

# Astronomical Filters Summary – 2023

## Index

Filter	Application	Class	Comments
<a href="#">Baader Neodymium</a>	Multiple	Broadband	Incorporated in Star Diagonal, great for moon, planetary, Blackbody Deep sky objects
<a href="#">Lumicon Deep Sky</a>	Visual	Broadband	A fairly aggressive filter, but still lets a little background in the field of view. I have found this as probably my favorite broadband filter (excluding the Baader Moon & Skyglow) for broadband targets in the city.
<a href="#">Orion Skyglow Broadband</a>	Visual	Broadband	A cost-effective filter that performs quite well relative to other broadband filters and can even surpass the <a href="#">Lumicon Deep Sky</a> in some instance
<a href="#">Astronomik UHC-E</a>	Visual	Broadband	For smaller aperture telescopes (up to 5”), this filter is a less aggressive broadband filter.
<a href="#">Astronomik UHC</a>	Visual	Narrowband	Good filter for larger telescope viewing deep sky objects
<a href="#">DGM-NPB</a>	Visual	Narrowband	This is an excellent filter for observing nebula
<a href="#">Orion Ultrablock</a>	Visual	Narrowband	Untested at this point.
<a href="#">Baader UHC-L Booster</a>	Multiple	Narrowband	May be useful for both visual and photographic purposes. Haven’t had a chance to check this one out yet.
<a href="#">Lumicon UHC</a>	Visual	Narrowband	Untested at this point.
<a href="#">Baader O-III Super G</a>	Multiple	Line	Ideal for Planetary Nebula and Supernova Remnants, even in small telescopes
<a href="#">Lumicon O-III</a>	Visual	Line	Untested at this point.
<a href="#">Astronomik CLS-CCD</a>	Imaging	Broadband	
<a href="#">OPT Radian Triad Ultra</a>	Imaging	Line	Up to this point this has been my primary nebula imaging filter
<a href="#">Antlia Triband RGB</a>	Imaging	Narrowband	To be tested, this looks to be an interesting filter when combined with the <a href="#">Askar Color Magic</a> filter.
<a href="#">Askar Colour Magic</a>	Imaging	Line	To be tested, this looks to be an interesting filter when combined with the <a href="#">Antlia Triband RGB</a> filter.
<a href="#">Optolong L-eXtreme</a>	Imaging	Line	
<a href="#">IDAS LPS-D2</a>	Imaging	Narrowband	No longer sold; replaced with <a href="#">IDAS LPS-D3</a> .
<a href="#">Lumicon Hydrogen-Alpha</a>	Imaging	Line	Never used this filter
<a href="#">Lumicon H-Beta</a>	Imaging	Line	Never used this filter
<a href="#">Lumicon Comet Filter</a>	Imaging	Specialized	Specialty filter used for imaging ionized comet tails
<a href="#">Astronomik ProPlanet 642</a>	Imaging	Specialized	Moon & Planetary IR filter
<a href="#">Astronomik ProPlanet 807</a>	Imaging	Specialized	Moon & Planetary IR filter for large aperture telescopes
<a href="#">Astronomik ProPlanet 742</a>	Imaging	Specialized	Moon & Planetary IR filter
<a href="#">Astronomik IR-Block</a>	Imaging	Specialized	

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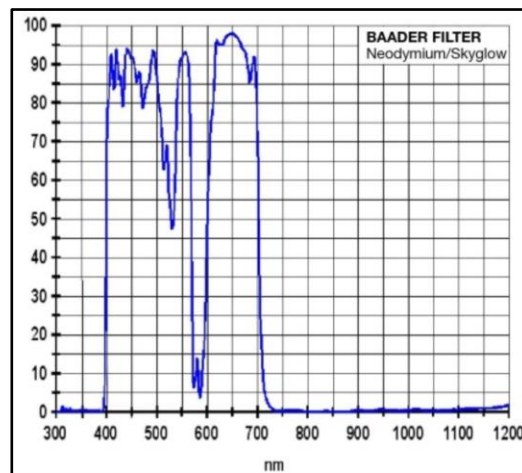
## Filter: [Baader Neodymium \(Moon & Skyglow\) Filter](#)

Manufacturer	Size	Type	Application	Cost
<a href="#">Baader Planetarium</a>	1.25" 2.0"	Broadband	Many: Visual, Imaging, Planetary, Moon, BlackBody Deepsky	1.25" = <a href="#">\$92</a> 2.0" = <a href="#">\$152</a>

### Comments

This may be one of the most useful filters to own, great for visual observation of planets, the moon, black-body deep sky objects (galaxies, multiple star systems, globular clusters, open clusters), I incorporate this into my star diagonal so it is generally always in the optical train by default.

### Wavelength Chart



### Manufacturer Description

Drastic contrast enhancement for all telescopes, without loss of image brightness! The effect of the element neodymium as filter material is very impressive. If used as co-mixture to optical glass, it improves the contrast and enhances the red portions of the image (especially for Mars and Jupiter). At night it blocks that part of the spectrum, which suffers most from street lighting – and it blocks the light pollution, also known as “skyglow”. And lastly, the applied UV/IR blocking coating (Luminance-coating - check the spectral trace) cuts all unwanted UV below 400 nm and NIR above 700 nm - this makes it the sharpest contrast enhancing filter for imaging.

Compare with the moon & Skyglow filter before the naked eye, to test the effectiveness. Red and blue colors are extensively strengthened. If you cannot see the GRS (Great Red Spot) due to pollution, try this which will allow you to see it.

SURFACE DETAILS ON MARS, JUPITER AND MOON AS WELL AS MANY DEEP-SKY-OBJECTS BECOME MUCH MORE PROMINENT.

- Selective contrast filter, especially suitable for all reflector telescopes
- Filters out specific wavelengths, especially those caused by streetlight and most importantly their scattered light which lightens up the night sky
- Selective blocking retains natural colors intact but with RGB significantly enhanced, differences in color and brightness persist.
- 95% transmission in the selected spectral range.
- Fits all standard filter threads and can be combined with other filters – e.g. the planeoptically

## Astronomical Filters Summary – 2023

- polished (!) Baader planetary color filters. This way, you can see fine details better or combine several images with a monochrome camera to achieve color images.
- The filter is at the same time optimized for Astrophotography due to it's full UV/IR-blocking coating. When used with DSLRs, stars will remain much tighter, because the unfocussed UV and IR parts of the spectrum are blocked out.
- Planeoptically polished; can be used without problems in front of a binoviewer or for afocal photography – far away from the focus without loosing sharpness!
- The fine-optical polish and absence of wedge error in the glass ensure perfect sharpness when magnifying more than 200x - while the much cheaper "fire -polished" filter glasses destroy the optical wavefront at high mags
- Neodymium doped optical glass
- Coatings Front/Back: 7-layer hard-BBAR-coating / 27-layered dielectrical UV/IR-cut coating
- Ultra-hard and durable Ion-beam hardened coatings – may be cleaned anytime without fear

# Astronomical Filters Summary – 2023

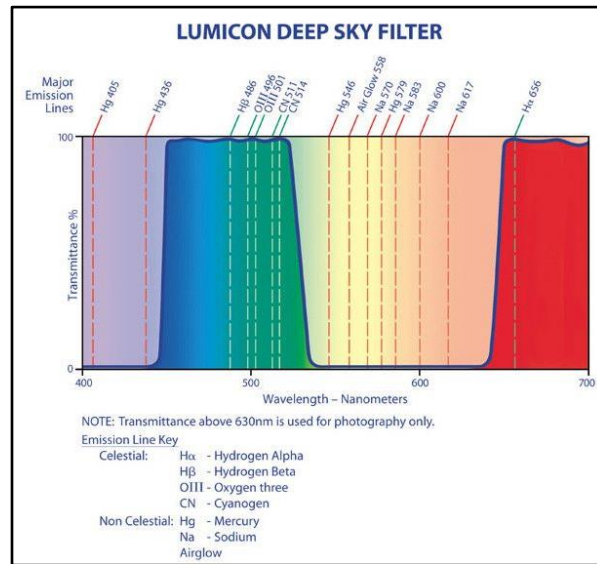
## Filter: [Lumicon Deep Sky Filter](#)

Manufacturer	Size	Type	Application	Cost
<a href="#">Lumicon Inc</a>	1.25"	Broadband	Visual: Black Body Deep Sky, Reflection Nebula, Mars Ice Caps	1.25" = <a href="#">\$134</a>

### Comments

A fairly aggressive filter, but still lets a little background in the field of view. I have found this as probably my favorite broadband filter (excluding the Baader Moon & Skyglow) for broadband targets in the city.

