



SG Certus

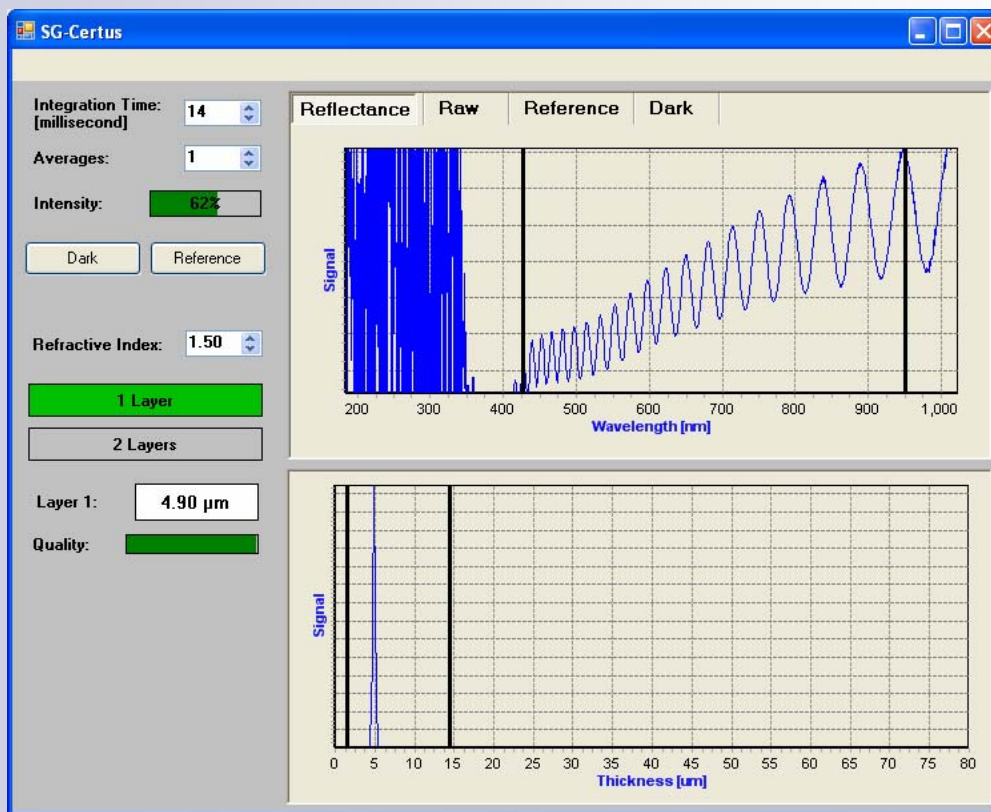


SG Certus

**HIGH PERFORMANCE, FLEXIBLE
LOW-COST NON-CONTACT OPTICAL THICKNESS
MEASUREMENT FOR TRANSPARENT THIN FILMS AND COATINGS**

SG Certus System Overview

SG Certus from Scalar Technologies is a film thickness measurement instrument which is designed to be light, portable and extremely user friendly. **SG Certus** is designed for a wide range of applications and has been specifically introduced to offer the highest levels of performance, measurement precision and flexibility with value for money in mind. Robust and compact this unit is suitable for use in the lab or in the field and is used and operated with a laptop computer.



SG Certus uses the principle of white light interference to accurately and quickly derive thickness results from test samples. Light from a stabilised halogen source is transmitted onto the sample through one arm of a bifurcated fibre-optic cable. Reflected light from the sample is received through the other arm of the cable and sent to a precision spectrometer. A simple interference pattern is generated and captured by the spectrometer. Fourier transform algorithm (FFT) processing is then used to establish the thickness of the sample under test and a clear, unambiguous thickness measurement is presented to the user.

The system is supplied with a comprehensive, yet simple to use software package. All information is presented in a clear and easily to understand format. The unit actually measures the Optical Thickness of the material under test, but allows the user to enter the Refractive Index (Ri) and automatically converts this to Physical Thickness.

