

APPLICATION NOTE

Handling of Cameras with TCG and RCG Sensor Options

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Terms used in this document

Term	Description
Circular protection foil	Adhesive tape to close the lens mount against dirt
Cover glass	Top layer protecting the sensor surface, removed for RCG and TCG cameras
Protection glass	Clear “filter”
RCG	Removed Cover Glass
TCG	Taped Cover Glass

Scope

RCG and TCG cameras must be handled with utmost care to avoid damage to the image sensor. Follow the instructions in this document to properly prepare RCG or TCG cameras for operation.

Safety notes



Notice: Avoid electrostatic discharge

To prevent damage to the camera by electrostatic discharge (ESD), use proper grounding techniques and avoid static charge, using:

- Wrist strap
- ESD protective clothing
- ESD protective workstation
- Air ionization



Notice: Protect the sensor from dirt

- Follow the instructions thoroughly to avoid damage to sensor and camera.
- Work in a dust-free environment (\leq class 100,000) with low humidity.



Warranty precautions

- Allied Vision does not warranty against any damage to the sensor as soon as the cover glass or the circular protection foil is removed.
- TCG and RCG cameras have the standard 3 year warranty on the electronics, but not on the sensor.

Instructions

Unpacking cameras



Keep camera packaging

We recommend to keep the camera packaging:

- To store the camera.
- To ship the camera in case of damage.

1. Open the shipping box.
2. Take out the ESD bag with the camera.
3. Take the camera out of the ESD bag.
4. For RCG cameras, continue with: [Preparing RCG cameras](#) on page 2.
For TCG cameras, continue with: [Preparing TCG cameras](#) on page 3.

Preparing RCG cameras

1. With your finger tips, starting from the edge, slowly pull the circular protection foil from the lens mount until removed completely.

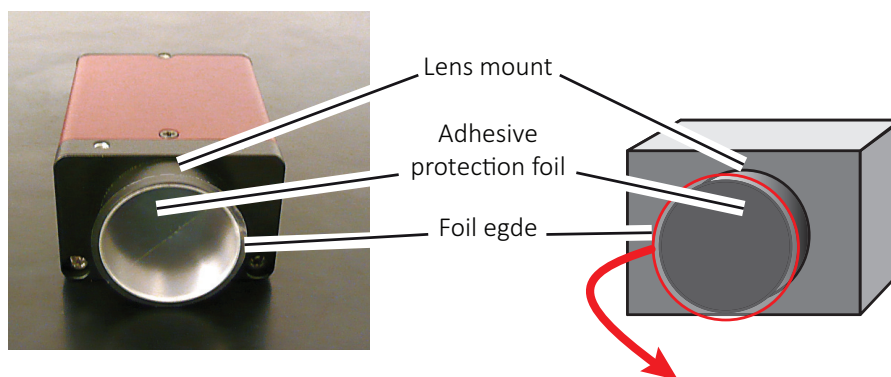


Figure 1: Pulling the circular protection foil off the lens mount

2. Continue with: [Mounting the lens](#) on page 6.

Preparing TCG cameras

At delivery, sensors of TCG cameras are protected by the cover glass. After removal, it has been fixed by adhesive tapes. This section instructs on removing these tapes and the cover glass.



Sensor access for special cameras

- For Prosilica cameras, the camera head must be disassembled to access the sensor. Please follow the instructions delivered with the camera.
- For some cameras, filter or protection glass must be removed, see [Handling cameras with filter or protection glass](#) on page 6.



Ease handling

- Use a magnifying glass for better view.
- Read the instructions thoroughly and keep tools at hand for camera preparation.

Required tools	Tools short names	Purpose
Base magnifier or microscope	Magnifying glass	For better view
Wooden spatula	Spatula	To keep the cover glass in position until removed
Precision screwdriver	Screwdriver	To lift up the adhesive tapes
Pinch nose pliers	Pliers	To finally pull off the adhesive tapes
Circular protection foil (optional)	Circular protection foil	To protect the sensor during camera storage before final hardware installation