### Wavelength Chart



### Specifications

Not Available

### Manufacturer Description

- Intended for viewing nebulae from light-polluted skies.
- Blocks all mercury vapor and high & low pressure sodium vapor lamp light, neon lights and airglow, while transmitting the rest of the visible spectrum.
- The best all-around visual light pollution filter for use in urban skies.
- This filter also provides high-contrast views of the Martian polar caps

The 1.25in Deep Sky is Lumicon's most popular nebula filter. It blocks all high & low pressure mercury and sodium vapor lamp light, neon lights and airglow, while transmitting the rest of the visible spectrum. Visually, the Deep Sky Filter enhances contrast of nebula under both light-polluted and dark skies. The Deep Sky Filter also passes infrared light, making it an excellent filter for photographing deep space objects through light-polluted skies.

To ensure that your Lumicon filter remains the World's Best, the strictest quality control standards are employed throughout the production process. Each Lumicon Deep Sky Filter is individually inspected and proudly inscribed with the percentage of light transmittance of the H-Alpha, H-Beta and OIII emission lines.

# Astronomical Filters Summary – 2023

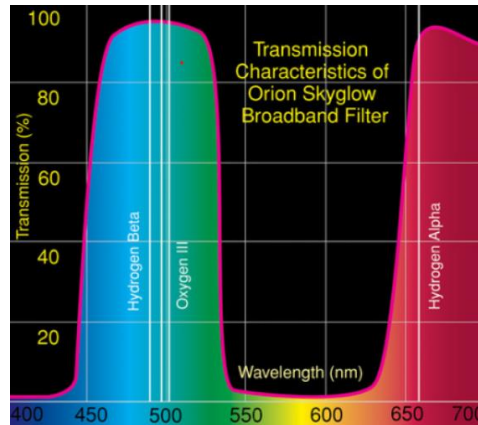
## Filter: [Orion Skyglow Broadband Filter](#)

Manufacturer	Size	Type	Application	Cost
<a href="#">Orion</a>	1/25"	Broadband	A cost-effective filter that performs quite well relative to other broadband filters and can even surpass the <a href="#">Lumicon Deep Sky</a> in some instance	1.25" = <a href="#">\$45</a>

### Comments

This may be one of the most useful filters to own, great for visual observation of planets, the moon, black-body deep sky objects (galaxies, multiple star systems, globular clusters, open clusters), I incorporate this into my star diagonal so it is generally always in the optical train by default.

### Wavelength Chart



### Specifications

Not Available

### Manufacturer Description

Light pollution is waging war on amateur astronomy. But don't surrender! Fight back with the affordable 1.25" Orion SkyGlow Broadband Telescope Filter.

This 1.25" SkyGlow Broadband Telescope Filter is an advanced multilayer "interference" filter that blocks the most common wavelengths of light pollution while passing desirable wavelengths with very little attenuation, yielding dramatically better deep-sky views.

It features improved blocking of mercury-vapor light and higher transmission at critical hydrogen-alpha and hydrogen-beta lines than competing filters. Bright, light-polluted skies appear much darker, and the contrast between object and sky is improved significantly.

This contrast-enhancement effect is particularly apparent on nebulas. Unlike stars, emission nebulas give off light in a very narrow range of wavelengths. SkyGlow filters allow maximum transmission of the important wavelengths of hydrogen-alpha, hydrogen-beta, and doubly ionized oxygen-the ones most commonly emitted by nebulas. Views of galaxies and star clusters are also enhanced, although not as much.

# Astronomical Filters Summary – 2023

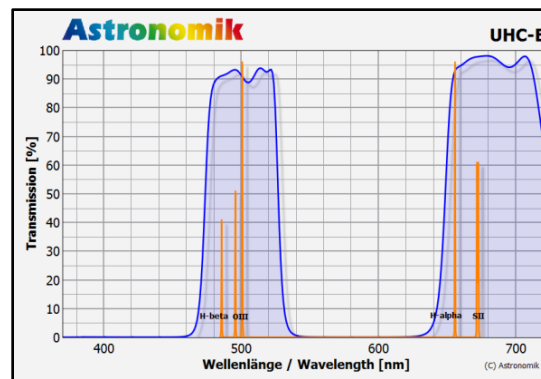
## Filter: [Astronomik UHC-E](#)

Manufacturer	Size	Type	Application	Cost
<a href="#">Astronomik</a>	1.25"	Broadband	Visual: Made for smaller telescopes (up to 5"), a good broadband filter	1.25" = <a href="#">\$80</a>

### Comments

For smaller aperture telescopes (up to 5"), this filter is a less aggressive broadband filter.

### Wavelength Chart



### Specifications

- H-beta | 486nm | 94% Transmission
- O-III | 496nm, 501nm | 95% Transmission
- H-alpha | 656nm | 94% Transmission
- Transmission 465 to 530 nm and above 645nm
- FWHM: 45nm

### Manufacturer Description

The Astronomik UHC-E filter is our budget filter for deep-sky observation of emission nebulae and comets under light polluted skies. It's particularly suitable for small 'scopes. The UHC-E Filter increases contrast of emission nebulae and comets and blocks the light of typical streetlights as well as airglow. It is best suited for telescopes up to 5" / 125mm.

The Astronomik UHC-E filter provides a FWHM of 45nm and blocks the light of typical streetlights (e.g. sodium and mercury vapour) as well as airglow. Thus it increases contrast between your target and the night sky. The contrast enhancement is less than that of the Astronomik UHC filter, but at the same time the transmitted amount of starlight is greater. It's therefore better suited to smaller telescopes. As the UHC-E filter passes a spectral line of Carbon (due to the higher FWHM) it opens up the possibility of comet observation.

### Other uses

- Observation of Jupiter's clouds.
- Easier resolution of Double Stars.
- Photography under light-polluted skies with DSLRs and other cameras.

# Astronomical Filters Summary – 2023

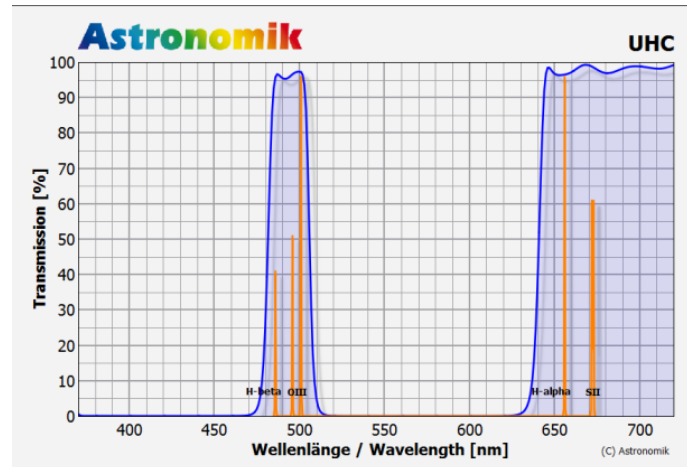
Filter: [Astronomik UHC](#)

Manufacturer	Size	Type	Application	Cost
<a href="#">Astronomik</a>	1.25"	Narrowband	Visual	1.25" = <a href="#">\$100</a>

## Comments

Comments Here.

## Wavelength Chart



## Specifications

- H-beta | 486nm | 95% Transmission
- O-III | 496nm, 501nm | 95% Transmission
- H-alpha | 656nm | 95% Transmission
- Transmission 465 to 530 nm and above 645nm

## Manufacturer Description

The Astronomik UHC is THE filter for visual observing.

