

The logo for PHILTEC, featuring the word in a bold, white, sans-serif font with a slight 3D effect. Below the text is a horizontal line that tapers to a point on the left, resembling a stylized pencil or probe.

PHILTEC

Application Note

V9N1 January 2009

The title 'CONTOURED GLASS INSPECTION' is written in a large, bold, white, sans-serif font. The text is reflected below it, creating a mirror image effect. The background of the slide transitions from black at the top to a dark blue gradient at the bottom.

CONTOURED GLASS INSPECTION

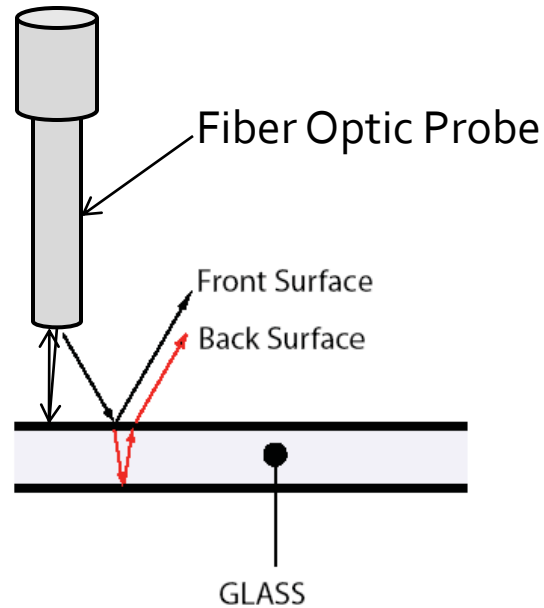
Contoured Glass Windows

Can be inspected for conformance to a master shape $\pm 50 \mu\text{m}$
If the sensors have been calibrated
To glass of the *same type and thickness*.



➤ **Philtec fiber optic probes are the retro-reflective type**

Emitted light reflected from the target is returned to the probes for single-sided measurements.



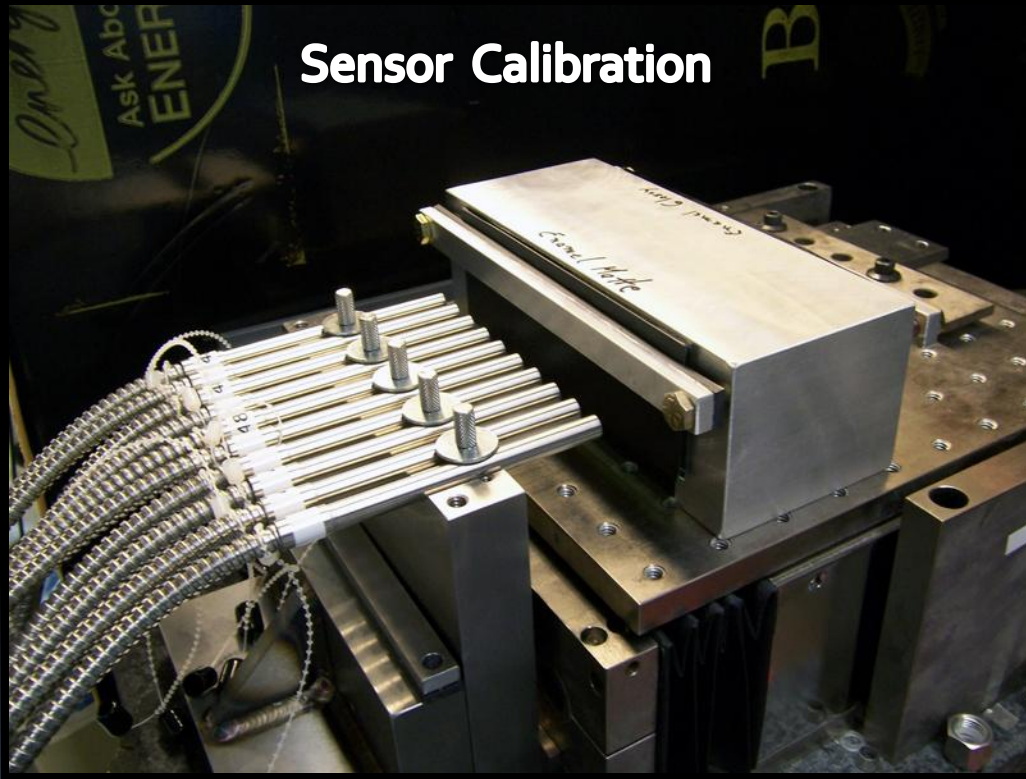
With glass targets, light is reflected from the front and back surfaces

