LUMETRICS®

Precision Measurement Solutions

# Refractive Index Calculation System (RICS)

The Refractive Index (RI) determines how much light is bent, or refracted, when entering a material. The OptiGauge® normally measures the optical thickness of a material. The RI is needed in order to calculate an accurate physical thickness of a material at the measurement wavelength (~ 1300 nm). The Refractive Index Calculation System (RICS) provides an easy to use method to determine the RI of any sample being measured by the OptiGauge. The outline of those measurements is included in Figure 1.

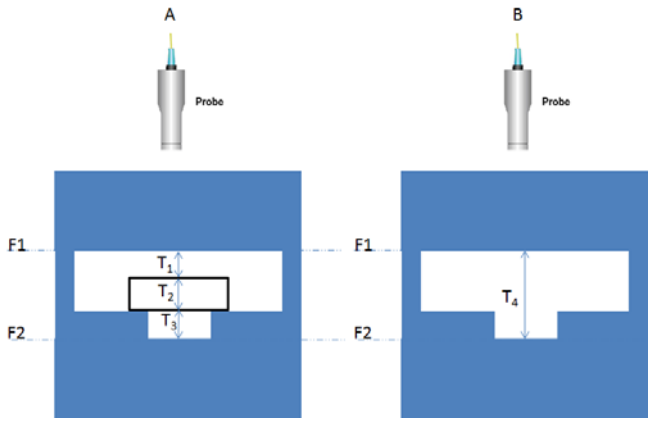


**Figure 1. Measurement of optical material between optical flats.**

Typical Applications

- Films
- Glass
- Lenses
- Coatings

RICS uses a mechanical fixture Figure 2 and specialized software running on an OptiGauge to calculate the RI.

Figure 2. RICS

RICS:

- Uses a standard OptiGauge
- Provides physical thickness measurement
- Determines Group refractive index measurement at ~ 1300nm wavelength
- Uses a two-step process
- Includes RICS hardware fixture and software