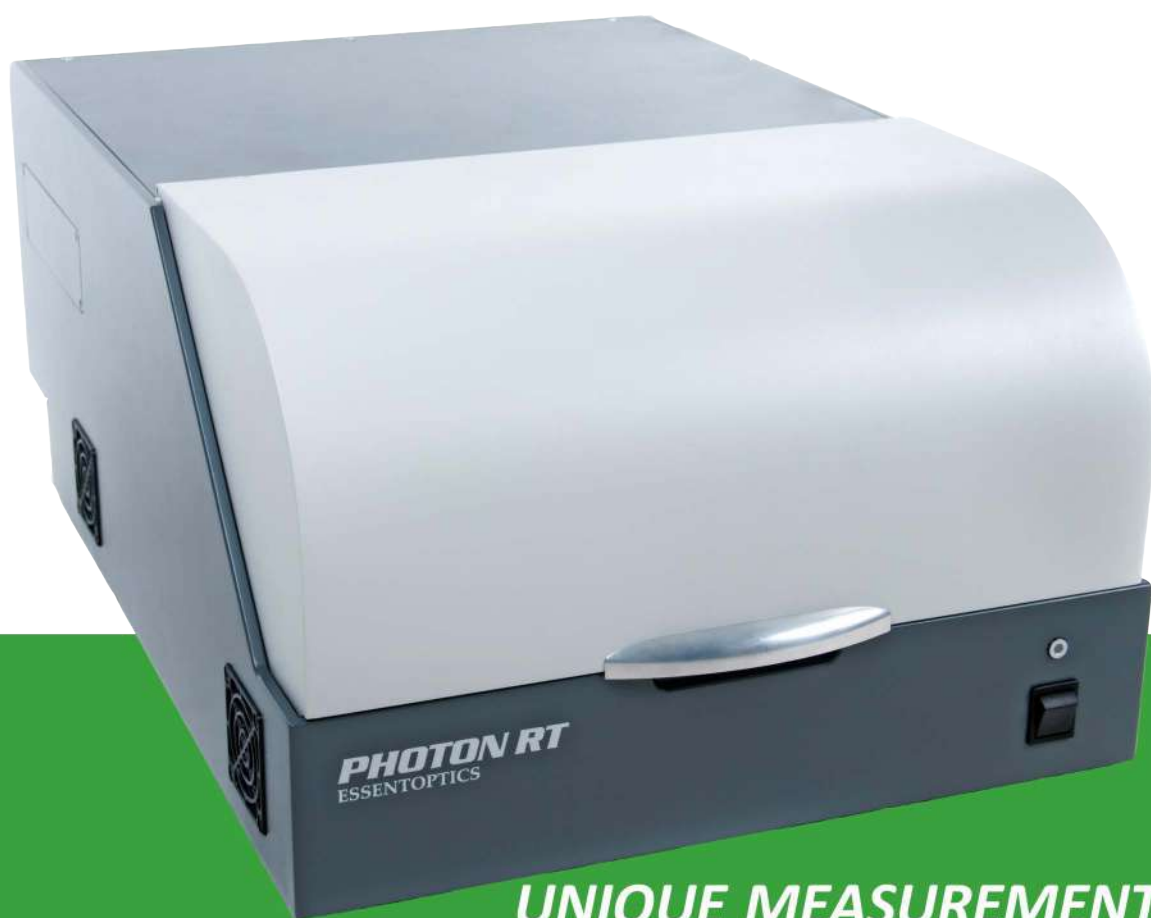


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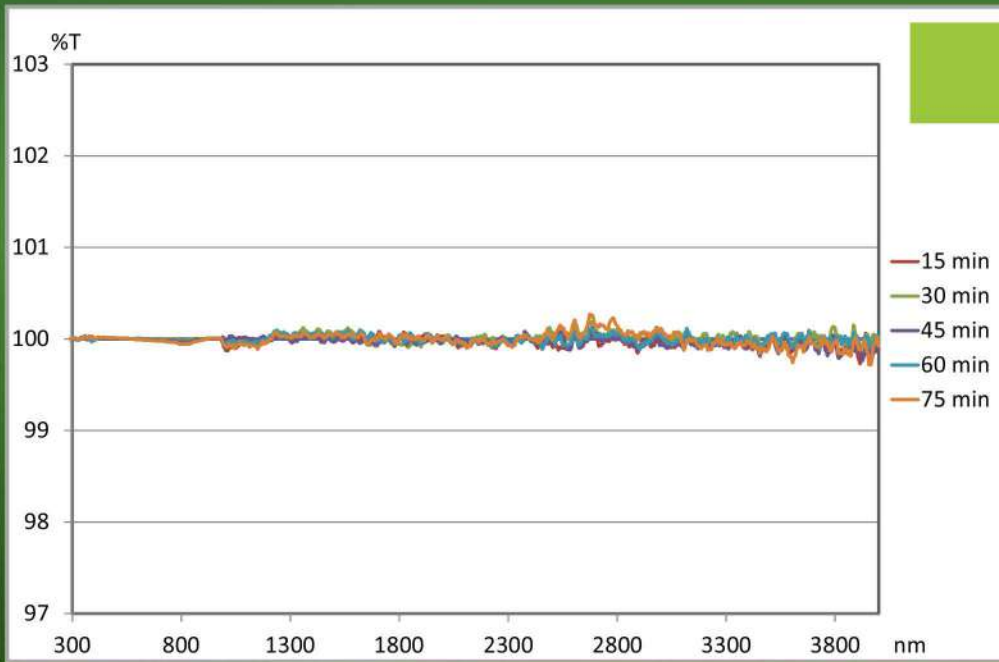
UV-VIS-MWIR SPECTROPHOTOMETERS

# ***PHOTON RT***



***UNIQUE MEASUREMENT CAPABILITIES***