Typical Glass Samples

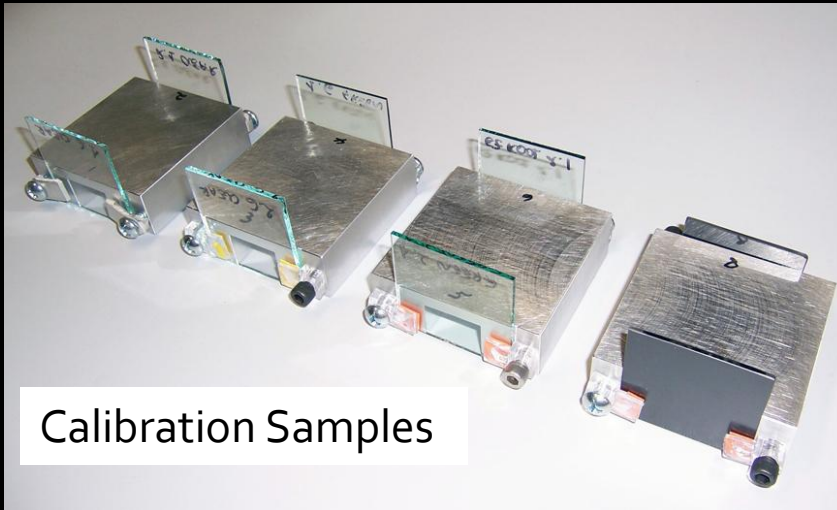
- The strength of the back side reflection is dependent upon glass thickness and amount of tint
- Painted Glass has no back side reflection



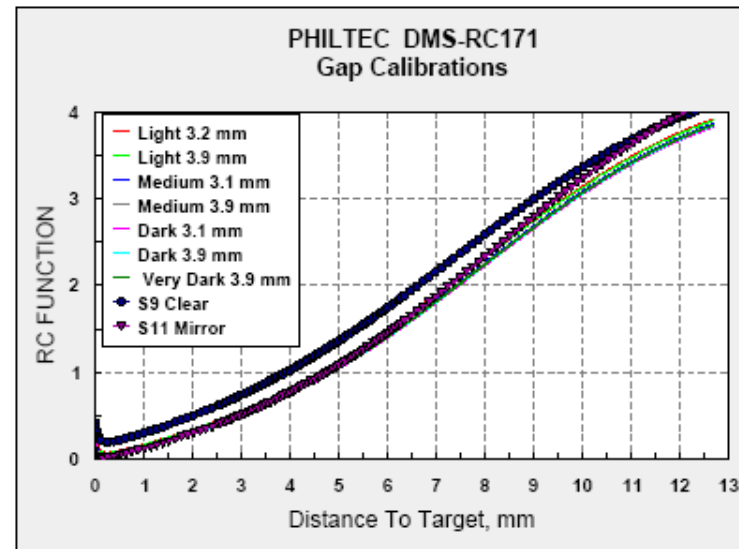
Sensor Calibration



Fiber Optic Probes are Calibrated By Fixturing Them Perpendicular To The Glass Sample Which Is Mounted On a Linear Motion Stage



Calibrations For All Glasses
Are Stored In Sensor Memory





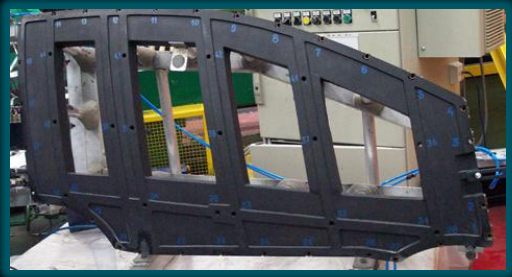
Sensors Are Packaged In 10 - Channel Racks



One Sensor



For more info on 10 channel racks, see the Product Data Sheet
<http://www.philtec.com/datasheet10dms.pdf>



