

# Automating DWDM Filter Testing Using LabVIEW

## Customer

Precision Optics Corp. (Gardner, MA) manufactures optical thin-film coatings, including narrow bandpass filters used in dense wavelength division multiplexed (DWDM) optical networks.

## Challenge

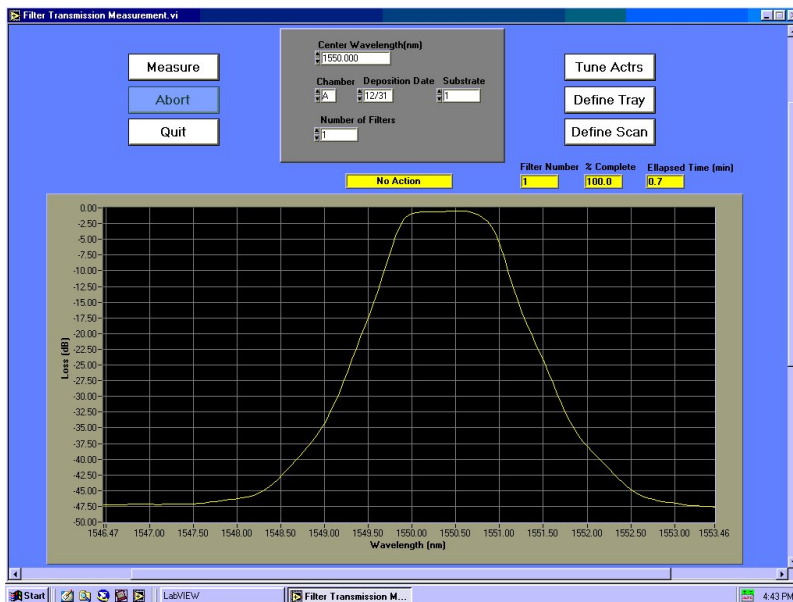
Reduce manual operator involvement in DWDM filter test to increase throughput and remove human error.

## Solution

Create automated test system that positions filter under test, aligns collimated laser source to filter, measures transmission power, and displays and saves data to file.

Key products used:

- National Instruments (NI) LabVIEW
- NI PXI-1002 chassis
- NI PXI-8176 controller
- NI PXI-7334 motion controller
- NI MID-7604 and MID-7602 stepper motor drives



User interface shows wavelength versus insertion loss curve of filter under test



Precision Optics turnkey DWDM filter test system

## Benefits

The automated test system reduced operator involvement to loading a tray of filters and initiating the automatic test sequence. The system tests 150 filters per hour – a net throughput increase of 5X per station and 10X per operator over the previous manual system – improves accuracy, and eliminates human error.

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