## BASELINE STABILITY

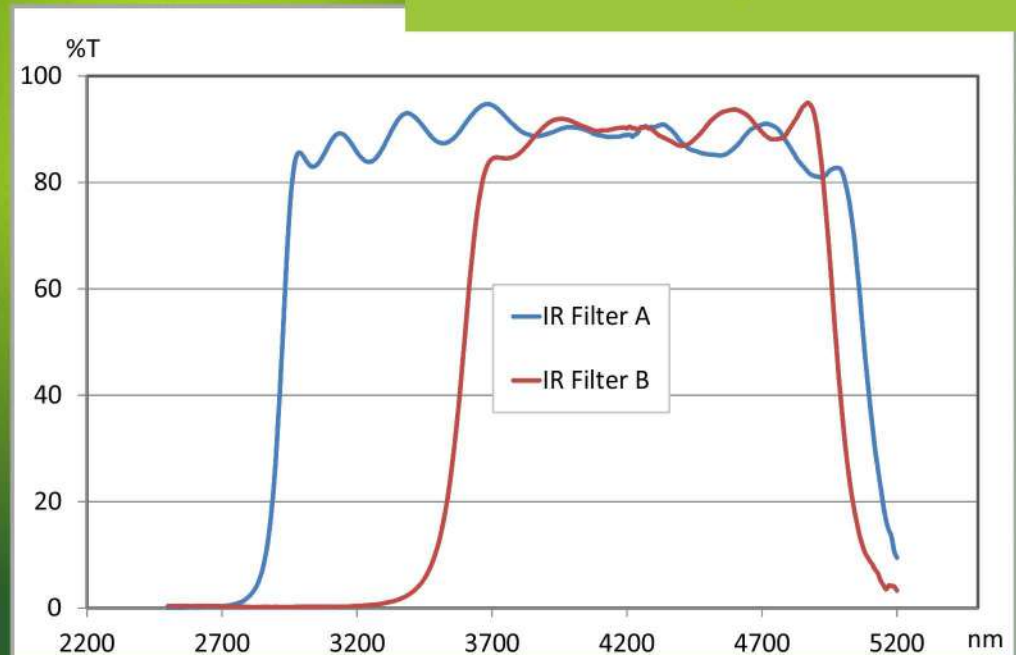


### Baseline stability

Spectrophotometer PHOTON RT demonstrates very good baseline stability over time and at record-wide UV-MWIR wavelength range.

