



CHRONOS CAMERA SUPPORT

Removing Chronos 1.4 and 2.1-HD IR filter



Tutorial Overview:

Our cameras come with an IR cut filter to enhance color accuracy by mitigating the impact of infrared light on color pixels. The Monochrome version optimizes this filter for capturing sharp details in objects emitting significant IR light. Users can customize their experience by removing the IR filter for cleaning or applications requiring IR sensitivity, adding filters of varying wavelengths using 15x15mm square filters.

All cameras sold by Kron Technologies are equipped with an IR cut filter. An IR filter helps provide proper colour reproduction as all colour pixels (red, green and blue) have parasitic sensitivity to IR light which result in a washed-out image, especially under daylight or incandescent lamps.

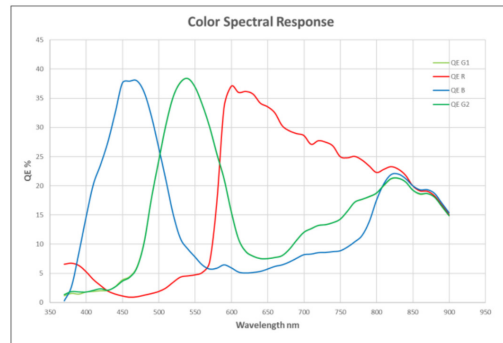
The Monochrome version benefits from the IR filter when recording objects that emit large amounts of IR light, such as glowing objects, like sparks. The IR light will focus differently than visible light in most lenses, resulting in these objects being blurry. Using an IR filter results in sharper images, at the penalty of reduced sensitivity.

You can remove the IR filter for cleaning or for applications that require IR sensitivity. You can also add your own filter of any filter of any desired wavelength. The 1.4 and 2.1-HD Chronos Cameras accept 24x16mm square filters, of 1.1mm thickness. The wavelength of the stock IR filter is 650nm.

Note: 1.4 Chronos Cameras produced up to 07/16/2020, S/N 01836 or lower, have an IR filter of size 15 mm by 15 mm, 1.1 mm in thickness.

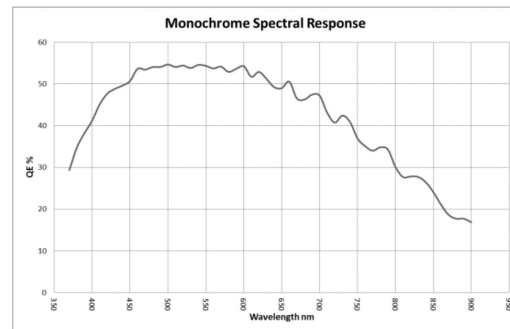
Color Spectral Response, 1.4 Chronos

Color (without IR filter)



Color Spectral Response, 1.4 Chronos

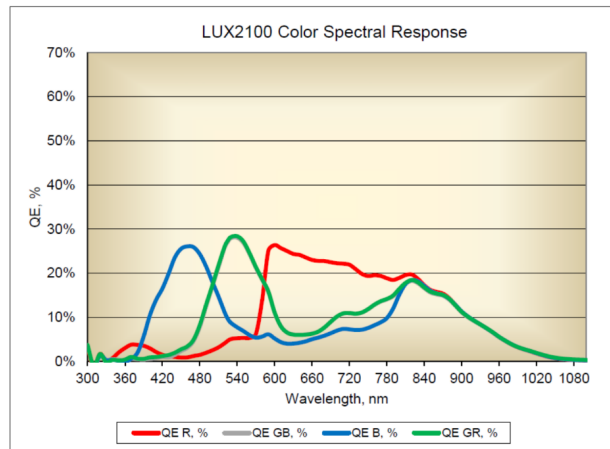
Monochrome (without IR filter)



