

SOLUTIONS IN GLASS



GVB

Schutzgläser für Laseroptiken
Protective Windows for Laseroptics

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Protective windows for Disc-, Nd:YAG- and Fiber-Lasers

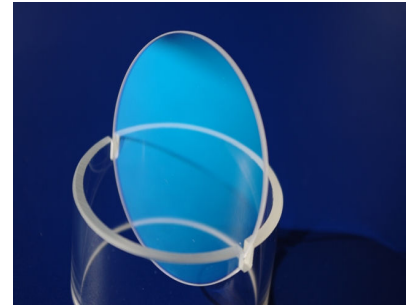
Used as last optics to be used before the working are to protect the high-class laser optic from material spillings during the laser welding and cutting process.

These protective windows are available in many different sizes according to our customers specifications. You can choose whether the discs should be coated from one or both sides with an anti-reflex coating for example for the standard wavelengths of 1030nm, 1064nm and 1070nm.

In addition we can also offer coatings for different wavelengths in the visible region of the pilot beam (532-650nm) as well as broadband coatings in the range of 400nm to 1200nm.

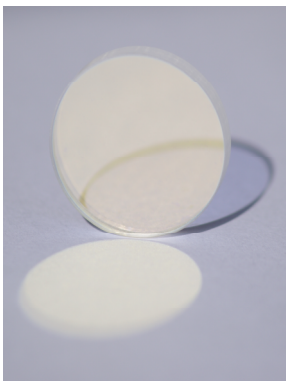
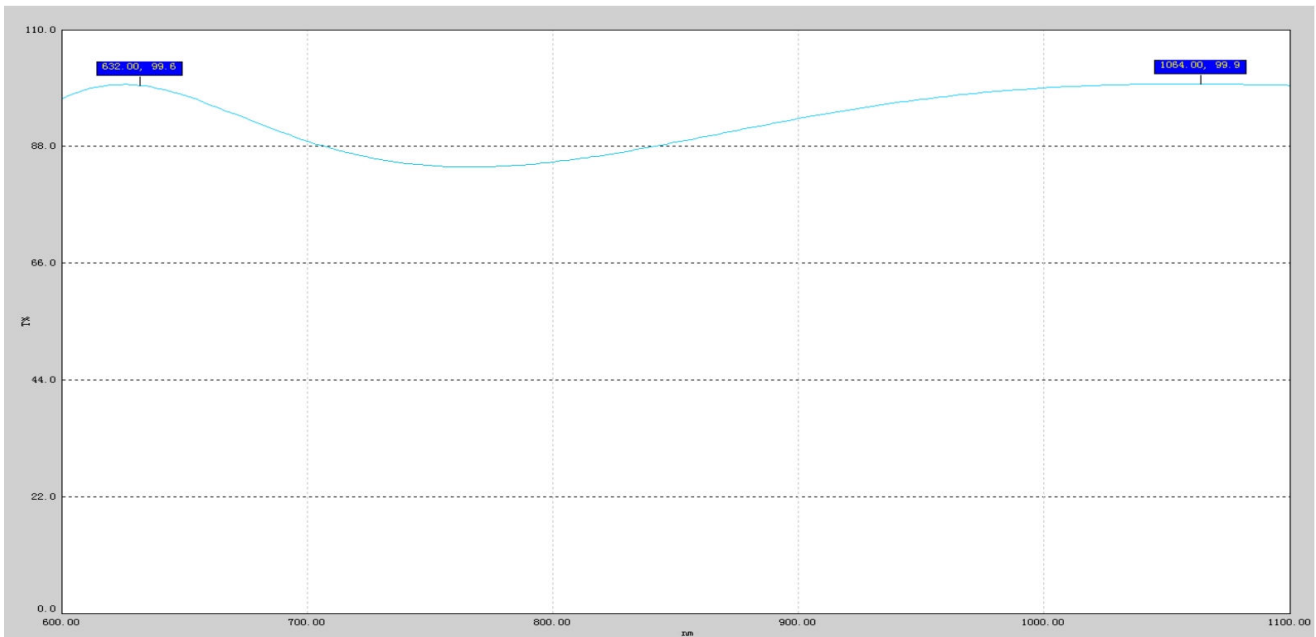
An example for the specification of a Nd:YAG protective window:

- **Tolerances:** according to the customers requirement, f. e. $\varnothing 55 \pm 0,1 \text{mm}$
- **Thickness:** according to the customers requirement, f. e. $1.5 \pm 0,1 \text{mm}$ with small facette
- **Surface quality:** $\lambda/4$ - $\lambda/6$
- **Anti-reflex Coating for 1064nm:** $T > 99.5\%$ @ 633nm; $T > 99.8\%$ @ 1064nm
- **Reflection:** $< 0,5\%$ @ 1064nm
- **Coating thickness:** approx. 0,55 microns
- **Scratch dig:** 60/40
- **Laser damage threshold:** approx. 50 J / cm^2
- **Parallelism:** $< 10'$
- **AOI:** 0°
- **Surface:** In the aperture no bubbles, scratches and other glass defects are allowed. 0.2mm bubbles und minimal scratches outside of the aperture are allowed.
- **Wipping resistance** is 100% checked by an adhesive tape peeling test and by cleaning with alcohol in a dust-free chamber.
- **Packing:** for example for $\varnothing 55 \times 1.5 \text{mm}$: 60 discs / small carton box, every disc is packed in an optic flat bag. The carton box contains drying bags.



Transmission at 632nm = 99.6% at 1064nm = 99.9%

(quartz disc thickness 1.5mm, both sides anti-reflex coated):



Our target:

As these consumable items will be replaced often times, we know that affordable alternatives are in great demand.

To deliver in short time and to give our customers the opportunity to save storage and associated costs, we are offering volume contracts of one year. All discs will be stored in our warehouse in Herzogenrath, Germany and only the discs stated on each delivery note will be charged.

The customer service in an optimum way is very important for us as your satisfaction is our future!

Subject to change without prior notice, errors excepted!

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