## MID-WAVE IR BANDPASS FILTERS

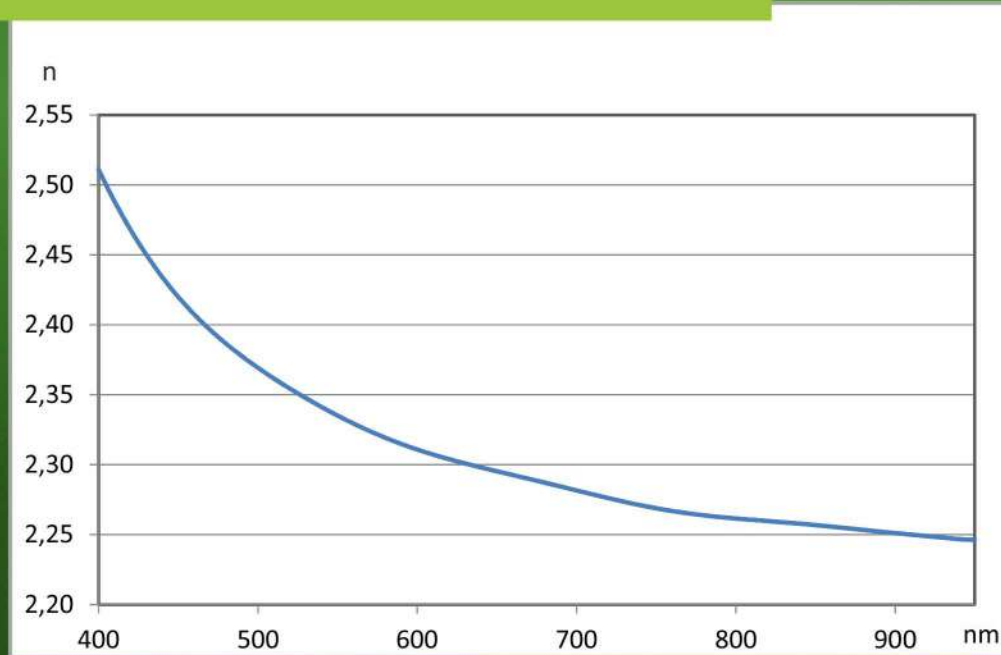
### Mid-Wave Infrared Measurement



PHOTON RT is perfectly suited to meet the fast growing demand for precise measurements of MWIR coatings (advanced laser systems and thermal vision instruments), both at normal AOI and at variable angles and polarizations.

# UNATTENDED MEASUREMENT AND CALCULATION OF COMPLEX REFRACTIVE INDEX

## Refractive Index of Nb<sub>2</sub>O<sub>5</sub> Thickness 490 nm. IBS Coating

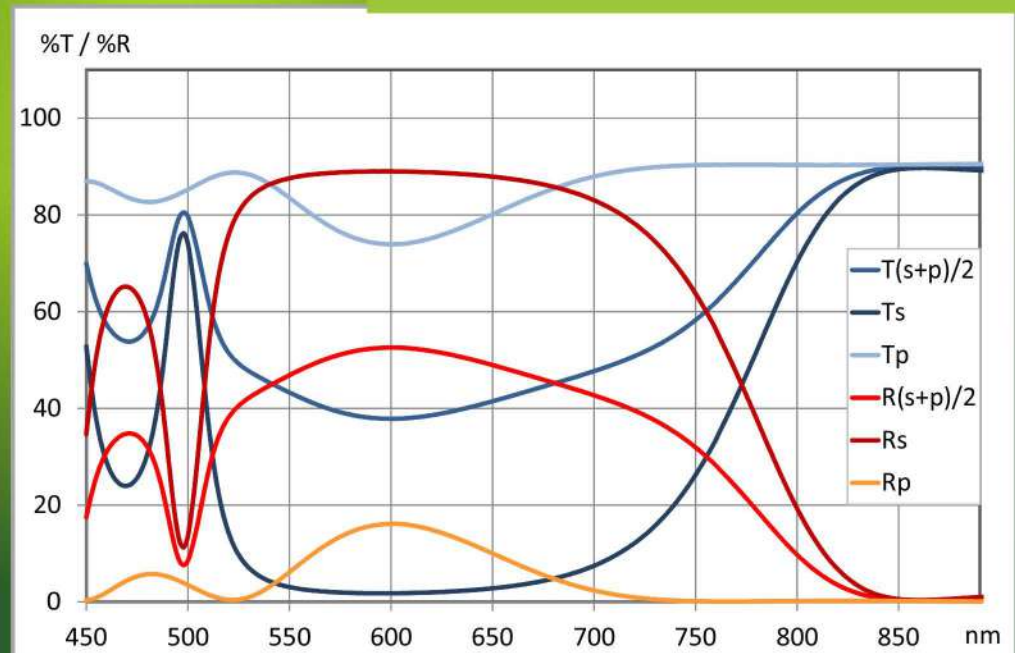


Single layer coatings can be measured with built-in proprietary software feature for subsequent instant calculation of complex refractive index and layer thickness. The example is shown for Nb<sub>2</sub>O<sub>5</sub> layer, 490 nm thickness, produced by ion-beam sputtering technology.