You will enjoy using your Astronomik UHC filter because you will see more stars and more details in deep-sky-objects compared to using filters from all other manufacturers.

The Astronomik UHC (Ultra High Contrast) filter allows the transmission of nearly 100% of the radiation from both O-III and the H beta lines. Though the second window for the H-alpha-line is not intended for visual observing, it is important, if the filter is used with an electronic device. All annoying, scattered light from other wavelength sources, including local artificial light pollution, is reliably filtered out. With this strong blocking of the sky background an unexpected wealth of detail becomes visible for gas nebulae and planetary nebulae.

Astronomik UHC filters' astounding high light transmission brings better views of deep-sky-objects even to small telescopes! The high transmission of our optical glass filters means that enough light is available to allow successful visual observations with telescopes beginning at 2" (50mm) aperture. Our Astronomik filters are optimized for use with telescope focal length  $f$  / ratios of  $f/4$  to  $f/15$ . Transmission losses and chromatic distortions, which arise with other filters, only occur with Astronomik filters when extremely bright aperture ratios of 1:2 and more come into play. Another major advantage of our Astronomik UHC filter is the high optical

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quality of the filter glass. When using Astronomik UHC filters you will quickly notice the same needle-sharp stars which you are familiar with from your astronomical instrument without any filter!

## Suitability

- Visual observation (dark skies): Very good, for telescopes of all apertures and high exit pupil
- Visual observation (urban skies): Very good, for telescopes from 100 mm aperture
- Film photography: Reasonable, but very long exposure time
- CCD photography: Good, when used with an additional IR-block-filter
- DSLR photography (original): Good, color balance shifted but contrast enhanced
- DSLR photography (astro modified): Very good, color balance is near perfect
- DSLR photography (MC modified): Good, when used with an additional IR-block-filter
- Webcam / Video (Planets): Unsuitable
- Webcam / Video (Deep Sky): Good, if light pollution is a big problem



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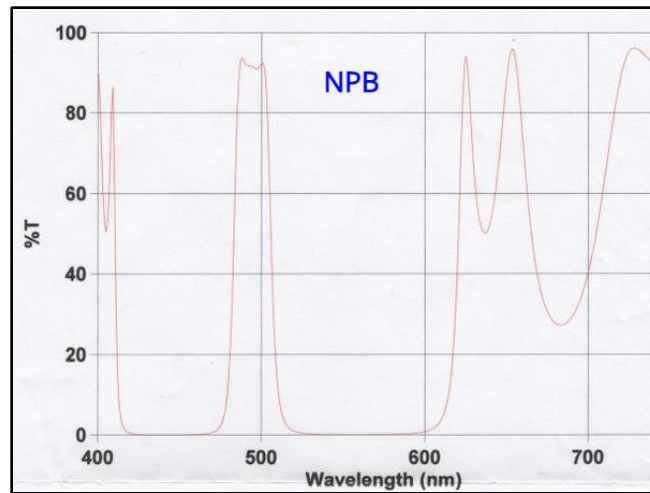
Filter: [DMG - NPB](#)

Manufacturer	Size	Type	Application	Cost
<a href="#">DGM Optics</a>	1.25" 2.0"	Narrowband	Visual observation of Nebula	1.25" & 2.0" = <a href="#">\$190</a>

## Comments

This is an excellent filter for observing nebula.

## Wavelength Chart



## Specifications

Not Available

## Manufacturer Description

The NPB is the ONE filter to have if you have just one, and now regarded as the top narrowband (UHC type) filter in the world. Judged by renown astro-equipment author Phil Harrington as the best of nine leading competitors in the Astronomy Magazine review [Secret Weapons](#) (August 2005). With the NPB more objects show enhancement, than any other filter in its class, and is also a useful Imaging filter. Visually bright nebula seem to be "switched on" with this top shelf filter designed by Dan McShane, Optical Thin Film expert and founder of DGM Optics. One observer described the NPB as a "UHC on steroids"! And, with ultra durable Ion Assisted Plasma Coating Technology used to produce your NPB Filter, it will provide decades of flawless performance.

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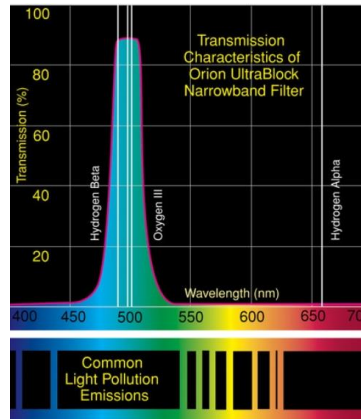
## Filter: [Orion UltraBlock Narrowband](#)

Manufacturer	Size	Type	Application	Cost
<a href="#">Orion</a>	1.25"	Narrowband	Visual	1.25" = <a href="#">\$80</a>

### Comments

Untested at this point.

### Wavelength Chart



### Specifications

- In areas plagued with significant light pollution, our UltraBlock eyepiece filter greatly increases contrast of emission and planetary nebulas
- Allows you to see features and details through a telescope that would normally be lost due to light pollution
- Blocks all forms of light pollution while passing critical hydrogen-beta and ionized oxygen wavelengths of light
- Enhances the sky presence of a significant number of fainter deep-sky objects

### Manufacturer Description

The 1.25" Orion UltraBlock Narrowband telescope eyepiece filter is the filter of choice for deep-sky observers viewing from highly light-polluted sites.

Light pollution can significantly decrease the quality of telescopic views of deep-sky objects. The UltraBlock filter blocks all forms of light pollution from incandescent and fluorescent lighting, including mercury vapor and sodium emission bands, while passing critical hydrogen-beta and ionized oxygen wavelengths. With an UltraBlock telescope eyepiece filter, emission and planetary nebulas "surface" from the washed-out background sky seen from light-polluted areas. With contrast increased, you'll be able to discern more detail in deep-sky observations.

In dark skies, the UltraBlock also enhances the sky presence of a significant number of fainter deep-sky celestial objects. You'll see more of these faint nebulas, galaxies, and clusters with an UltraBlock compared to unfiltered and wideband-filtered views. You'll simply see more with an Orion UltraBlock filter!

The handy 1.25" UltraBlock filter can be installed on any 1.25" filter-threaded Orion telescope eyepiece and many other brands of telescope eyepieces.

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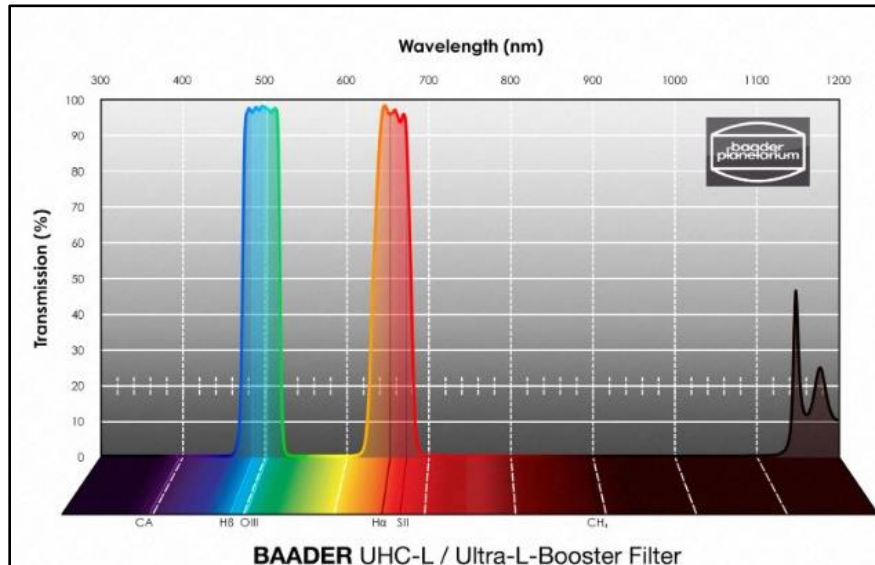
## Filter: [Baader UHC-L Booster](#)

Manufacturer	Size	Type	Application	Cost
<a href="#">Baader Planetarium</a>	1.25"	Narrowband	Visual and possible Imaging	1.25" = <a href="#">\$106</a>

### Comments

Haven't had a chance to check this one out yet.