At The Gaging Station

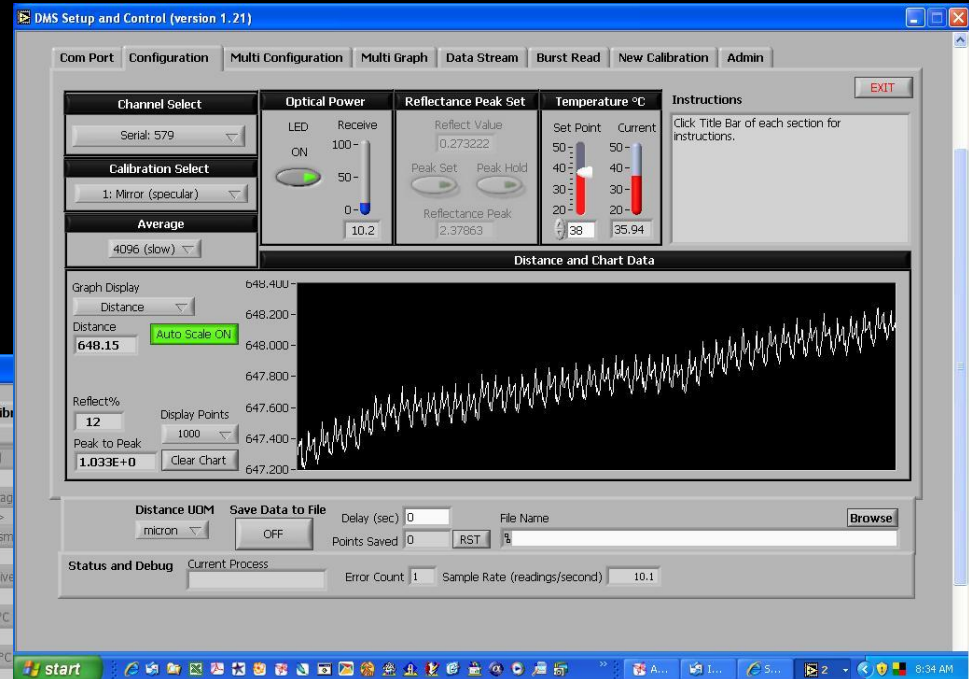
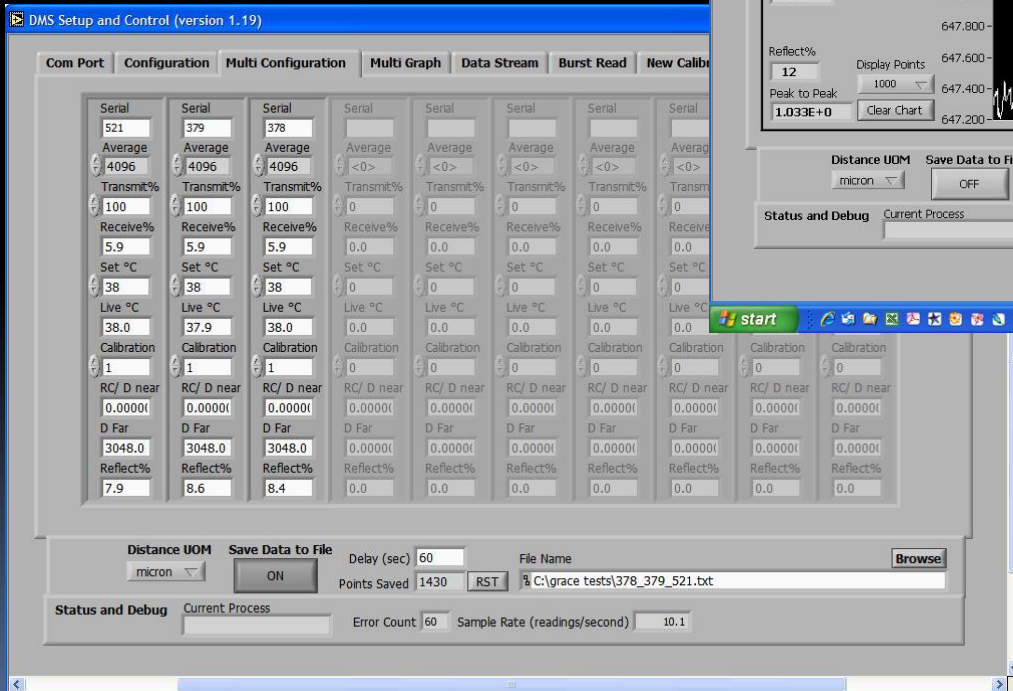
An Array Of Sensors Is Mounted In A Master Frame



Readings From 50 Sensors Can Be Recorded in
Less Than 1 Second

Sensor Control Software

Philtec Provides Software for Controlling 1 – 10 Sensors



LabVIEW and VB6 Drivers are available for programmers.

Fiber Optic Sensors



- Use RC Type (Reflectance Compensated) Sensors
- Select Model Based Upon Gaging Distances (RC100, RC171)
- Customize Sensor Tip As Desired (Length & Diameter)
- Specify Fiber Optic Cable Length
- Use Interlocking SS Cable Sheathing
- Sensor Electronics Include Ambient Light Rejection

Our Application Engineers are Ready To Help You
E-mail to Sensors@Philterec.com