# UNATTENDED MEASUREMENTS OF PBS CUBES

## PBS Cube

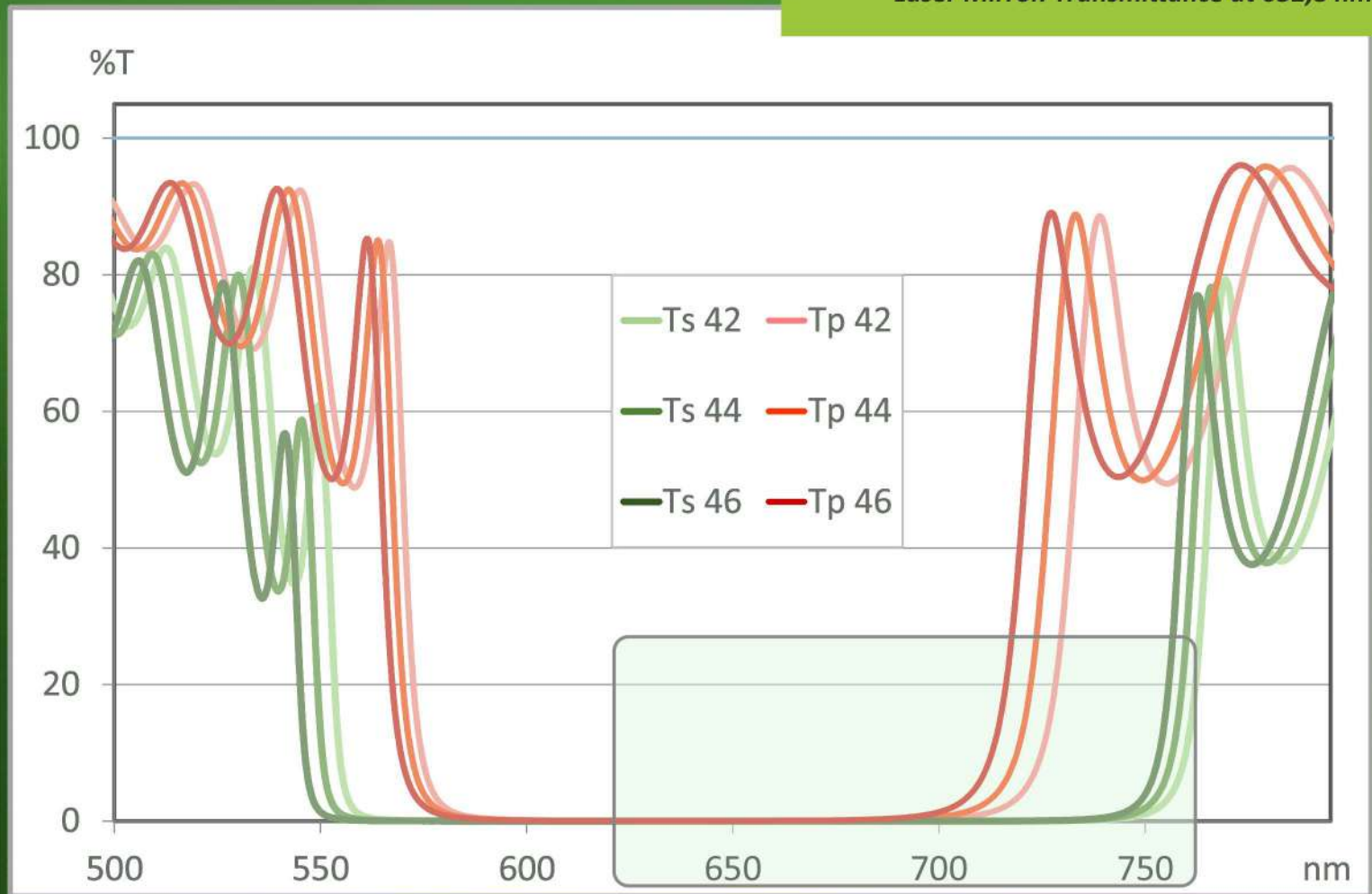
PBS cubes are among widely available yet challenging to measure optical components. Shown above, a PBS cube with uncoated front surfaces measured unattended in less than 2 minutes, ensuring the beam entering exactly the same point on the cube both for  $T_s/T_p$  and  $R_s/R_p$  measurements.



