encoder, Trigger
Outputs	2x Digital Output, RS485 Serial (115 kbaud), 1x Analog Output (4 - 20 mA)
Factory Communication	PROFINET, Modbus, EtherNet/IP, ASCII, Gocator
Housing	Gasketed Aluminium Enclosure, IP67
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 in X, Y, and Z directions

SOFTWARE AND BUILT-IN 3D MEASUREMENT TOOLS

3D Feature Tools	Openings (holes, slots), Cylinders, Studs (threaded and non-threaded), Plane
3D Volumetric Tools	Volumes, Areas, Bounding boxes, Positions (min, max, centroid), Ellipses, Orientations
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, and PLCs.

[1] VDE within central 100 mm measurement range
[2] VDE within full 150 mm measurement range