Altechna

Beam Delivery Optics for Quantum Computing

Altechna, a leading Lithuanian laser optics manufacturer, has completed a successful 2023 investment round. We have expanded our cleanroom production facilities, elevated expertise in thin film coatings, increased optical and optomechanical assembly capabilities and strengthened our ability in contract manufacturing. With over 27 years of experience and wide technological capabilities we are committed to provide best comprehensive solutions for diverse markets across the globe, including Quantum Computing.





Partially Reflective Mirrors

- Fixed reflectance values for particular wavelength
- Reflectance value tolerance up to ±0.1%
- Broad angle solutions available for most demanding applications
- Ultra-low reflection second side coatings to minimize back reflections



Filters

- Long-pass
- Bandpass
- Multi-band
- Notch filters
- Interference filters



HR Laser Line Mirrors

- Reflectance at wavelength range of <10% of the central wavelength (CWL)
- Low absorption in UV
- Low loss mirrors available, reflectivity up to 99.99% (CRD tested)
- Low phase-shift mirrors



Polarizing & Non-polarizing Beamsplitter Cubes

- Extinction ratio: >1000:1
- Medium & high energy applications
- Optical contact

Achromatic Lenses

- Chromatic aberrations control
- Dimensions: 3-200 nm
- Focal length tolerance: ±1%
- Broadband solutions



Crystalline Quartz Waveplates

- Ultra-thin TZO waveplates for wide temperature ranges
- Retardation: $\lambda/2$, $\lambda/4$
- Retardation tolerance: $\lambda/300 @ 20 \ ^{\circ}C$



Vertical Mirror Mounts

- High-end industrial grade lubricant free optics' mount suitable for cleanroom and vacuum applications
- Unprecedented mechanical stability and low thermal drift (<2 µrad deviation during thermal cycling)
- Negligible mount's influence on flatness or wavefront distortion on mounted optics
- Highly customizable design possibility to tailor it according to your needs

Discover our top-tier solutions in the Quantum Computing market, including:

• Wavelengths:

Altechna

- Single: 370–1100 nm
- Broadband: 400-750, 780-850, 650–1050 nm or any other from range of 260–3000 nm
- Optical elements size:

• 0.5", 1", 1.5", 2", or other custom solutions

Savanoriu ave. 176B 03154 Vilnius, Lithuania info@altechna.com www.altechna.com