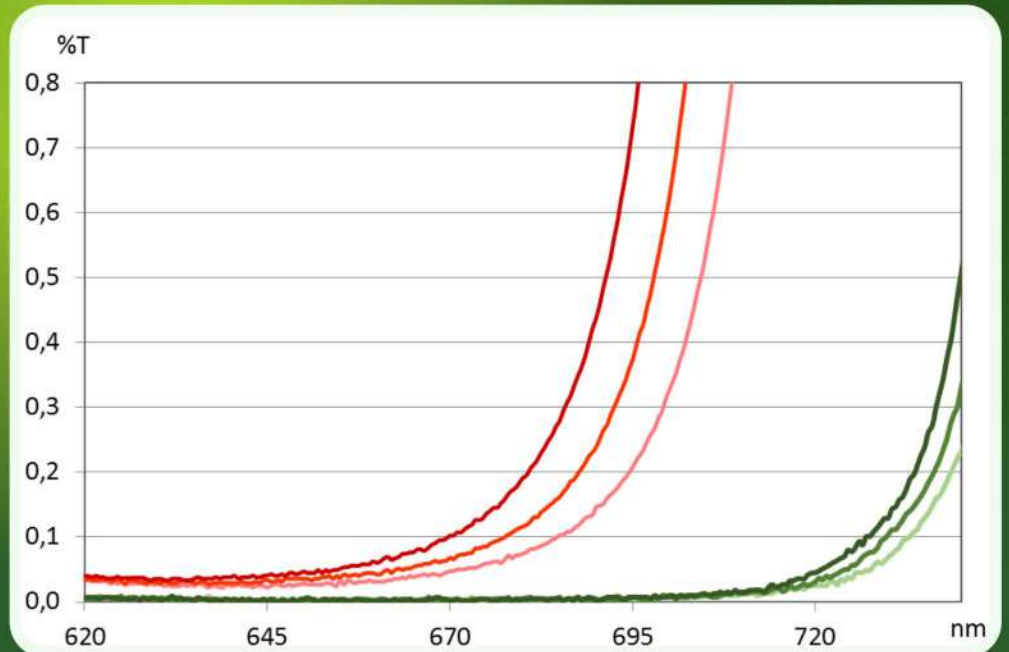


# HIGH ACCURACY MEASUREMENTS

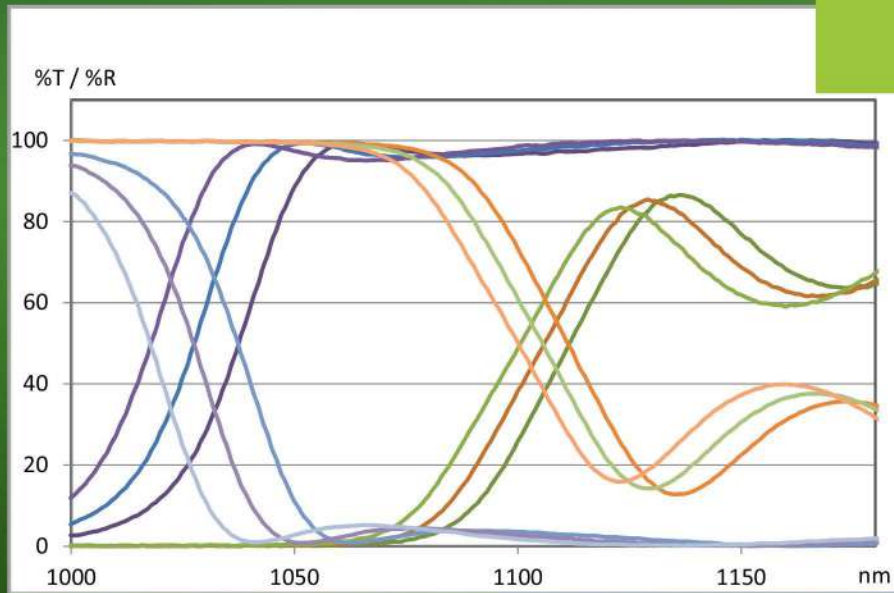
Laser Mirror. Transmittance at 632,8 nm



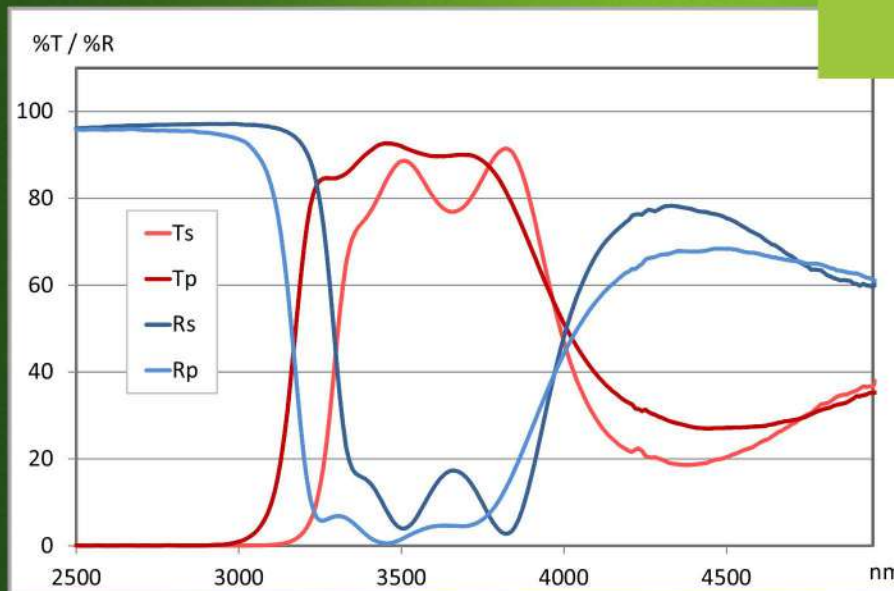
Transmittance measurement of laser mirror optimized for 632,8 nm at 44 degrees angle of incidence. The measurement results also shown for 42 and 46 degrees AOI to verify performance of the coating over +/- 2 degrees angle of deviation.