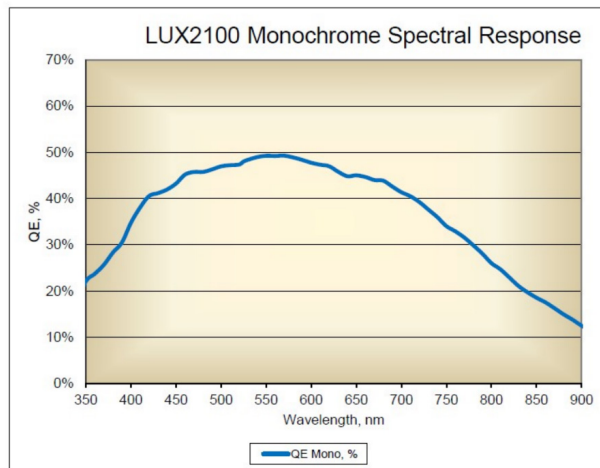
Note: These curves are measured in units of quantum efficiency.

Chronos 2.1-HD High-Speed Camera

LUX2100 Color Spectral Response



LUX2100 Monochrome Spectral Response

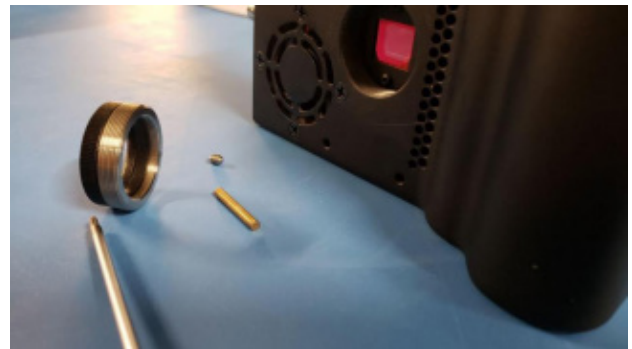


Note: These curves are measured in units of quantum efficiency.

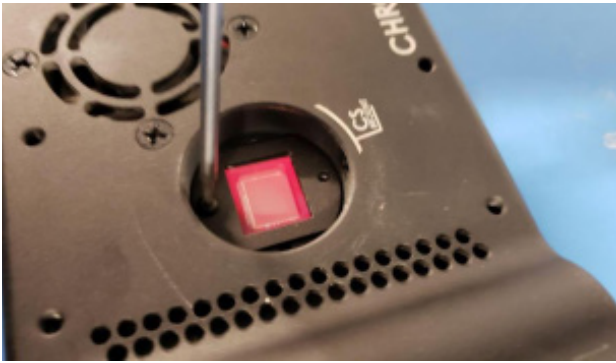
Removing the IR Filter

You will need tweezers and a small Philips screwdriver.

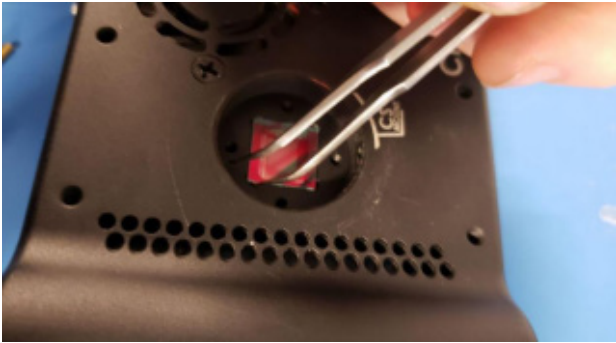
1. Remove the lens and loosen the back-focus screw on the bottom of Chronos. Loosening the back-focus screw will allow the CS adapter to be removed. Be careful as the back-focus rod may fall out and scratch the filter, allow it to fall out when you remove the screwdriver into your hand and not into the camera. Once unscrewed, you can then remove the CS ring.



2. Loosen the two IR frame screws and carefully remove the frame without scratching the filter. Note that the filter is extremely sensitive and even the lightest touch can scratch it.



3. Using tweezers, very, very carefully push the IR filter up so you can grab one end. When grabbing it with tweezers, it will scratch it, only touch the part where the lens rests on the frame, not where the sensor looks through.



4. The IR filter is now removed! Reverse these steps to reinstall it.

If you damage yours in the process you can email us to request a replacement at support@krontech.ca. Note that accidental damage to the camera or sensor is not covered by warranty.