
LRGB Filter Set, 1.25"

#5563



The Orion LRGB filter set includes luminance, red, green, and blue filters which allow you to create stunning composite color images of night-sky objects when used with a monochrome imaging system like the Orion StarShoot Monochrome Imager II. You'll be amazed at the amount of detail a LRGB filter set can add to your monochrome imaging pursuits.

Celestial objects such as nebulae and galaxies look very different when observed or imaged in specific colors of light. Different processes and structures within celestial objects emit light of varying color. Certain features and details will seem to "pop out" of objects when viewed or imaged with wavelength-specific filters. The Orion LRGB filter set allows you to isolate red, green, and blue light for imaging purposes. Additionally, the full-spectrum luminance filter adds superb image resolution to the process.

Since monochrome imaging systems like the Orion StarShoot Monochrome Imager II are sensitive to all visible light, they require a LRGB filter set in order to produce detailed color images. Just like the human eye synthesizes color images using red, green, and blue receptors, monochrome imaging systems can create color images by using varying proportions of the three colors. You will have to image an object through all of the LRGB filters and then combine and process them afterwards to obtain a detailed color image.

All Orion LRGB filters have been made to cut out infrared (or IR) wavelength light which can detract from image quality. CCD cameras are also sensitive to unwanted IR light which can easily contaminate the resultant image combination. Each Orion LRGB filter blocks all infrared light with a wavelength above 690nm which makes creating sharp images even easier.

Orion LRGB filters are dichroic and utilize microscopic multiple-layer coatings, which allow them to reflect unwanted wavelength light and allow specific wavelength light to pass through. Due to their dichroic design, the LRGB filters have a reflective appearance. Dichroic filters last much longer than conventional filters as the color is intrinsic in the construction of the hard microscopic layers and cannot fade out over the lifetime of the filter.

Using the LRGB Filter Set

For most convenient use of the LRGB filter set we recommend the Orion Multiple Filter Wheel. The filter wheel allows you to quickly change the filter in the light path without the sometimes frustrating process of removing the imaging system every time a different filter is needed. Due to their parfocal design, you will generally not need to refocus your telescope when switching between filters. To use the LRGB filter set with the filter wheel simply thread all four filters into the filter wheel tray as described in the wheel instructions. You can now switch between LRGB filters by rotating the knurled wheel. Contact Orion Customer Service / Sales at 800-676-1343 for details.

You do not have to use a filter wheel to utilize the LRGB filter set. In order to image through each filter without the filter wheel, you will need to remove your imager and swap filters for each different color and luminance exposure. Install a filter by threading it onto the inserted "nosepiece" section of the imager. With the filter installed, all light collected by the imager will be filtered appropriately.

As most imaging systems are not equally sensitive to all wavelengths of light, exposure times may vary for each of the LRGB