## Wavelength Chart



### Specifications

- Visual and photographic UHC-L Nebula filter with highest transmission
- Ultra High Contrast L Filter blocks city lights and increases contrast of nebula and comets (C2 lines)
- Can be used as LED-optimized Luminance filter for RGB-Imaging with skyglow suppression
- Blue transmission optimized to block blueish skyglow caused by LED car- and streetlights.
- Creates a much brighter image than a conventional Nebula filter
- Ideal for deep-sky observers. This UHC-L filter is the perfect visual complement to narrowband OIII filters.
- Reflex-Blocker™ hard coated and planeoptically polished – with sealed coating edges (Life-Coat™)
- Blackened edges all around, with filter-lead-side-indicator in the form of a telescope-sided black outer rim

### Manufacturer Description

Baader UHC-L Nebula filter with highest transmission, realistic star colors, also usable as highly effective LED-optimized luminance filter for LRGB imaging.

The Baader UHC-L filter is the classic all-round "light pollution rejection filter", but now also blocked against the main LED emissions in the blue part of the spectrum. The passband curve corresponds to a wide dual-band filter without distorting star colors. The two passbands transmit all light emitted by the known gas nebulae (the H-alpha and H-beta lines of fluorescent hydrogen as well as the OIII line of oxygen), while both the atmospheric most disturbing stray light from LED lamps and intense bluish car headlights as well as further stray light from classical street lamps and the natural

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night sky glow (airglow/skyglow) of the atmosphere are blocked to a large extent. At the same time, the UHC-L filter is coated with latest technology (CMOS-optimized) and therefore blocks false light much more effectively than all previous UHC filters.

## Use of the UHC-L filter

The application of the UHC-L happens mainly in visual and photographic observation of emission nebulae (star forming regions, planetary nebulae, supernova remnants) under medium to highly polluted skies. Its use is also interesting for comet observation: It passes the OIII line at 501nm as well as the two C2 lines at 511nm and 514nm which are characteristic for the gas tail of many comets.

This UHC-L filter is the successor of the well-proven plane-optical polished Baader UHC-S filter. It consequently complements it with the advantages of CMOS optimization (no disturbing halos, blackened filter edges, Life-Coat™-coating) while providing an improved transmission spectrum adapted to also cover modern LED light pollution. It provides a brighter image than many classic LPR (Light Pollution Rejection) filters and is therefore not only suitable for large, fast instruments, but also for smaller telescopes collecting less light, where a large exit pupil cannot be achieved. This applies for long-focal length telescopes as well as for small aperture telescopes that only have an eyepiece socket for 1.25" eyepieces. Unlike the single line or dual line narrowband filters, the image is also bright enough for high magnification, while not diminishing the number of stars. For deep-sky observers, therefore, this UHC-L filter is the perfect visual complement to narrowband OIII filters.

The UHC-L filter is also excellent for photographic use. It does not just block polluting terrestrial light sources, but at the same time it serves as a luminance filter (L-filter), since it blocks all UV and IR transmission like a UV/IR cut filter. An additional UV/IR-cut filter is therefore not necessary: Cameras without a built-in UV/IR-cut filter thus deliver significantly sharper images on refracting telescopes. Both classical photographers and users of EAA/LiveStacking do benefit from the increased sharpness of stars and better contrast of nebulae, as well as the improved transmittance in H-alpha.

Like all Baader CMOS-optimized filters, Baader UHC-L filters likewise are plano-optically polished, with ultra-hard, sputtered dielectric coatings. Even a one-hour bath in boiling water cannot harm these filters! They are scratch-resistant and can be cleaned as often as desired.

The Baader UHC-L / Ultra-L-Booster Filter offers all the advantages of the CMOS-optimized Baader filters:

Increased contrast, matched for typical CMOS quantum efficiency and s/n ratio

Reflex-Blocker™ coatings, for largest ever freedom from halos, even under most adverse conditions concerning aux-optics

Identical filter thickness to existing standards, with utmost care for parfocality

Blackened edges all around, with filter-lead-side-indicator in the form of a black frontside outer rim, to additionally eliminate any reflection due to light falling onto the edge of a filter

Each filter coated individually, with sealed coating edge (NOT cut out of a larger plate with coatings left exposed, read more)

Life-Coat™: evermore hard coatings to enable a non-aging coating for life – even in a most adverse environment

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Filter: [Lumicon UHC](#)

Manufacturer	Size	Type	Application	Cost
<a href="#">Lumicon Inc.</a>	1.25"	Narrowband	Visual	1.25" = <a href="#">\$118</a>

## Comments

Comments Here.

## Wavelength Chart

--NO CHART AVAILABLE--

## Specifications

Not Available

## Manufacturer Description

- Narrow bandpass filter (24 nm) isolates the two doubly ionized oxygen lines (496 and 501 nm) and the hydrogen-beta line (468 nm) emitted by planetary and most emission nebulae
- Provides superb views of the Orion, Lagoon, Swan and other extended nebulae
- The best all-around dark-sky nebular filter available

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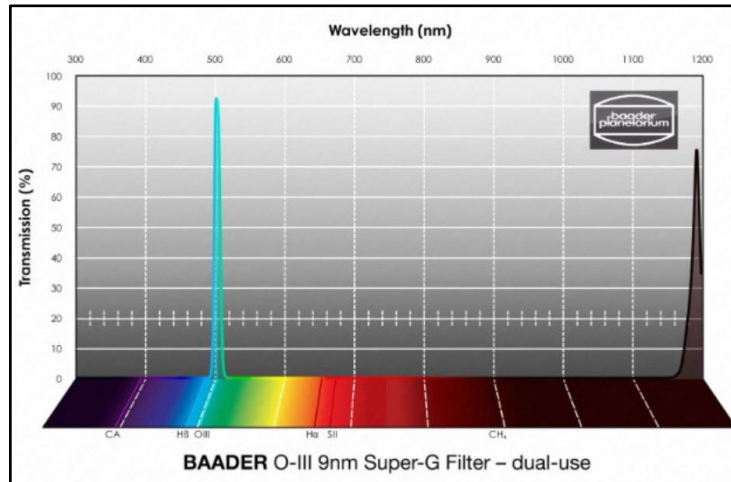
## Filter: [Baader O-III Super G – CMOS optimized](#)

Manufacturer	Size	Type	Application	Cost
<a href="#">Baader Planetarium</a>	1.25"	Line	Visual, Imaging	1.25" = <a href="#">\$96</a>

### Comments

Comments Here.

## Wavelength Chart



### Specifications

- O-III | 500.1nm | FWHM=9nm | 97% Transmission

### Manufacturer Description

The O-III filter is designed for observing and photographing those gas nebulae in which doubly ionized oxygen fluoresces - i.e. primarily for planetary nebulae and supernova remnants. With a FWHM of only 9 nm and equipped with the CMOS-optimised coating technology, it darkens the sky background and thus also blocks stray light much better than its 10 nm predecessor ( Baader O-III Filter (10nm) visual (various versions available) ). But the narrower FWHM is not the most important improvement. More important is the significantly better blocking aside of the O III wavelength, as well as even steeper transmission slopes and a broad plateau in the transmission range. With a transmission of 97% for the emission line at 500.7 nm, practically all the light of the nebula passes through the filter. At the same time, this filter can be used photographically for practically any focal ratio from f/1.8 to f/12 without passing any light of the H-beta line. This makes the Super-G filter just as ideal for use in areas with high light pollution.