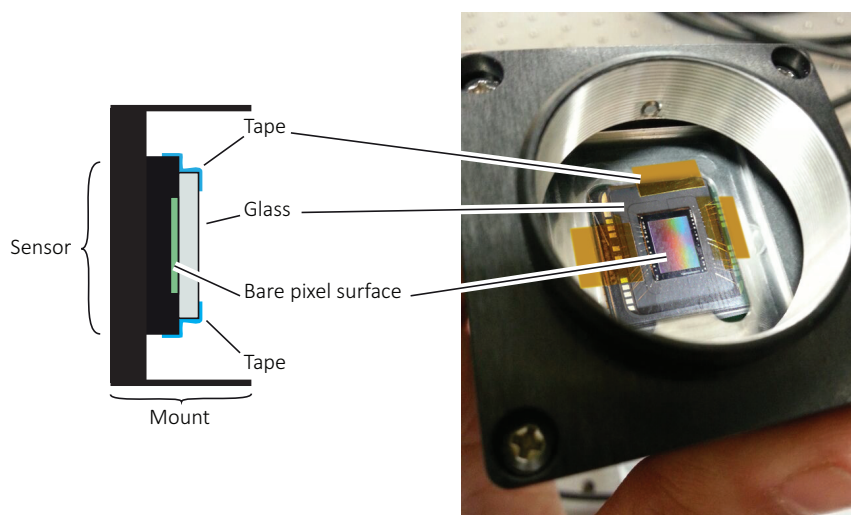


Figure 2: Sensor with TCG

1. Place the camera with the backside on the desktop.
2. Place the magnifying glass above the camera, with sufficient space to access the TCG and the adhesive tapes with tools.
3. Take the spatula.

4. With the spatula, push the cover glass down to keep the sensor protected.
Keep pushing down the spatula until step 15.

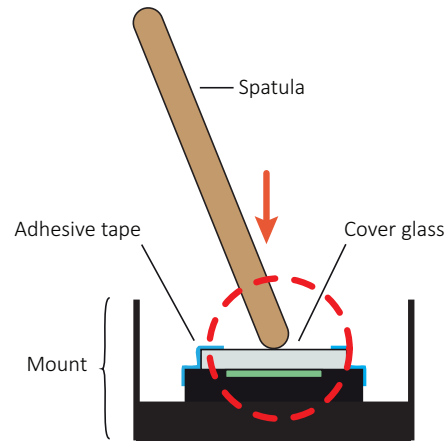


Figure 3: Spatula pushing down the cover glass

5. Take the screwdriver.
6. Carefully push the tool tip against the corner of the first adhesive tape and lift it up. Continue lifting up the corner, until pliers can get a grip.

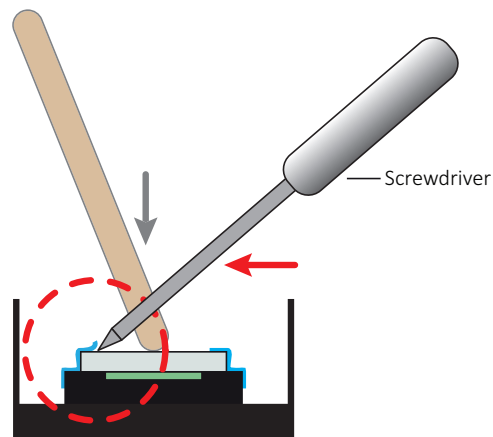


Figure 4: Screwdriver lifting up the adhesive tape

7. Put the screwdriver aside and take the pliers.

8. **Keep pushing down the spatula until step 15.**
9. With the pliers, grip the detached corner of tape and slowly pull it off the cover glass and off the sensor baseplate.

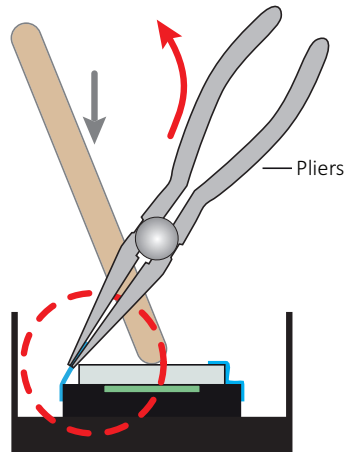


Figure 5: Pliers pulling the adhesive tape off the sensor

10. Strip off the tape from the pliers.
11. Put the pliers aside.
12. Repeat steps 5. to 11., until all adhesive tapes have been removed from the sensor.
13. With the spatula pushing against the cover glass, take the camera into the other hand.
14. Rotate the camera with the lens mount towards the desktop.
15. Slowly release the spatula from the cover glass until it drops out of the lens mount.

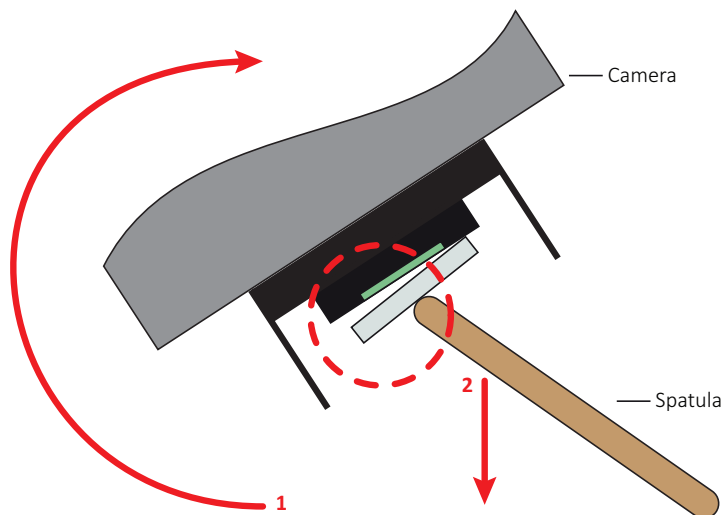


Figure 6: Rotating the camera to drop the cover glass



Storing cameras after the cover glass has been removed

If you want to store the camera at this stage, stick a circular protection foil to the lens mount to protect the sensor.

