Installing optical filters

This document provides information on how to install optical filters in Sapphire 4K40-RGBH projectors.

Affected products

The following products are affected:

- Sapphire® 4K40-RGBH

Required components

The following filters can be installed in Sapphire 4K40-RGBH:
- Left-eye 3D 66 mm filter (P/N: 177-101103-XX)
- Right-eye 3D 66 mm filter (P/N: 177-102104-XX)
- 2D aperture 66 mm filter (P/N: 177-104106-XX)

Safety precautions

The following safety precautions are for installing an optical filter.

⚠ **Warning!** If not avoided, the following could result in death or serious injury.
- LASER RADIATION HAZARD! This projector has a built-in Class 4 laser module. Never attempt to disassemble or modify the laser module.

  LASER RADIATION HAZARD! This projector has an external Class 4 laser module. Never attempt to disassemble or modify the laser module.
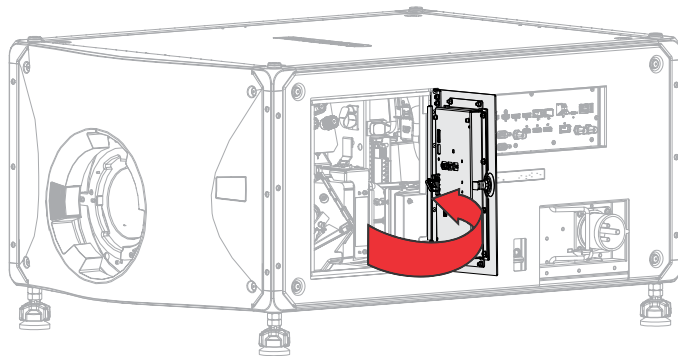
⚠ **Caution!** If not avoided, the following could result in minor or moderate injury.
- This procedure must be performed by a qualified installer.
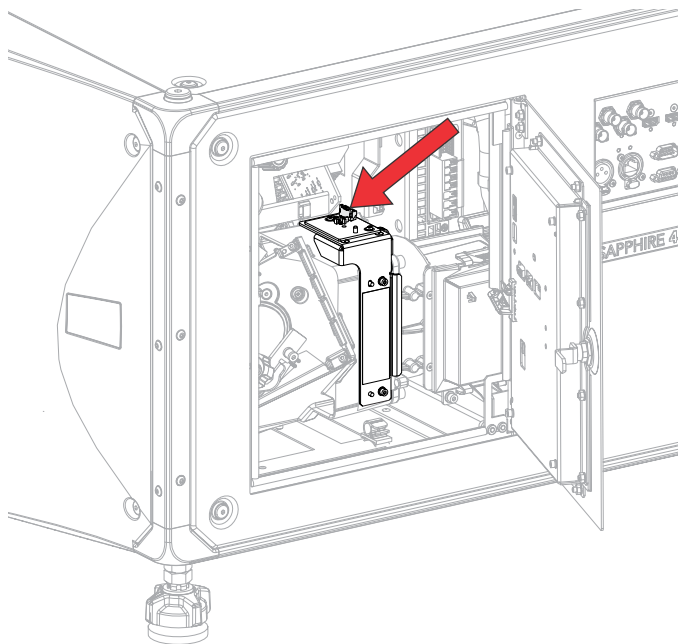- Always wear clean, powder-free latex gloves when handling optical components.

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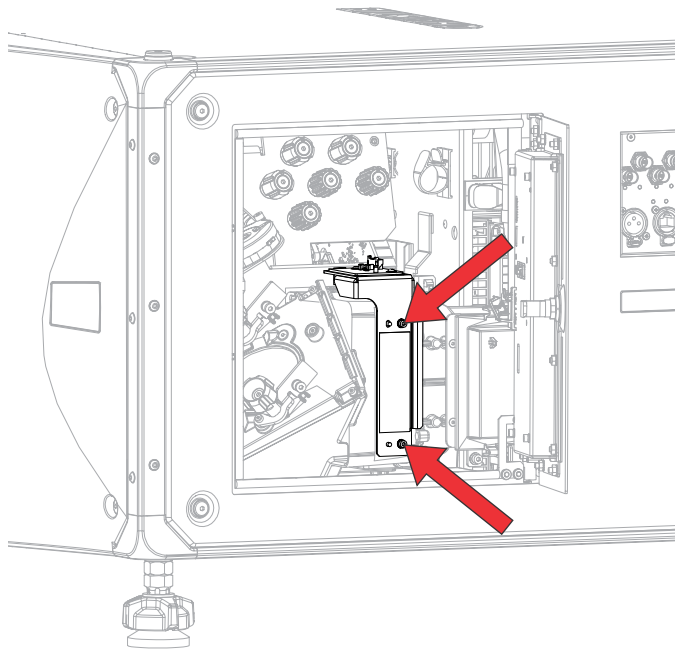Follow these steps to install an optical filter in a Sapphire 4K40-RGBH projector.
1. Turn off the projector and disconnect it from AC power.
2. Open the service door.

3. For Sapphire 4K40-RGBH, disconnect the intelligent filter holder harness on the optical filter ID (OFIB) board.

4. Wearing gloves, remove the two screws securing the existing optical filter and remove and store it.

    The filter contains an optic that must not be touched and must remain free of contaminants.

5. Remove the new optical filter from the packaging.

6. Inspect the new optical filter with a light to make sure there are no contaminants and the optic is clean.

7. If necessary, use standard optic cleaning practices to clean the optic (for example, gloved hands, isopropyl alcohol, and optical wipe).

8. Seat the optical filter on the alignment pins, making sure the filter seats flush against the surface to prevent light leakage, and tighten the two screws.

    The optical filter must be properly and fully installed before powering on the projector.

9. Connect the intelligent filter holder harness on the filter board.

10. Close the service door.

11. Connect the projector to AC power and turn on the projector.

12. Christie recommends performing a Hawkeye sensor-to-screen calibration for the following scenarios:

    •   Sapphire 4K40-RGBH—If the optical filter type has never been calibrated in the system before or if the the optical filter calibration was previously performed on a different inlet line voltage (110V vs 220V).

        Sapphire 4K40-RGBH automatically stores LiteLOC calibrations on a filter-by-filter type basis, and an AC voltage basis. Calibration data is not lost or discarded when changing filters.

    📝 The matched eye glasses filter must be placed over the color meter at the time of calibration.

    Christie recommends using one of the following Colorimetry Research Inc. filter holders:

    •   *https://www.colorimetryresearch.com/accessories/filter-holder*

    •   *https://www.colorimetryresearch.com/accessories/glasses-holder*

    Make sure to follow the Colorimetry Research Inc.'s procedure for using these filter holders.

13. Update the primary color settings on the projector after the calibration has completed.
For more information, see *TruLife+ User Guide (P/N: 020-103315-XX)*.

Technical support

Technical support for Christie Enterprise products is available at:

- North and South America: +1-800-221-8025 or *Support.Americas@christiedigital.com*
- Europe, Middle East, and Africa: +44 (0) 1189 778111 or *Support.EMEA@christiedigital.com*
- Asia Pacific (*support.apac@christiedigital.com*):
  - China: +86 10 6561 0240 or *tech-supportChina@christiedigital.com*
  - India: +91 (80) 6708 9999 or *tech-India@christiedigital.com*
  - Japan: 81-3-3599-7481
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