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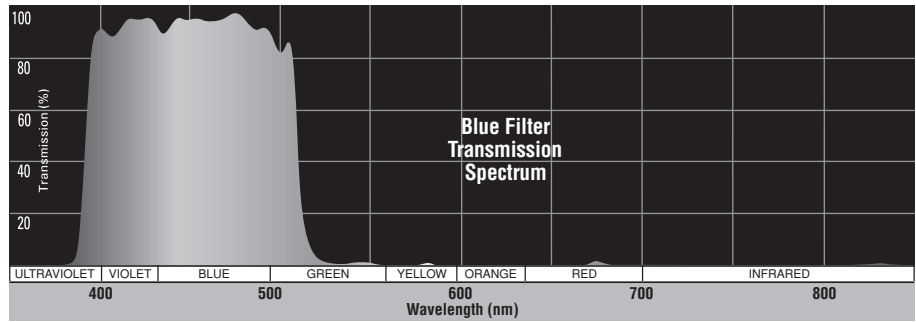
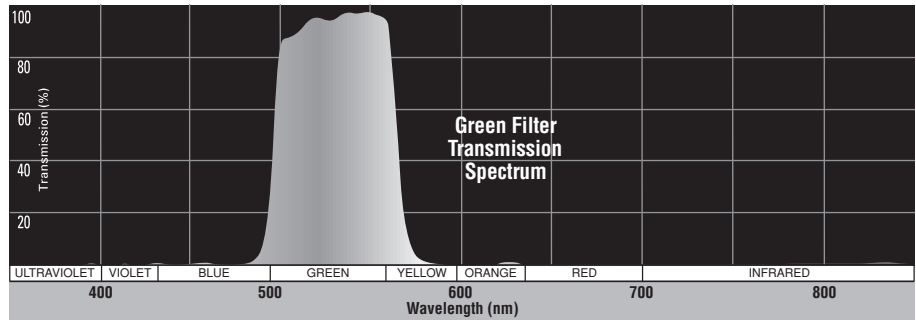
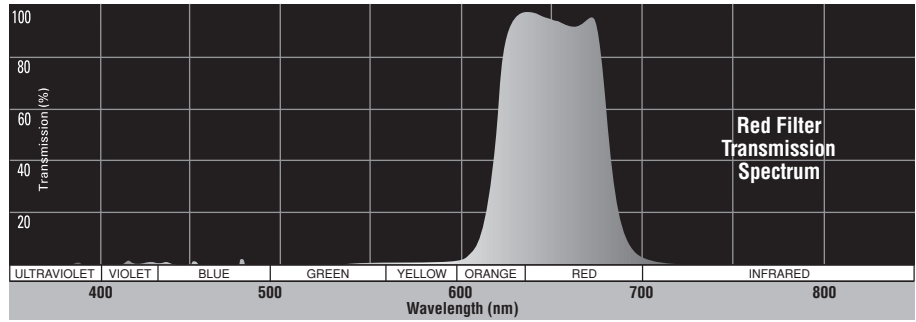
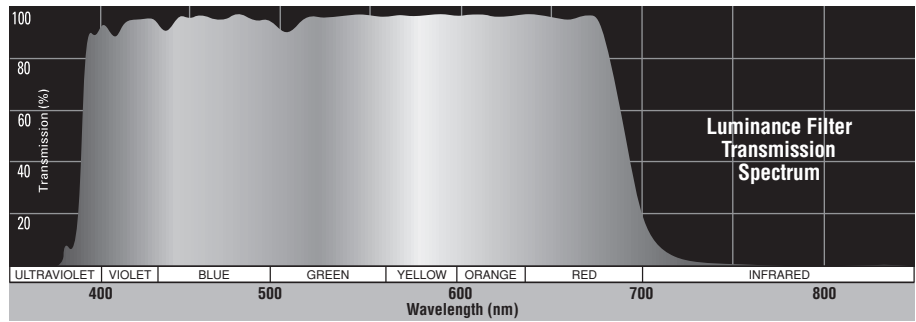
filters. This will depend on your imaging camera, telescope, and celestial target object.

Care and Storage

When not in use, your filters should be kept in their original foam-lined case. Given proper care and storage, the filters should last a lifetime. Should a filter need cleaning for any reason, use the following directions to clean the filter without damaging it.

Any quality optical lens cleaning tissue and optical lens cleaning fluid specifically designed for multi-coated optics can be used to clean the glass surfaces of the filter. Never use regular glass cleaner or cleaning fluid designed for eyeglasses.

Before cleaning with fluid and tissue, blow any loose particles off the surface with a blower bulb or compressed air. Then apply some cleaning fluid to the tissue, never directly on the optics. Wipe the lens gently in a circular motion then remove any excess fluid with a fresh lens tissue. Oily fingerprints and smudges may be removed using this method. Use caution: rubbing too hard may scratch the filter glass. Do not remove the filter glass from its housing for cleaning.



One-Year Limited Warranty

This LRGB Filter Set is warranted against defects in materials or workmanship for a period of one year from the date of purchase. This warranty is for the benefit of the original retail purchaser only. During this warranty period Orion Telescopes & Binoculars will repair or replace, at Orion's option, any warranted instrument that proves to be defective, provided it is returned postage paid to: Orion Warranty Repair, 89 Hangar Way, Watsonville, CA 95076. If the product is not registered, proof of purchase (such as a copy of the original invoice) is required.

This warranty does not apply if, in Orion's judgment, the instrument has been abused, mishandled, or modified, nor does it apply to normal wear and tear. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state. For further warranty service information, contact: Customer Service Department, Orion Telescopes & Binoculars, 89 Hangar Way, Watsonville, CA 95076; (800)-676-1343.