Mounting the lens



Notice: Using cameras without lens

If you want to use your camera without lens, observe [Safety notes](#) on page 1.



Notice: Avoid damage to camera or lens by unsuitable lenses

If the lens exceeds maximum protrusion, camera or lens may be damaged.

To avoid damaging the sensor or the back lens, use lenses with a maximum protrusion within camera specifications. For details, see your camera's technical manual.

1. Mount the lens according to the manual of the lens or of the camera.

Handling cameras with filter or protection glass

For cameras delivered with filter or protection glass, filter holder with IR-cut filter or protection glass must be removed.

Required tool	Tool short name	Purpose
E9020001 Filter removal tool (pin spanner wrench)	Wrench	To remove the filter holder

Removing filter or protection glass

1. Insert the wrench into the lens mount, cautiously engage the pins of the wrench into the holes of the filter holder.
2. Rotate the wrench counter-clockwise to detach the filter holder.

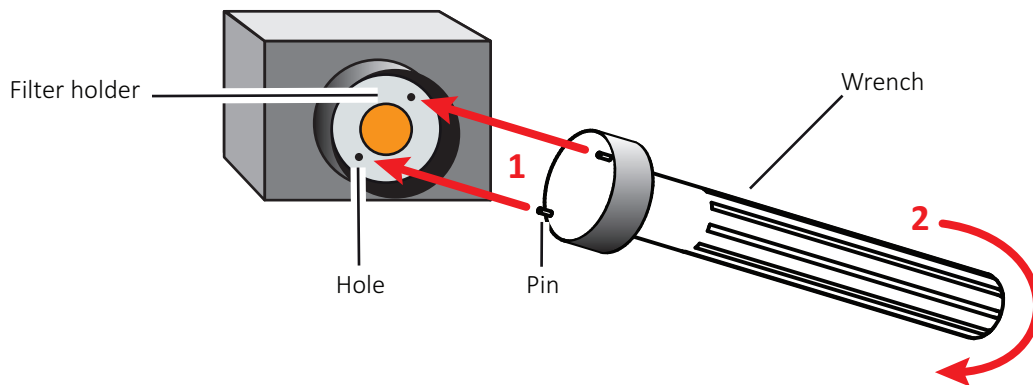


Figure 7: Removing the filter holder

3. When the filter holder has been disengaged, slowly move the wrench out of the lens mount, so that the filter holder lies on top of the tool.
4. Take the filter holder from the wrench.
5. Store the filter holder in a clean and dry place.

Remounting filter or protection glass

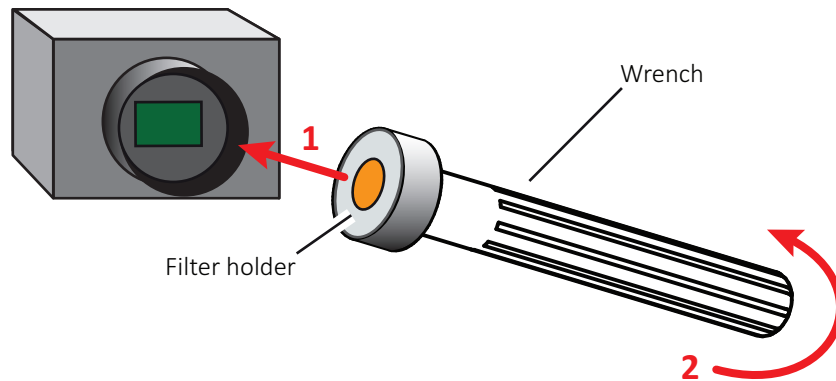


Figure 8: Remounting the filter holder

1. Place the filter holder on the wrench.
2. Insert the wrench into the lens mount, until the filter holder touches the thread.
3. Rotate the wrench counter-clockwise, until you feel the filter holder engage into the thread.
4. Rotate the wrench clockwise, until the filter holder is fastened in the thread.
5. Move the wrench out of the lens mount.
6. Immediately mount a lens to the camera or close the lens mount with a circular protection foil for storage.

Contact

For technical support, please contact support@alliedvision.com.

For comments or suggestions regarding this document, please contact info@alliedvision.com.

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