### Photographic use

The 9 nm O-III filter can be excellently used photographically on all telescopes, especially with a DSLR or an astronomical OSC color camera. It offers all the advantages of the CMOS-optimized Baader filters such as Reflex-Blocker™ coating against reflections, plano-optical polishing and age-resistant Life-Coat™ coating. For monochrome cameras, we recommend the even stronger Narrowband (6,5 nm) and Ultra-Narrowband (4 nm) filters , which are available specially adapted for different aperture ratios. For this comparatively broadband 9 nm filter, preshifting is not necessary at focal ratios faster than f/4, thus it can be used at all focal ratios.

### Super-G filter

The filter has the same thickness as the 1.25"/2" Baader LRGB filters. This makes it suitable for use as a "super G filter": In the transmission range of the normal green filter (490-580nm) there are no emission lines other than OIII; H-Beta at 486 nm is already

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covered by the RGB blue filter. So, when using the 9 nm O-III filter instead of the standard RGB green filter, emission nebulae are consequently emphasized much more strongly, while the stars appear fainter.

The Baader O-III Super-G filter has got all the advantages of the new generation of CMOS-optimized Baader filters:

- Increased contrast, matched for typical CMOS quantum efficiency and s/n ratio
- Reflex-Blocker™ coatings, for largest ever freedom from halos, even under most adverse conditions concerning aux-optics
- Identical filter thickness to existing standards, with utmost care for parfocality
- Blackened edges all around, with filter-lead-side-indicator in the form of a telescope-sided black outer rim, to additionally eliminate any reflection due to light falling onto the edge of a filter, making additional front-masks obsolete
- Each filter coated individually, with sealed coating edge (NOT cut out of a larger plate with coatings left exposed, read more)

# Astronomical Filters Summary – 2023

## Filter: [Lumicon O-III](#)

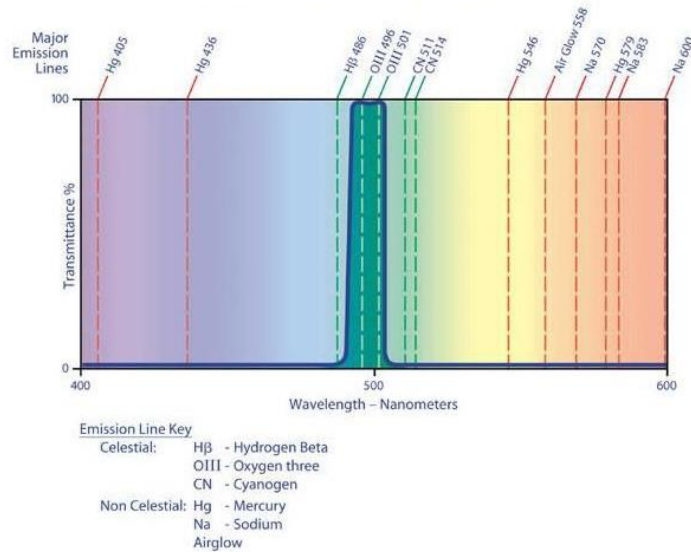
Manufacturer	Size	Type	Application	Cost
<a href="#">Lumicon Inc</a>	1.25"	Line	Visual	1.25" = <a href="#">\$138</a>

### Comments

Filter Untested.

## Wavelength Chart

### LUMICON OXYGEN III FILTER



### Specifications

Not Available

### Manufacturer Description (Gen 3 Description)

The legendary Lumicon 1.25in OIII narrow band-pass filter isolates just the two doubly ionized oxygen lines (496 and 501nm lines) emitted by diffuse, planetary and extremely faint nebulae. Thus, these faint objects become much more visible against the blackened background of space. The Lumicon Oxygen III Filter produces near-photographic views of the Veil, Ring, Dumbbell and Orion nebula, among many other objects. Performs well under both light-polluted and dark skies.

To ensure that your Lumicon filter remains the World's Best, the strictest quality control standards are employed throughout the production process. Each Lumicon Oxygen III Filter is individually inspected and proudly inscribed with the percentage of light transmittance of the two OIII emission lines.

- Narrow bandpass filter (11 nm) isolates just the two doubly ionized oxygen lines (496 and 501 nm) emitted by planetary and extremely faint nebulae
- Produces near-photographic views of the Veil, Ring, Dumbbell, Orion, plus many other nebulae



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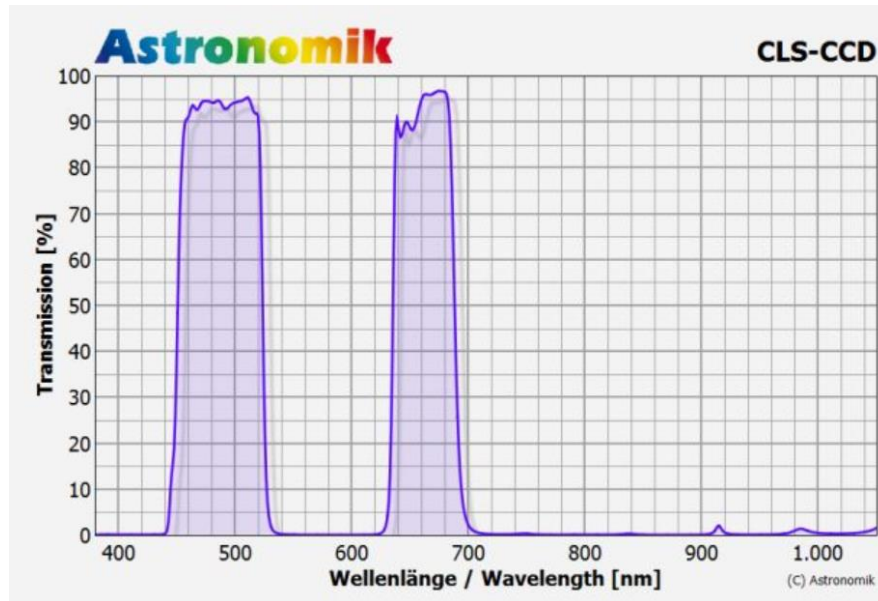
Filter: [Astronomik CLS-CCD](#)

Manufacturer	Size	Type	Application	Cost
<a href="#">Astronomik</a>	2.0"	Broadband	Imaging	2.0" = <a href="#">\$160</a>

## Comments

Comments Here.

## Wavelength Chart



## Specifications

- H-beta | 486nm | Transition = 95% |
- O-III | 496nm, 501nm | Transition = 95% |
- H-alpha | 656nm | Transition = 97% |
- Pass from 450 to 520nm and from 640 to 690nm

## Manufacturer Description

The Astronomik CLS CCD is suitable under light-polluted skies for DSLR Cameras, which have been remodeled for astronomical use. The filter enhances the contrast between all deep-sky objects and the background.

The CLS-CCD Filter enhances the contrast between astronomical objects and the background. Due to the wider transmission curve compared to UHC filters, a greater amount of light will pass the filter. Stars will be less dimmed. This filter has been optimized to block as much spurious light as possible and simultaneously provide the best performance for 'useful' light. A good filter for DSLR-, CCD- and film b/w-photography as well as observation of deep-sky-objects with telescopes or photo lenses of all aperture f/2 and above.

Main use: The filter blocks completely emission lines of artificial light sources like streetlights (e.g. sodium- and mercury-vapor) as well as the airglow. All 'important' emission lines as well as the spectral range of the night-adapted eye are passed. The supplementary IR-blocking layer allows the use for DSLR- and Webcams without an integrated IR-block filter.

# Astronomical Filters Summary – 2023

## Other uses

- Easier resolution of Double Stars.
- With the EOS-Clip model, photography with DSLR cameras is feasible even under extreme light-polluting conditions without shifting the white balance.
- The 1,25" and 2" socket models can be used for observations from light-polluted areas.
- If you plan to create color images from emission line data, our CLS-CCD filter is a great choice for the Luminance channel
- Alternatives
- CLS: For cameras with an integrated IR-filter or for visual observation.

