

COMPETENCE SHOWCASE

# Optical Cleaning for Allied Vision Cameras

V1.0.0 2024-Nov-28



## Production quality at Allied Vision

#### // Quality is built on experience.

On new Allied Vision cameras, the sensor is cleaned thorughly, so users can focus on their applications. It takes a committed team to build high quality cameras, from the first design idea to the shipping of the product.

Numerous steps have been taken until then. For optimum image quality, the production processes have evolved to prevent dirt from penetrating cameras. But in real life, even in a clean room, a minimum number of particles is allowed. What if such a particle falls on a filter or sensor? You can trust the high quality of Allied Vision cameras because dirt is detected by production experts and the end of line test. Would you like more in-depth information? Our Support team will be happy to inform you about specifications for sensor cleanliness.

## Challenges for the manufacturing team

#### // Expertise results from time - and commitment.

Cleaning should ideally require only one cycle, but for microscopy, several cycles may be required. Every cleaning bears the risk to damage the delicate surface of optical components. Therefore, our cleaning experts are trained to develop a sure instinct for every move.

Conditions can be defined clearly for the hardware assembly. But it is difficult to define the conditions for optical cleaning without ambiguities.



#### Quantity and evaporation of cleaning liquids

The tips of cleaning tabs or cleaning tissues must be moist enough to remove dirt from the surface, but the liquid must not spread uncontrollably, for example on masks or electronic components. Cleaning liquids evaporate spirits into the air, thus changing the composition of ingredients. Therefore, the ready-to-use solution must be replaced in time.

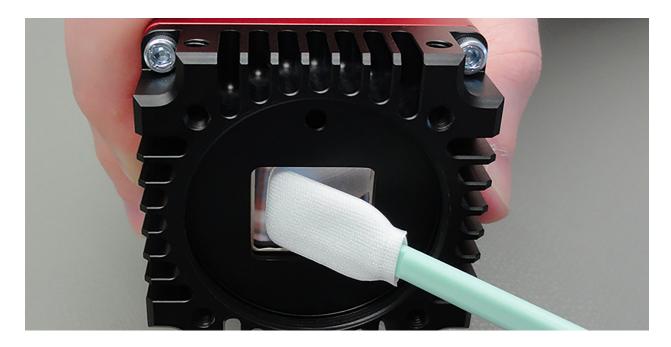
#### Mechanical stress

The pressure applied to the optical surface must be sufficient to reach every spot. On the other hand the pressure must not be so strong that the hardware is broken. For example, the optical windows have a thicknesses of only 0.45 mm.

#### Skills and talents

We have found that every cleaning task requires different manual skills. At Allied Vision, the single cleaning experts have specialized for those tasks where they perform best. They get better every time.

This way, optimum cleaning results are achieved with least efforts, ensuring that customers are satisfied.



## If standard cleanliness is not enough

#### // Don't hesitate to reach our for us.

Each camera that is shipped was tested for cleanliness in order to meet the requirements of machine vision applications. For example, Alvium cameras with Sony sensors are tested to show no spots when acquiring an image at an aperture of f/8.0.

Please contact us if you have any doubts on the cleanliness of your Allied Vision camera:

www.alliedvision.com/en/about-us/contact-us/technical-support-repair-/-rma



## Need help or have any questions?

Are you feeling unsure or have questions? Don't hesitate to reach out to us.

#### Website, email

#### General

www.alliedvision.com/en/contact info@alliedvision.com

#### **Distribution partners**

www.alliedvision.com/en/avt-locations/avt-distributors

#### Support

www.alliedvision.com/en/support www.alliedvision.com/en/about-us/contact-us/technical-support-repair-/-rma

#### Offices

## Europe, Middle East, and Africa (Headquarters)

Allied Vision Technologies GmbH Taschenweg 2a 07646 Stadtroda, Germany T// +49 36428 677-0 (Reception) T// +49 36428 677-230 (Sales) F// +49 36428 677-28

#### North, Central, and South America, Canada

Allied Vision Technologies Canada Inc. 300 – 4621 Canada Way Burnaby, BC V5G 4X8, Canada T// +1 604 875 8855

#### **USA**

Allied Vision Technologies, Inc. 102 Pickering Way- Suite 502 Exton, PA 19341, USA Toll-free// +1-877-USA-1394 T// +1 978 225 2030

#### Asia-Pacific China

Allied Vision Technologies Shanghai Co Ltd. B-510, Venture International Business Park 2679 Hechuan Road Minhang District, Shanghai 201103 People's Republic of China T// +86 21 64861133

#### Japan

Allied Vision Technologies Yokohama Portside Bldg. 10F 8-1 Sakae-cho, Kanagawa-ku Yokohama-shi, Kanagawa, 221-0052 T// +81 (0) 45 577 9527

#### Singapore

Allied Vision Technologies Asia Pte. Ltd 82 Playfair Rd, #07-01 D'Lithium Singapore 368001 T// +65 6634 9027

All text, pictures, and graphics are protected by copyright and other laws protecting intellectual property. All content is subject to change without notice. All trademarks, logos, and brands cited in this document are property and/or copyright material of their respective owners. Use of these trademarks, logos, and brands does not imply endorsement. Copyright © 2024 Allied Vision Technologies GmbH. All rights reserved.