

Datasheet

The LPM series of 3D smart sensors is an all-in-one solution that helps factories improve efficiencies in product validation at a fraction of the cost of other sophisticated solutions. Providing the same measurement tools and output support available in high-end sensors, LPM series systems can easily scale up to larger systems or higher resolutions.

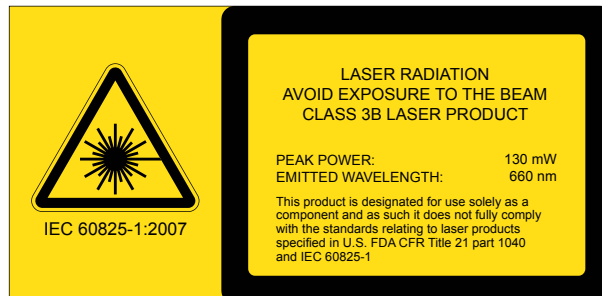


- Built-in PLC protocols greatly simplify integration with PLCs
- Built-in, intuitive GUI to configure profiling settings and measurement tools using any web browser, computer, or operating system
- Measurement tools and real-time visualization to solve complicated inspection problems
- Extensive output support on Gigabit Ethernet, digital and analog out, to directly communicate with existing production line systems



WARNING:

- **Do not use this device for personnel protection**
- Using this device for personnel protection could result in serious injury or death.
- This device does not include the self-checking redundant circuitry necessary to allow its use in personnel safety applications. A device failure or malfunction can cause either an energized (on) or de-energized (off) output condition.



Specifications

Specifications stated are based on standard laser classes. Linearity Z, Resolution Z, and Repeatability Z may vary for other laser classes.

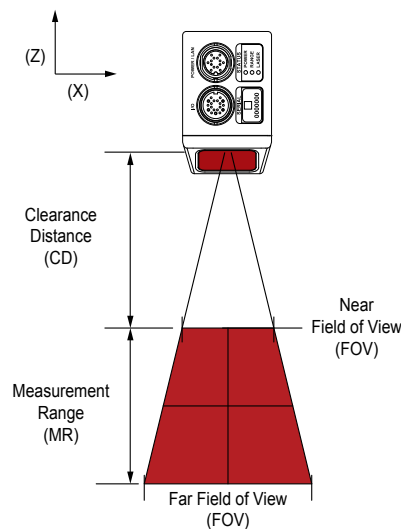


Table 1: All models

Scan Rate	Approximately 170 Hz to 5000 Hz
Interface	Gigabit Ethernet
Inputs	Differential Encoder, Laser Safety Enable, Trigger
Outputs	2x Digital output, RS-485 Serial (115 kBaud), 1x Analog Output (4 mA to 20 mA)
Input Voltage (Power)	24 V DC to 48 V DC (13 Watts); Ripple \pm 10%
Construction	Gasketed aluminum enclosure
Environmental Rating	IP67

Operating Temperature	0 °C to +50 °C (+32 °F to +122 °F)
Storage Temperature	-30 °C to +70 °C (-22 °F to +158 °F)

Vibration	10 Hz to 55 Hz, 1.5 mm double amplitude in X, Y and Z directions, 2 hours per direction
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Shock	15 g, half sine wave, 11 ms, positive and negative for X, Y and Z directions
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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.
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Table 2: LPM300-2000 Models

Data Points / Profile	640
Linearity Z	0.03 \pm % of MR
Resolution Z	0.175 mm to 0.925 mm
Resolution X (Profile Data Interval)	0.51 mm to 1.58 mm
Repeatability Z	12 μ m
Clearance Distance (CD)	650 mm

Measurement Range (MR)	1350 mm
Field of View (FOV)	324 mm to 1010 mm
Laser Classes	2, 3R
Dimensions	Top Mount 49 mm \times 75 mm \times 272 mm
Weight	1.3 kg

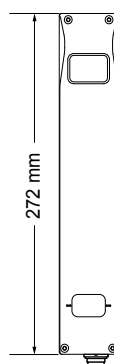
Table 3: LPM300-1150 Models

Data Points / Profile	640
Linearity Z	0.04 \pm % of MR
Resolution Z	0.092 mm to 0.488 mm
Resolution X (Profile Data Interval)	0.75 mm to 2.20 mm
Repeatability Z	12 μ m
Clearance Distance (CD)	350 mm

Measurement Range (MR)	800 mm
Field of View (FOV) (mm)	390 mm to 1260 mm
Laser Classes	2, 3R
Dimensions (mm)	Top Mount 49 mm \times 75 mm \times 272 mm
Weight	1.3 kg

Dimensions

Figure 1. LPM300



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