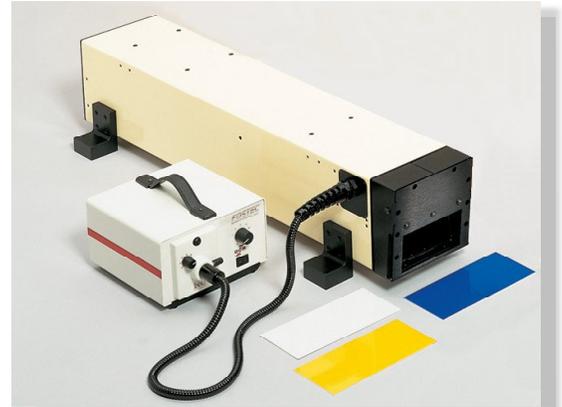


# Model 1000 Online Retroreflection Monitoring System

## PRODUCT SUMMARY

The Model 1000 retroreflection online monitoring system is a measurement system specially designed for retroreflective sheeting material production line monitoring. The system optionally comes with powerful computer-controlled data acquisition, display and recording capabilities. That option (Option 1) includes a Microsoft Windows-based computer, a data acquisition board that is plugged inside the computer, a chassis box, connection cables and user-friendly control software. It can perform analog to digital data conversion, system calibration that converts the voltage to retroreflection unit, graphical data display and data storage. Optionally, production line parameters such as conveyer position, speed and material thickness can be recorded with the appropriate sensors. Option 1 can read a rank file provided by the user and rank the measurement results. If the result is below the lower rank, or above the higher rank then option 1 can send out an alarm signal.

The Model 1000 has one projection light source and two observation angle photodetectors. Both the projection and receiver optics are collimated. The optical design meets both ASTM and CIE specifications for retroreflection measurement. The entrance angle axis is parallel to the instrument's centerline. Typically the entrance angle is set to either 5 degrees or 30 degrees and can be obtained by setting the position of the instrument. The observation angles are 0.2 and 0.5 degrees. With different optics, the observation angle could be modified to other angles. The industrial retroreflectometer output is 0-10 VDC analog voltage from each detector. The analog signal can be either connected to a chart recorder, an oscilloscope, a data logging device, display voltmeters or a computer data acquisition system.



### FEATURES

- Continuous retroreflectivity measurements of sheeting material
- High-speed data logging capabilities
- Meets both ASTM and CIE specifications
- Two observation angles of 0.2 and 0.5 degrees are simultaneously measured
- User-adjustable alarms to alert of any production line problems
- External light source for easy lamp replacement

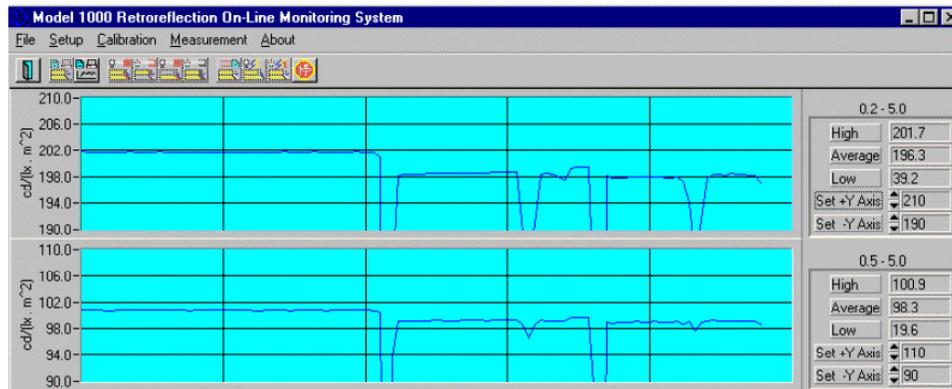


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## SPECIFICATIONS



Sample data acquisition software screen capture

Length	29 inches
Width	6 inches
Height	6 inches
Measurement Area	100 x 50 mm
Detector Angular Diameter	0.1 degrees
Light Source Angular Diameter	0.1 degrees
Illumination Source	Tungsten-Halogen approximately 2856 K (Illuminant A)
Observation Angles	0.2 and 0.5 degrees
Entrance Angles	Typically +5 or +30 degree options (Others available upon special request)
Signal Output	0 to 10 VDC analog output
Power Requirements	100 to 240 VAC / 50 to 60 Hz
Data Acquisition	Via oscilloscope, voltmeter, or computer using a National Instruments PCI-6025E DAQ card



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