

Leybold Optics APSpro – plasma sources.

Most powerful device in the market.



LEYBOLD OPTICS APSpro

Bühler Leybold Optics' proprietary technology APS (Advanced Plasma Source) was introduced in 1992 and delivers maximum performance and productivity paired with its unique ability to produce shift-free optical coatings. In contrast to other sources in the market, low- and high-index materials can be applied with sufficient densification but without additional heating – even for SiO_2 . While the main applications of the plasma-ion-assisted deposition (PIAD) process lie in coating materials such as metal oxides and nitrides, it can, however, also be used in coating pure metals and non-metal oxides.

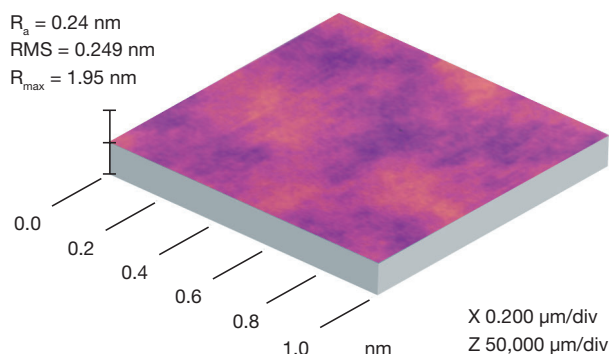
Key benefits:

- Perfect, shift-free spectral performance
- Dense and extremely smooth films
- High deposition rates
- High refractive-index layers
- Wide-angle characteristics
- Enormous library of established processes

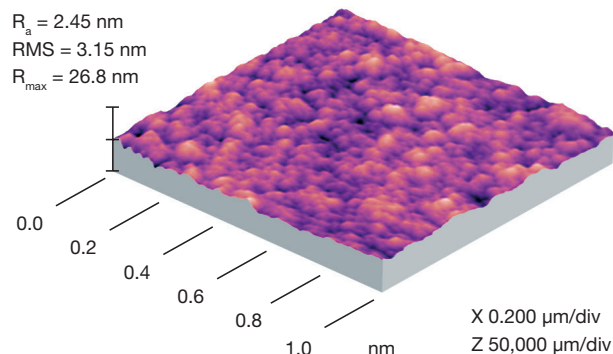
Technical data APSpro

Discharge current	Typical 65 A (max. 100 A)
Discharge voltage	≤ 200 V
Discharge power	≤ 15 kW
Bias voltage	55 - 200 V
Heater power	1.8 kW
Process gas	O_2 / Ar flow controller
Ion current density	$1300 \mu\text{A}/\text{cm}^2$ @ 450 nm
Ion energy	20 – 250 eV

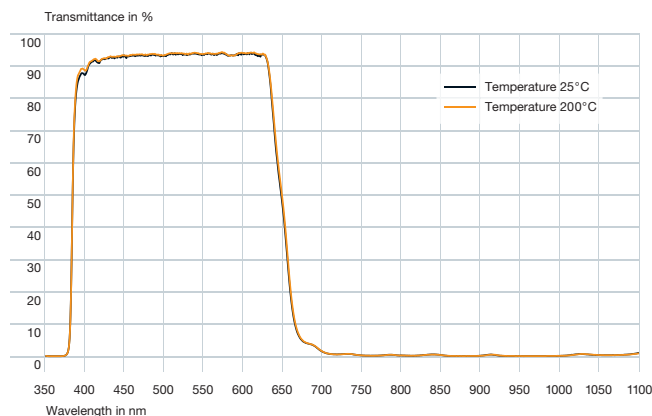
Strikingly better layer smoothness with LEYBOLD OPTICS APSpro



Standard surface roughness with conventional coating



Perfect shift-free characteristics



Optical filter created with APSpro at different temperatures.