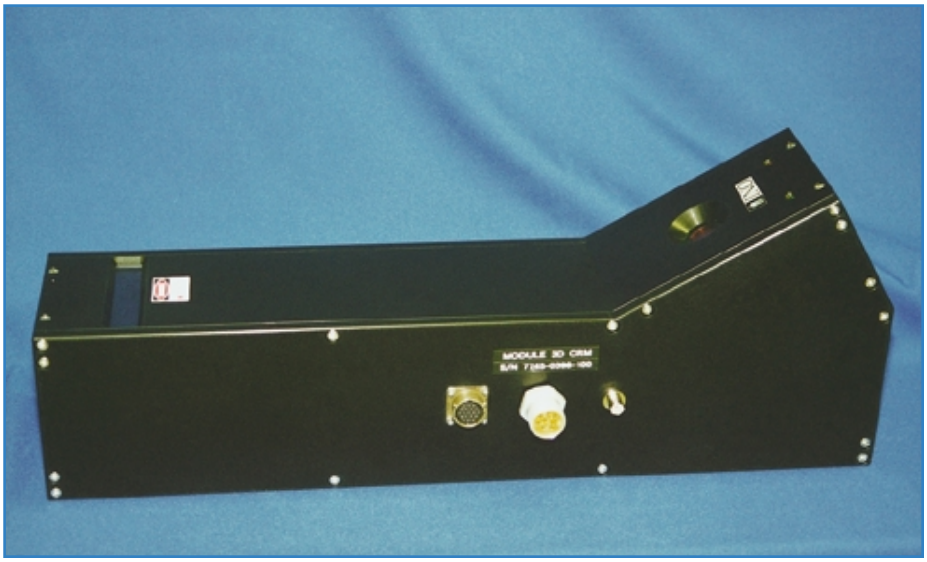
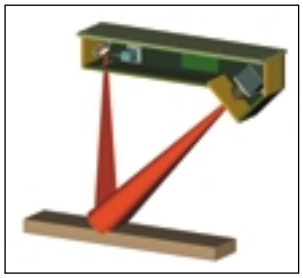


3D LASER PROFILING SENSOR

LPS

INO offers a line of high speed/high power 3D laser profiling sensors suitable for demanding industrial applications. These 3D sensors were designed for the inspection and measurement of fast moving objects or materials in web-type applications. Our fastest profilers are capable of acquiring 900 full 3D profiles per second with a standard depth accuracy of 0.25 mm. Custom 3D sensors can be built to suit your application.



Optical principle of INO 's 3D laser profiling sensor.

APPLICATIONS

INO 's 3D laser profiling sensors have delivered reliable performance in a number of demanding industrial applications including:

- Lumber measurement and classification
- Pavement rutting measurement
- Iron ore pellet measurement

- **VERSATILE**

  Large selection of laser sources to choose from depending on the reflectivity and surface characteristics of the object to be scanned. Available sources start with low-cost 35 mW diode laser-line projectors, up to 5 W high-power sources.

  Programmable laser pulse duration and intensity up to 1/25 000 sec.

  3D-profile acquisition can be synchronized to an external source.

- **PRECISE**

  Sub-pixel positioning algorithms for increased depth accuracy.

  Laboratory pre-calibrated.

- **PRACTICAL**

  Includes a PCI acquisition board and a software library for sensor configuration and acquisition of 3D profiles.

  Available in a rugged NEMA-4 class housing.

  Power supplies, cables, acquisition hardware, software and special mounting brackets also available.

3D LASER PROFILING SENSOR

LPS

CONFIGURATION

HIGH-PERFORMANCE CONFIGURATION

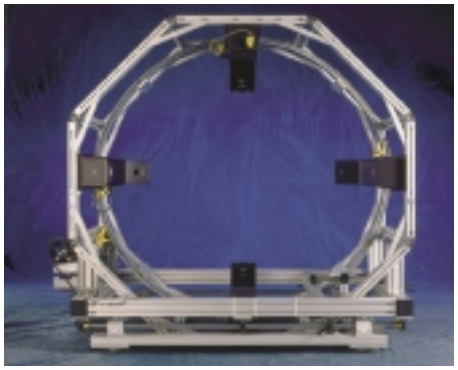
Speed:	900 profiles/second
Lateral resolution:	256 points/profile
Lateral field-of-view:	300 mm
Depth accuracy:	0.25 mm
Depth range of operation:	300 mm
Laser power:	35 mW to 5 W

STANDARD CONFIGURATIONS

Depending on your application, our 3D laser profiling sensors can be configured to the following standard specifications:

Speed:	60/120/240/350 profiles/second
Lateral resolution:	640 points/profile
Lateral field-of-view:	up to 2 m
Depth accuracy:	0.1 to 1.0 mm
Depth range of operation:	up to 1 m
Laser power:	35 mW to 5 W

If none of the standard configurations available meet your specifications, custom sensor configurations can be developed.



Four 3D laser profilers were used in the design of a lumber measurement and classification system.

FOR MORE INFORMATION OR QUESTIONS:

INO

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All specifications subject to change without notice.

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