

# Photron

MONTHLY TECH TIPS WITH MIKE



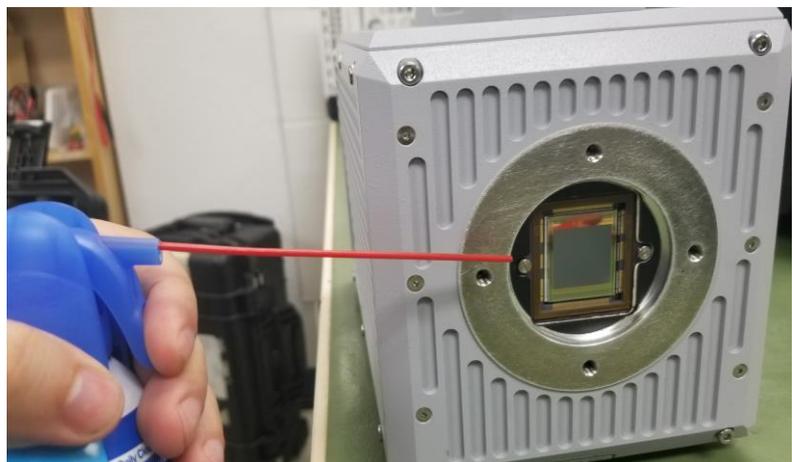
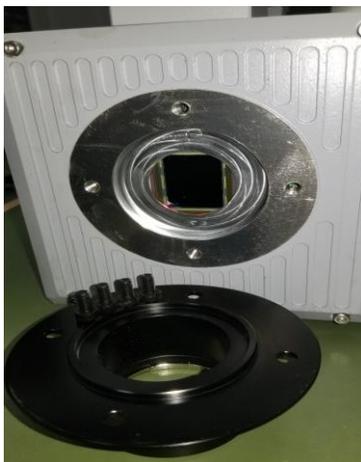
## Topic: Cleaning your camera sensor

Keeping your camera sensor clean and free of debris is very important to obtaining the best images possible. If you notice smudges or other spots showing up on the image it's possible the sensor may need to be cleaned. The tech tip will go over four methods we use here in our lab for cleaning our sensors when needed. We recommend performing the cleaning steps that remove the smudge/dirt in the least invasive way possible.

- 1) The first method is to use a dust removal tool such as the one pictured below. The lens mount can be kept on for this method and simply point the tool at the sensor and give it a few good squeezes of air. If the dust/dirt still is present than move onto the next method.



- 2) The second method involves using compressed air. Always ensure you are using clean compressed air and that you do not point the air directly at the sensor but shoot air at it from the sides. For this method and the two that come after the lens mount will need to be removed. Remove the four black screws holding in the mount and then apply the compressed air from the side of the camera as pictured below.



3) If compressed air hasn't removed the debris or you are dealing with a smudge on the sensor then you will have to use a lens cloth to take care of the issues. Select a high quality disposable lens cloth and ensure you use a new cloth each time you clean a sensor. With the lens mount removed, use a single quick motion across the affected area and make sure to never re-use a portion of the cloth that has already touched the sensor.

4) The last method used if none of the other methods have been successful is using isopropyl alcohol and then wiping the sensor again with a lens cloth. Please ensure to use the highest purity isopropyl alcohol while using the same single quick motion wiping method across the affected area with a lens cloth. Pictured below is the isopropyl alcohol we use in our lab.



## Cleaning of the Image Sensor Surface

Electro-Static Discharge (ESD) events may cause immediate and unrecoverable damage to the image sensor. Please read the following instructions and take **EXTREME CARE** when cleaning the image sensor surface.



- ALWAYS take appropriate anti-static precautions when cleaning or working near the Image sensor.
- DO NOT use any form of cleaning equipment using electrostatic or 'charged fiber' technology.



- Please discharge any electrostatic build up in your body by touching a grounded metallic Surface before working near the camera sensor.
- Very gently, use only clean and dry air to remove dust from surface of the image sensor.
- To remove stubborn contamination use the highest grade (e.g. VLSI grade) pure Isopropyl alcohol (IPA) with optical wipes of 'clean room' grade.
- Extreme care must be taken! Gently wipe across the sensor in a single action. (DO NOT rub to avoid abrasive damage to delicate optical coatings on the glass surface.)



We hope this tech tip was helpful and if you have any questions or comments please contact us:

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