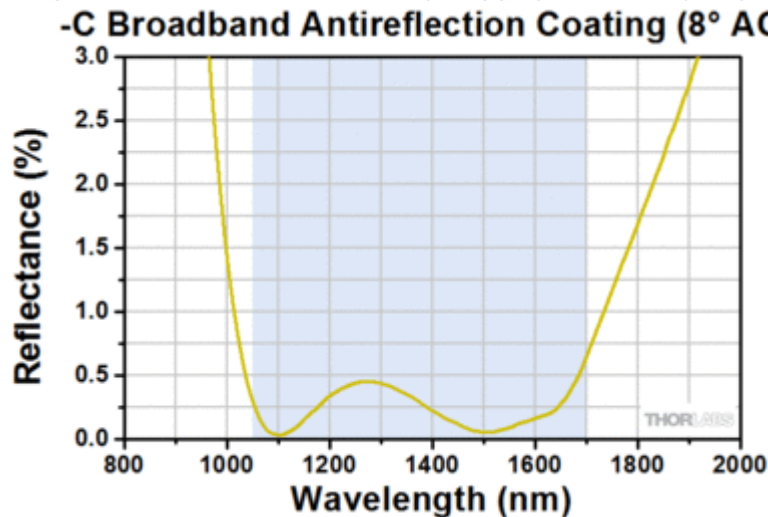


# Optical components inside the vacuum

## Windows

- Typ: Broadband precision wedged window  
([https://www.thorlabs.com/newgrouppage9.cfm?objectgroup\\_id=8430&pn=WW11050-C](https://www.thorlabs.com/newgrouppage9.cfm?objectgroup_id=8430&pn=WW11050-C))



- Ordering No.: WW11050-C
- Wavelength: 1050 - 1700 nm
- Wedge Angle: 30 +/- 10 arcim
- Substrate: N-BK7 (Datasheet: [https://www.thorlabs.com/newgrouppage9.cfm?objectgroup\\_id=6973&tabname=N-BK7](https://www.thorlabs.com/newgrouppage9.cfm?objectgroup_id=6973&tabname=N-BK7))
- Diameter: Ø1" 25.4 mm +0.0/-0.2mm
- Thickness 5.0 mm +/- 0.1mm
- Clear Aperture: >= Ø22.86 mm
- Surface Flatness:  $\leq \lambda/20$  Over Central Ø10 mm;  $\leq \lambda/10$  Over Entire Clear Aperture
- Surface Quality: 20-10 Scratch-Dig
- Reflectance Over AR Coating Range:  $R_{avg} < 0.5\%$  @ 0° AOI
- Temperature:
  - Question: What is the maximum (continuous) temperature which the AR coatings are able to withstand? What is the maximum temperature gradient that can be applied (continuously) between the two faces of the 1/2" 3mm BK7 and fused silica windows?
  - Response from Jeremy at Thorlabs: The maximum temperature will be around 200°C or so. We do not spec a maximum temperature gradient since it can depend on the thermal boundary conditions and geometrical boundary conditions of the window. However, I would recommend UVFS over N-BK7 because of its much lower coefficient of thermal coefficient.

Wavelength [nm]	Reflectance [%]
1580	0,13389
1570	0,12753
1560	0,10307

Wavelength [nm]	Reflectance [%]
1550	0,08615
1540	0,07766
1530	0,07079
1520	0,05383
1510	0,06028
1500	0,05612

- Auto Cad (2D):

[ww11050-c-autocadpdf.pdf](#)

## Vacuum isolator

- Test report scan copy for vacuum compatible isolators:  
[test\\_report\\_scan\\_copy\\_for\\_vacuum\\_compatible\\_isolators.pdf](#)

## Vacuum faraday rotator

- Typ/Name: 102022 - FR-5-1550-SS
- Serie: 2117
- Wavelength: 1550nm
- Aperature: 4.5mm
- Transmisson: 98%
- Rotation: 44.5° @ 1550nm
- Test report scan copy for vacuum compatible faraday rotator:  
[Faraday rotator\\_Datasheet](#)

From:  
<https://iqwiki.iqo.uni-hannover.de/> - IQwiki

Permanent link:  
[https://iqwiki.iqo.uni-hannover.de/doku.php?id=groups:mg:project\\_ptb-cavity:vacuum:vacuum\\_optics](https://iqwiki.iqo.uni-hannover.de/doku.php?id=groups:mg:project_ptb-cavity:vacuum:vacuum_optics)

Last update: 2018/06/26 06:16

