

# Standard and Customs Optics

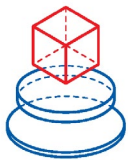
## Altechna

A perfect solution for research and OEM applications, from prototype to large series.

- ✓ More than 20 years of experience
- ✓ Expertise in high performance optics, polarizing optics, crystals and laser accessories
- ✓ Standard or customed optics
- ✓ from UV to far infrared
- ✓  $R_{min} < 0.1 \%$
- ✓  $R_{max} > 99.995 \%$
- ✓ High reflectivity coatings up to  $35.2 \text{ J/cm}^2$  @ 1064 nm, 10 ns, 10 Hz
- ✓ Polarizing coatings up to  $57.2 \text{ J/cm}^2$  @ 1064 nm, 10 ns, 10 Hz

**Standard optics delivered  
1 to 2 weeks**

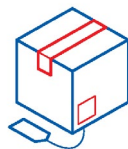
### Focus on customer needs



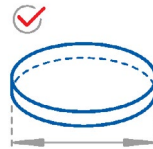
Laser related components



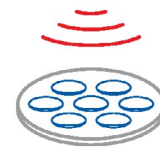
R&D Solutions in laser optics



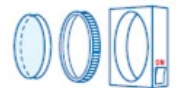
Distribution



Quality & Measurements



Advanced coatings



Assembly development

### Our capabilities

- ✓ Short delays for standard solutions Available on catalog
- ✓ Solutions on specifications for crystals, optics and optomechanical assemblies

**Customization available on stock**

### Our metrology and optical quality inspection

- ✓ GDD measurement
- ✓ Goniometre
- ✓ Interferometre (ZYGO)
- ✓ DPSS CW lasers
- ✓ EFL & ROC tests
- ✓ Savvy inspector
- ✓ Humidity and temperature tests
- ✓ Stereo and analytical microscopes

For further information

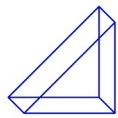
Acal BFi DE  
T : +49 (0) 8142 6520 0  
E : sales-de@acalbfi.de



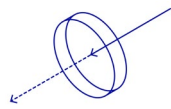
[www.acalbfi.de](http://www.acalbfi.de)

# Standard and Customs Optics

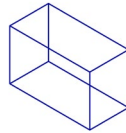
## Product lines and availables customization



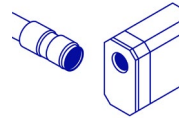
Uncoated optics



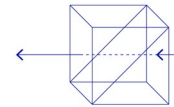
Coated optics



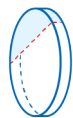
Crystals



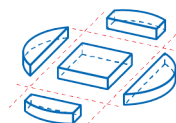
Laser accessories



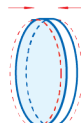
Polarization optics



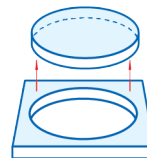
Cut corners



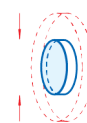
Cut to custom shapes



Reduce thickness



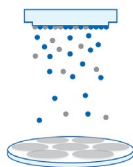
Drill hole



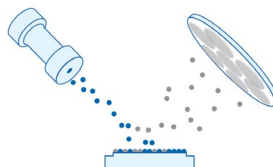
Reduce the diameter

## Available coating technologies

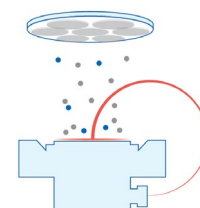
MS



IBS



E-BEAM + IAD



	Electron beam evaporation	Ion assisted deposition	Ion beam sputtering	Magnetron sputtering
Deposition rate	> 10 Å/sec	~5 Å/sec	1-3 Å/sec	1-6 Å/sec
Coating area per run	274-820 cm <sup>2</sup>	274-820 cm <sup>2</sup>	500 cm <sup>2</sup>	4400 cm <sup>2</sup>
Thermal conductivity	low	medium	high	high
Temperature range during coating	200 - 300°C	20 - 100°C	20 - 150°C	20 - 100°C
Number of layers	1 - 50	~50	up to 200	up to 200
Density / Porosity	Porous	Dense	Near bulk	Near bulk
Adhesion / Durability	low	good	excellent	excellent
Humidity sensitivity	yes	yes, small	no	no
Aging effect	yes	yes, small	no	no
Intrinsic stress	< 100 MPa	~100 MPa	quelques 100 MPa	quelques 100 MPa

For further information

**Acal BFi DE**  
 T : +49 (0) 8142 6520 0  
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