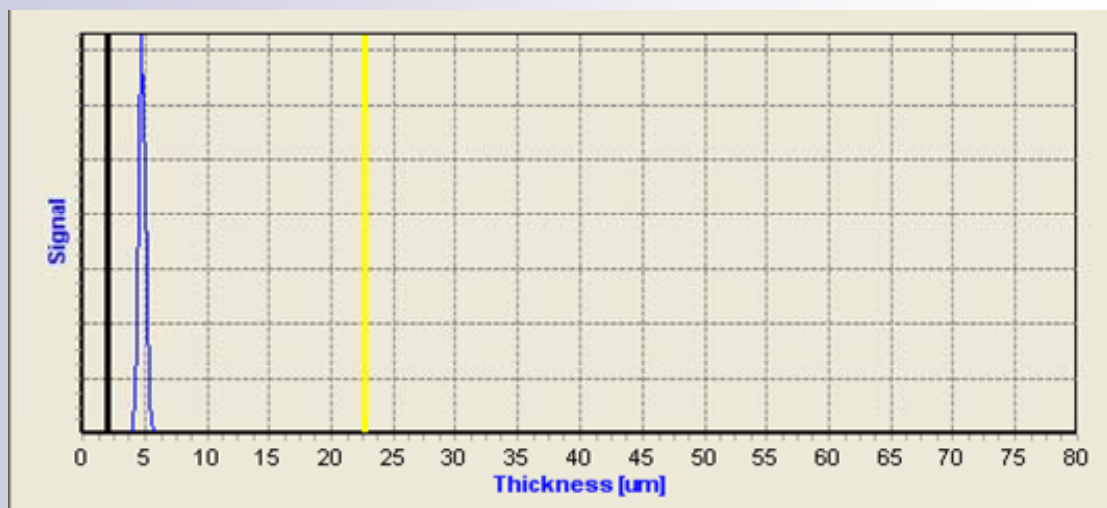
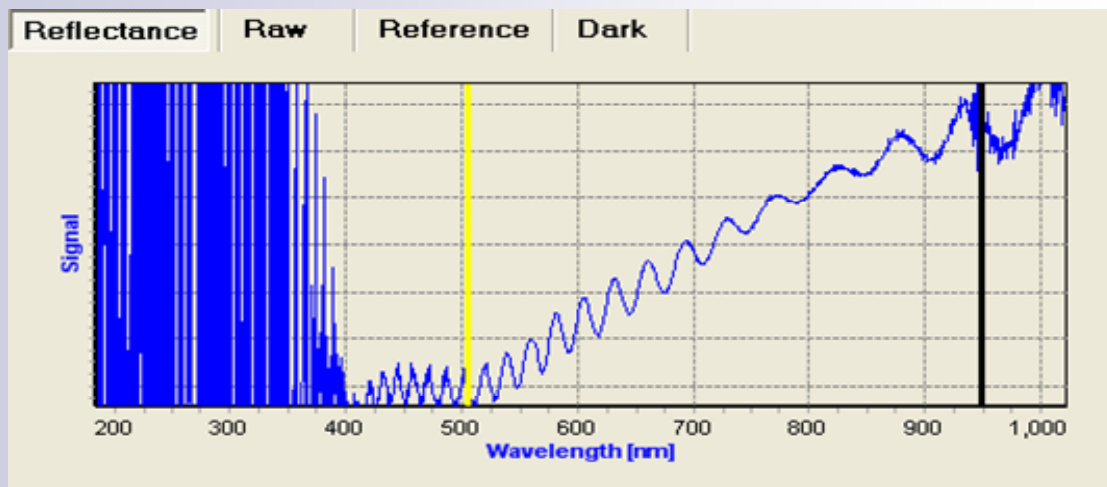
In certain types of film **SG Certus** can detect and calculate the thickness of several layers. It can calculate and display the thickness of two layers simultaneously.

APPLICATIONS

- Plastic films and coatings
- Hardcoatings on polycarbonate
- Clear adhesive layers (wet or dry)
- Clear coatings on sheet metals
- Semiconductor wafers
- Coatings on glass
- Optical films

BENEFITS

- Non-contact and non-destructive
- Fast : measures in milliseconds!
- Measures multi-layer films
- Easy to use ^{sg} **Certus** software
- Non-radioactive
- Thickness range : 0.5 μ m to 100 μ m
- High accuracy : better than +/- 0.01 μ m for simple films
- Simultaneous measurement of double-layer films



TECHNICAL DATA

THE **SG** Certus SYSTEM COMPRISES :

- A halogen source with automatic dark current and reference facility.
- High performance large array photo diode spectrometer.
- 0.25m + 1m bifurcated fibre-optic cable and probe.
- USB interface to computer running Windows XP.
- **SG Certus** application software.
- Portable enclosure.
- Universal 90v - 250v power supply.

Performance

Spectral range (spectrometer)	350nm – 1130nm
Halogen source spectral output (approx)	400nm – 900nm
Thickness measurement range (optical)	0.8um – 65um
Thickness measurement range (effective, Ri = 1.5)	0.5um – 100um
Accuracy (single or two layer film)	Better than 0.05um

Physical Data

Dimensions (W X H X D)	320 x 135 x 320 mm (12½ x 5¼ x 12½ in)
Weight	3 kg
Ambient operating temperature	10 - 40 Deg C (50 – 104 Deg F)
Input voltage	90V – 250V, 50/60Hz
Maximum power consumption	100W

Computer Requirements

- Any PC running Windows XP with a CD-Rom drive and a USB port (version 1.1 or 2.0).