# VARIABLE ANGLE AND POLARIZATION DEPENDENT MEASUREMENTS

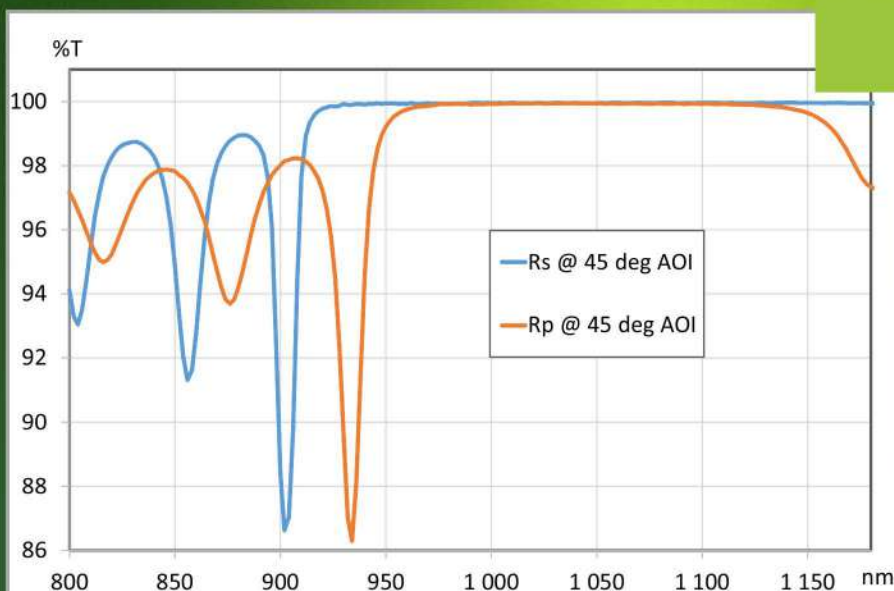


*Polarizer 1064 nm at 54, 56, 58 deg AOI  
Transmittance / Reflectance, S-, P- Polarization*



*Mid-Wave IR Polarizer*

Powered with built-in high-contrast broadband polarizers, PHOTON RT spectrophotometer is uniquely differentiated with capability to measure at variable angles and polarizations unattended in just a few minutes.

