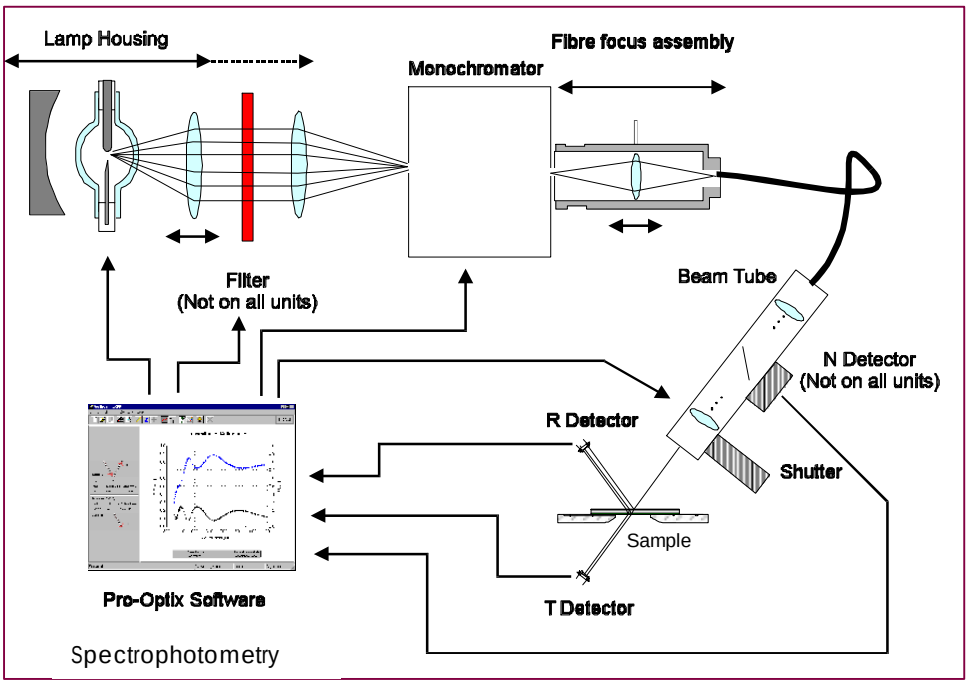

To summarise, the table below provides a performance comparison between the two methods.

Ellipsometry	Spectrophotometry (nkd series)
Analyse polarisation of reflected beam at high incidence angles. Only high incidence angles.	Measure Reflectance and Transmission vs. wavelength, of polarised or unpolarised light over a range of incident angles. 0 to 90 degrees.
Transparent substrates need to be prepared. Cannot handle reflections within substrate. Preparation method is often destructive. Characterisation of substrate not possible.	No sample preparation at all required. Characterise multi-layer films and substrate. Transparent substrate an advantage.
Most expensive method. Costly polarising components.	Cost effective, Turn Key Instrument.
Sensitive to very thin layers <?/2	Sensitive to all layers, but excels for thicker layers >?/2
Analyse multi layer and complex films	Analyse multi layer and complex films, but more easily with powerful integral automatic analysis software.
Cannot get n and k from single measurement.	n and k determined from single measurement.
Cannot measure T and R simultaneously. Additional attachments required.	T and R measured simultaneously from exactly the same area of the sample, guaranteeing accuracy of results.
Data analysis time consuming and difficult, requiring specialised personnel and third party software.	Data analysis fast and easy with powerful integral automatic software.
Subject to many sources of inaccuracy.	Photometric precision using powerful modelling technique and maximum optical data.
Baseline offsets required.	Full spectrum gives dispersion of n and k. No baseline offsets or corrections required.

The nkd spectrophotometer has the performance of any ellipsometer, with many more advantages.