## Suitability

- Visual observation (dark skies): Good, to reduce light pollution by mercury-vapor lamps (streetlight)
- Visual observation (urban skies): Reasonable, an UHC-E or UHC filter is more suitable
- Film photography: Very good, color balance is near perfect
- CCD photography: Very good, optimized rejection of light pollution
- DSLR photography (original): Good, color balance shifted but contrast enhanced
- DSLR photography (astro modified): Very good, color balance is near perfect
- DSLR photography (MC modified): Very good, color balance is near perfect
- Webcam / Video (Planets): Unsuitable
- Webcam / Video (Deep Sky): Very good, if light pollution is a big problem

# Astronomical Filters Summary – 2023

Filter: [OPT Radian Triad Ultra](#)

Manufacturer	Size	Type	Application	Cost
No longer in business	2.0"	Line	Imaging	2.0" = \$1,000

## Comments

Up to this point this has been my goto filter for imaging nebula.

## Wavelength Chart

--NO CHART AVAILABLE--

## Specifications

- H-beta | 486nm | FWHM = 5nm | Transition = 79% |
- O-III | 500.1nm | FWHM = 4nm | Transition = 97% |
- H-alpha | 656.3nm | FWHM = 4nm | Transition = 87% |
- Sulfur II | 671nm | FWHM = 4nm | Transition = 90% |

## Manufacturer Description

With the Radian Telescopes Triad filter you now have narrower band-passes, more light pollution reduction, higher contrast, better separation between H-beta and OIII channels, and sensitivity in the Sulfur II emission lines. Like the original Triad filter, the Triad Ultra is designed to work with color cameras but also as a narrow-band-luminance filter for monochrome cameras. Usable on telescopes up to f/2.2 speed!

# Astronomical Filters Summary – 2023

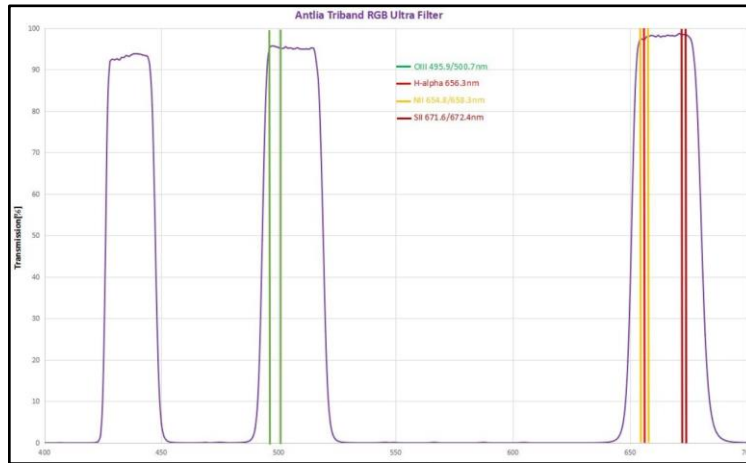
## Filter: [Antlia Triband RGB Ultra Filter](#)

Manufacturer	Size	Type	Application	Cost
<a href="#">Antlia</a>	2.0"	Narrowband	Imaging: Nebula	2.0" = <a href="#">\$180</a>

### Comments

To be tested, this looks to be an interesting filter when combined with the Askar Color Magic Filter.

### Wavelength Chart



### Specifications

- H-alpha | 656.3nm | >92% Transmission
- S-II | 671.6nm, 672.4nm | >92% Transmission
- O-II | 495.9nm, 500.7nm | >92% Transmission
- N-II | 658.3nm, 654.8nm | >92% Transmission

### Manufacturer Description

It is designed for light pollution suppression for OSC and Mono cameras. The spectral design selected the most substantial information in the RGB bands, which makes Antlia Triband RGB Ultra Filter possible to shoot over 90% of deep sky objects, in addition to its excellent performance on emission nebula, different from other ultra-narrowband filters, it is able to capture galaxies, reflection nebulae, and star clusters from a Bortle 8 location to Bortle 1 while presenting more balanced RGB colors in your images. Also, it has a broad bandpass designed to cope with faster optics up to the f/2 focal ratio.

The quantum efficiency of the B channel in current CMOS sensors is often significantly lower than that of R and G channels. Antlia team was to provide a filter with a more realistic color balance for astrophotography from light polluted locations. The problem with the low blue wavelength efficiency becomes apparent when imaging reflection nebulae and blue stars. In CMOS sensors, the blue wavelengths also contain contribution from the stronger green spectrum, thereby affecting the balance of the blue colors. Many popular imaging objects contain reflection nebula with faint blue hues such the central part of NGC2264. Therefore, we designed Antlia Triband RGB Ultra Filter that not only retains the HSO emission signal but also increases the amount of Luminous flux of the blue B channel. By improving the blue wavelength transmission, the color of the photo is better balanced and easier to manage in post processing.

# Astronomical Filters Summary – 2023

## Application and Performance:

- It is workable to shoot galaxies, reflection nebulae and star clusters.
- Refined coating process makes the Triband RGB Ultra filters with excellent halo suppression and improved signal-to-noise performance.
- It has been specifically designed for balanced color transmission using Antlia's experience in spectrum design.
- The balanced transmission allows the minimal color cast to broadband emission objects such as stars, galaxies, and globular clusters.
- The Triband RGB Ultra can be used with nearly all systems as fast as  $f/2$  with minimal loss of efficiency or shifts in spectral response.
- When shooting LRGB with mono cameras, unless you are wanting to image LDN (dark nebulae) the Triband RGB Ultra can be used as a luminance filter replacement for objects such as nebulae and galaxies to improve contrast and signal to noise ratio.
- The Triband RGB Ultra is able to better isolate the H-alpha, O3 and blue spectrum from the background light pollution.
- For visual use, Triband RGB Ultra filter ensures the high transmittance of the HSO emission line and can be used for observing deep-sky objects with large-diameter telescopes.
- The filter provides excellent flexibility and compatibility with both OSC and Mono camera systems. ☑ It facilitates the imaging of most astronomical objects using all optical configurations down to  $f/2$  focal ratio.

# Astronomical Filters Summary – 2023

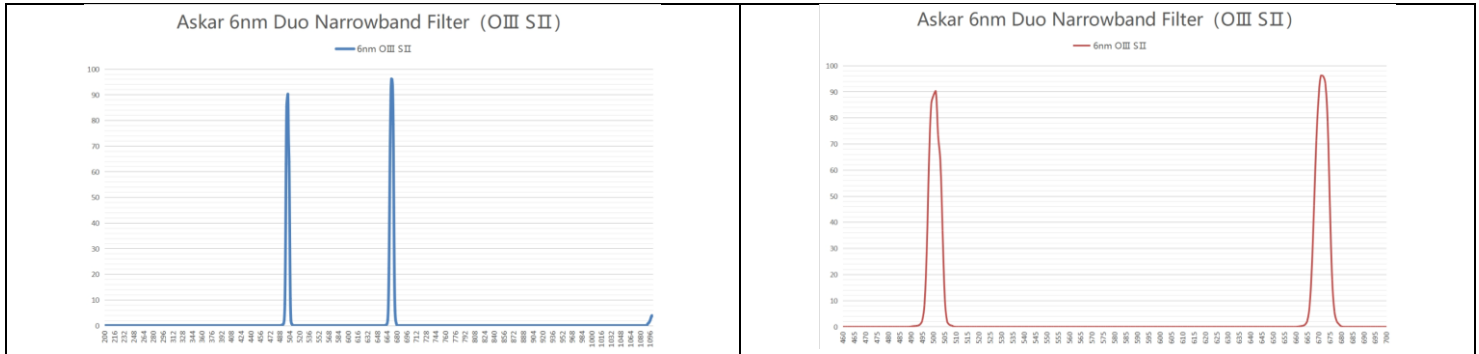
## Filter: [Askar Colour Magic 6nm Deep-Sky Narrowband Filter \(OII + SII\)](#)

Manufacturer	Size	Type	Application	Cost
Askar	2.0"	Line	Imaging: Narrowband	2.0" = <a href="#">\$280</a>

### Comments

This filter may work well with the [Antlia Triband RGB](#) filter.