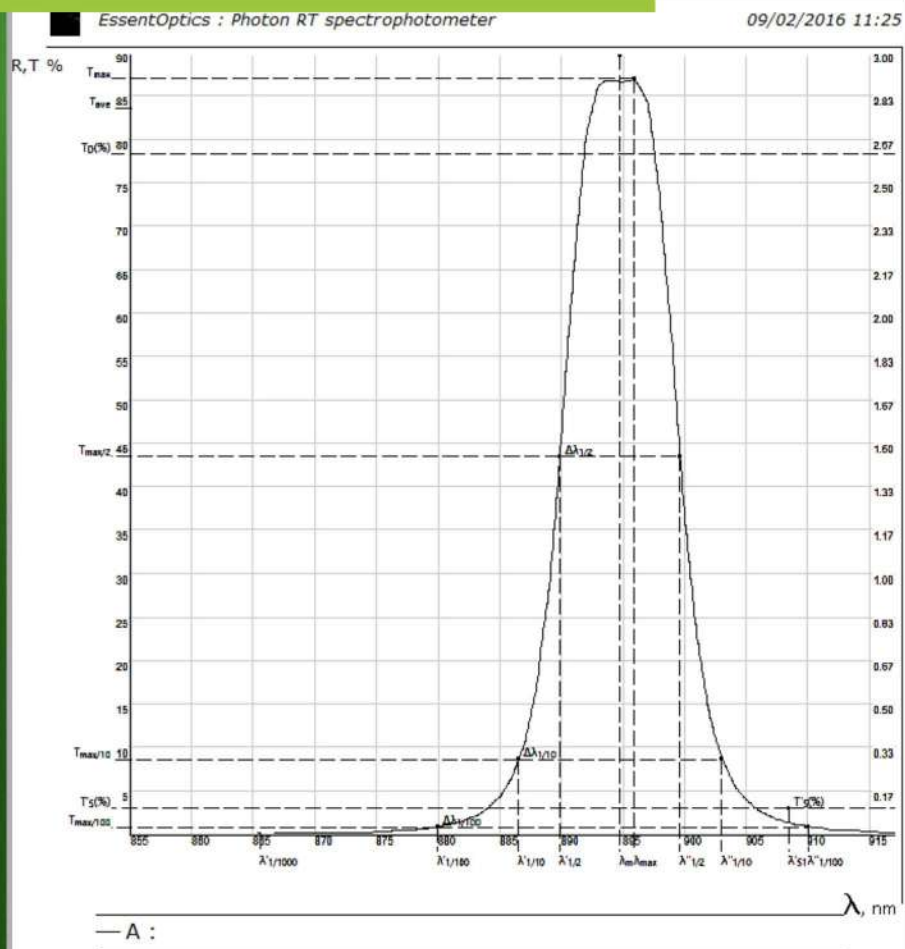


*Laser mirror 1064 nm @ 45 deg AOI*



# QUALITATIVE AND QUANTITATIVE ANALYSIS OF MEASURED COATINGS

## Yield Analyses and Spec Report



### A : : Spec Report

#### Initial data

| Parameter | Value  |
|-----------|--------|
| Tmax      | 91.186 |
| λmax      | 895.96 |
| S'%       | 0.71   |
| S''%      | 0.72   |

#### Passband

| Parameter | Value  |
|-----------|--------|
| TD(%)     | 82.067 |
| λD1       | 891.86 |
| λD2       | 897.58 |
| ΔλD       | 891.86 |
| Tave      | 87.672 |

#### FWHM

| Parameter | Value  |
|-----------|--------|
| λ'1/2     | 889.88 |
| λ''1/2    | 899.66 |
| Tmax/2    | 45.593 |
| Δλ1/2     | 889.88 |
| λm        | 894.77 |

Yield Analyses and Spec Report – powerful software features helping optical experts to perform qualitative and quantitative analysis of typical coatings with a click of button, like cut-off filters and narrow bandpass filters. The new time-saving and efficient software capabilities are used for QA/QC approval of the coatings against pre-set acceptance limits, and instant generation of specification data for analyzed spectra.

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