

## Cleaning Laser Optics

Cleanliness is essential when handling laser optics. At high laser powers, even the smallest contamination can cause the laser beam to destroy the coating and thus the optics. At LASER COMPONENTS we therefore follow strict rules when cleaning. This is the only way we can ensure the high quality of our optics.

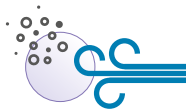
We will gladly share this experience with our customers.

### Cleaning Tips



- **Gloves**

Always wear gloves when handling laser optics! Fingerprint residue cannot be completely removed even after just a short amount of time. If a fingerprint does get on the optics, it must be removed immediately as described below.



- **Blow It Off – Do Not Wipe It**

Never wipe off larger particles or impurities with a cloth. Depending on the particles, scratches may appear on the optics. Use a bellows or nitrogen instead.



- **Assessment**

Check your optics carefully – if possible, in a darkened room. Inspection in transmitted light is best carried out using a cold light source. Errors and defects can also be easily detected in incident light at an angle. During inspection, make sure that the environment is low in dust; this is the case, for example, with a laminar flow box. A measuring magnifier or a comparison template according to DIN-ISO 10110/7 will help you classify the size of the defects.



- **Never Clean Metal Coatings**

Metal coatings are incredibly soft. Even if the optics are easily wiped, you can damage the coating. So: Hands off!



- **Laser Optics Are Not Glasses**

Eyeglass cleaning cloths often contain anti-fogging substances that are deposited on the optics and damage the coating. This lowers the laser damage threshold. Only use pure acetone or isopropanol as a cleaning agent.



- **Observe Safety Instructions**

Observe the standard safety regulations regarding cleaning agents. Read the safety datasheets carefully. Use solvent-resistant gloves and ensure that your working area is well ventilated.

### ... and Here's how it Works



- Use acetone- or isopropanol-resistant cleaning cloths such as, for example, Whatman paper.
- Fold a cloth so that the surface is as flat as possible, and the cloth can be held in a self-clamping tweezer. Please make sure that no parts of the tweezers protrude over the cloth; otherwise you will scratch your optics.
- Now slightly moisten the cloth with acetone or isopropanol. You must experiment a little bit to find the optimal amount. Too much solvent will leave streaks; too little will cause the cloth to fuzz faster.



- It is best to clean the optics in circular movements. Start in the middle and work your way to the edge. Make sure that you exert constant pressure that is not too little on the surface using the cloth.
- As soon as the cleaning cloth begins to fuzz, it should be replaced with a new one.

### Any More Questions?

No problem! We are always at your disposal.

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