### Wavelength Chart



### Specifications

- S-II | 671nm | FWHM = 6nm | >90% Transmission
- O-II | 500.7nm | FWHM = 6nm | >90% Transmission

### Manufacturer Description

While most of the commercially available duo-narrowband filters for deep-sky astrophotography are in the Ha and OIII bands, ASKAR offers another structure: SII & OIII.

When shooting deep-sky galaxies with color cameras, a duo-narrowband filter in the Ha and OIII bands is often used; whereas with a mono camera, a narrowband filter in the Ha, SII and OIII bands is often used, leaving users with color cameras missing one band of nebula detail. This can be compensated by using SII and OIII duo-narrowband filters mentioned above.

Askar 6nm Duo-narrowband Filter (OIII & SII) has an ultra-high transmittance over 90% at its center wavelength (500.7nm and 671nm). Askar 6nm Duo-narrowband Filter (OIII & SII) can effectively eliminate the influence of light pollution. Even if you are in an area seriously affected by light pollution, the pictures taken with the Askar 6nm Duo-narrowband Filter (OIII & SII) are still very good. It is so practical and efficient that you can get astronomical images of high quality with just one duo-narrowband filter and an ordinary astronomical color camera.

Askar 6nm Duo-narrowband Filter (OIII & SII) is ideal for photographing emission nebulae, planetary nebulae or supernova remnants, and has a very high transmittance at the central wavelength. The highly narrow bandwidth of the filter effectively blocks out the effects of light pollution or other distracting factors such as night glow.



# Astronomical Filters Summary – 2023

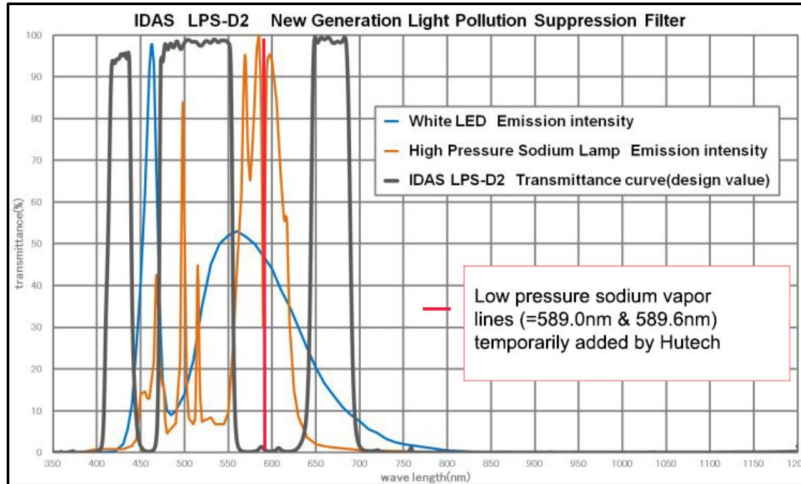
Filter: [IDAS LPS-D2](#)

Manufacturer	Size	Type	Application	Cost
<a href="#">Astro Hutech</a>	2.0"	Broadband	Imaging	2.0" = \$??

## Comments

This filter is no longer being sold and has been replaced with the [IDAS LPS-D3](#).

## Wavelength Chart



## Specifications

- H-alpha | 656.3nm | FWHM = 3nm |
- H-beta | 493nm | FWHM = 18nm |
- O-III | 493nm | FWHM = 18nm |

## Manufacturer Description

Improves color balance with color cameras and also uniquely provides LED light pollution suppression.

Following from the highly successful IDAS P2 and D1 LPS filters, the D2 has been optimized for one-shot color and modified DSLR cameras. The key concept of the D2 LPS is to reduce the reddish background cast whilst blocking as much light pollution as possible improving upon the already good color balance of the P2 LPS and in addition block high/low sodium and white LED light pollution.

Light pollution suppression (LPS) filters are designed to suppress the common emission lines generated by artificial lighting, yet allow the important nebula emission lines to pass, thus enhancing the contrast of astronomical objects, particularly emission nebulae (see filter plots).

Unlike other light pollution suppression filters, IDAS filters are specifically designed for balanced color transmission using the IDAS unique Multi-Bandpass Technology (MBT) process. The balanced transmission allows color photographs to be taken with minimal color cast to broadband emission objects such as stars, galaxies and globular clusters.



# Astronomical Filters Summary – 2023

IDAS LPS filters utilize the unique IDAS Ion Gun Assisted Deposition (IGAD) coating technology for superior coating durability (quartz hardness) and safer cleaning. IGAD coatings also improve temperature and humidity stability, reducing spectrum shifts down to +/- 1nm from the +/-3 or 4nm shift of standard coatings.

CCD imaging can also benefit, because although CCD imagers can already shoot through light pollution to some extent, including an LPS filter to the setup gives an added (signal-to-noise) edge. The filter also blocks infrared so a separate IR blocking filter is not needed.

Note, however, that light pollution suppression filters are not a perfect substitute for dark skies.

D2 LPS filters are initially available in 2" threaded cells and photographic filter size 52mm

# Astronomical Filters Summary – 2023

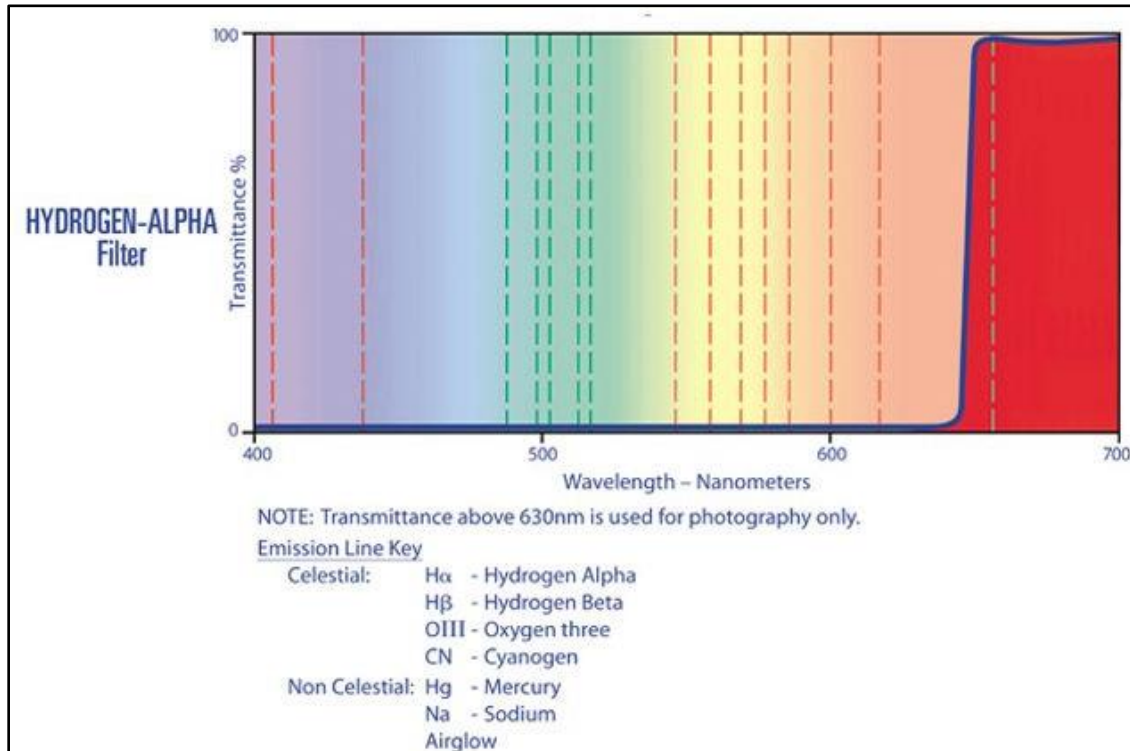
## Filter: [Lumicon Night Sky Hydrogen-Alpha Filter](#)

Manufacturer	Size	Type	Application	Cost
<a href="#">Lumicon Inc</a>	1.25"	Line	Imaging	1.25" = <a href="#">\$84</a>

### Comments

Filter has never been used by me.

### Wavelength Chart



### Specifications

Details

### Manufacturer Description

Lumicon's Night Sky Hydrogen-Alpha Filters are long-pass filters with a 50% transition from blocking to passing at about 640nm. At wavelengths longer than 650nm, transmittance is 90% or above. The filter is used as an extreme anti light-pollution filter, and for contrast-enhancement of emission nebulae and other astronomical objects bright in the infrared.

The LF3090, 2" Night Sky Hydrogen-Alpha Filter, threads into the nose-piece of industry-standard 2" Digital Imagers.

# Astronomical Filters Summary – 2023

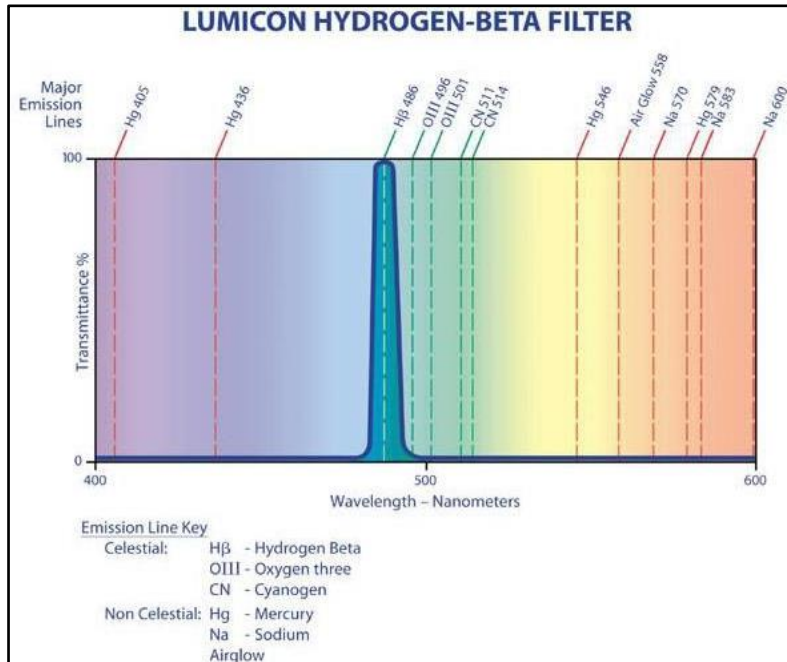
## Filter: [Lumicon H-Beta](#)

Manufacturer	Size	Type	Application	Cost
<a href="#">Lumicon Inc</a>	1.25"	Line	Imaging	1.25" = <a href="#">\$110</a>

### Comments

Filter has never been used by me.

### Wavelength Chart



### Specifications

- H-Beta | 486nm | FWHM = 9nm | Transition = ??% |

### Manufacturer Description

Also known as the Horsehead Nebula filter, the Lumicon 1.25in Hydrogen-Beta Filter isolates only the hydrogen-beta line of the spectrum (486nm) in a narrow pass-band just 9 nm wide, providing maximum contrast. Now you can view extremely faint nebulous objects such as the Horsehead, Cocoon and California Nebulae. In many cases, the Lumicon Hydrogen-Beta Filter is the ONLY way to view these objects. Recommended for 8" or larger telescopes.

To ensure that your Lumicon filter remains the World's Best, the strictest quality control standards are employed throughout the production process. Each Lumicon Hydrogen - Beta Filter is individually inspected and proudly inscribed with the percentage of light transmittance of the H-Beta emission line.

- Extremely narrow bandpass filter isolating the hydrogen-beta line alone (486 nm)
- Excellent for viewing the Horsehead, Cocoon and California Nebulae
- Often the only way to view certain nebulae
- Best used under clear skies with large aperture

# Astronomical Filters Summary – 2023

## Filter: [Lumicon Comet Filter](#)

Manufacturer	Size	Type	Application	Cost
<a href="#">Farpoint</a>	2.0"	Specialized	Imaging	2.0" = <a href="#">\$230</a>

### Comments

This is a specialty filter used for capturing the ionized tail of comets.

### Wavelength Chart

--NO CHART AVAILABLE--

### Specifications

- O-III | 501nm | FWHM = 25nm | Transition = ??% |
- C2 | 511nm, 514nm | FWHM = 25nm | Transition = ??% |

### Manufacturer Description

Lumicon 2 Inch Comet Filter is a narrow band-pass filter (25nm), which isolates the 501nm OIII line and both C2 lines at 511nm and 514nm.

The high contrast of the filter reveals the delicate ionized tail of gaseous comets for optimal viewing. The Comet Filter also helps better distinguish gaseous comets from dusty comets, which normally show little contrast gain.

Lumicon filter remains the world's best and strictest quality control standards are employed throughout the production process. Each Lumicon Comet Filter is individually inspected and scanned with the percentage of light transmittance of the primary emission lines at 501, 511 & 514nm.

# Astronomical Filters Summary – 2023

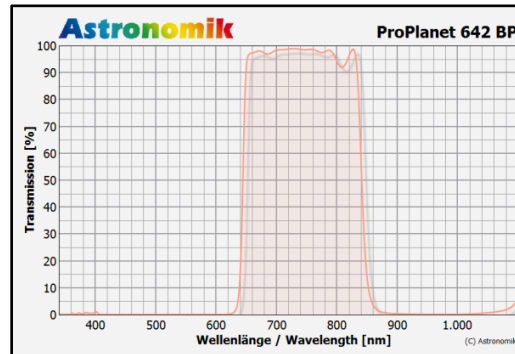
Filter: [Astronomik ProPlanet 642 BP IR-pass filter](#)

Manufacturer	Size	Type	Application	Cost
<a href="#">Astronomik</a>	1.25"	Specialized	Imaging	1.25" = <a href="#">\$130</a>

## Comments

Planetary/Moon and Sun?.

## Wavelength Chart



## Manufacturer Description

The Astronomik ProPlanet 642 BP is the latest addition to the family of Astromik ProPlanet IR-pass filters. The filter thrills because of its wide range of applications for daylight IR-Photography, high-resolution lunar and planetary imaging and for taking beautiful and deep images of H-alpha regions when used for Astrophotography.

"BP" are short for "Bandpass": The filter gives you a 200nm spectral window from 642nm to 842nm. Contrary to the other two ProPlanet filters it blocks the longer infrared. Together with the Astronomik ProPlanet 742 and the ProPlanet 807 you can now have three choices to match your needs when imaging in the IR. The Astronomik ProPlanet 642 BP will be the right choice for the best image quite often!

The Astronomik ProPlanet 642 BP will give you three filters in one single product! Depending on your camera, the Astronomik ProPlanet 642 BP is a great tool either for daylight IR-imaging with your digital camera, or it will reduce seeing effects and enhance contrast when used for lunar- and planetary imaging, and third it will be a very good and low-priced H-alpha Filter for getting started in Deep-Sky Astrophotography of H-alpha regions.

Due to our skillful development with lots of tests we reached the goal to give you a filter which will do a perfect job to deliver amazing images.

## Daylight IR-imaging:

- contrasty images with a great rendition of colors
- Clear "Wood-Effect" images
- Not Hot-Spot from longer IR!
- Short exposure times, about the same as normal VIS-imaging
- perfect choice for Infrared-Videos

# Astronomical Filters Summary – 2023

High-resolution Lunar and planetary imaging:

- short Exposure times
- effective reduction of Seeing
- enhanced contrast
- no ghosts and best sharpness due to blocking the longer IR

Deep-Sky Astrophotography of HII regions:

- best transmission of the H-alpha line at 656nm
- about 40nm FWHM with astro-modified DSLRs
- amazing contrast under light polluted skies or moonlight
- low priced filter for getting started in H-alpha imaging
- easy focusing using camera display plus LiveView!

Guiding for Astrofotography:

- installing the 642BP in front of your autoguider-camera dramatically improves guiding quality, as image-motion from one frame to the next is minimized.

High-Resolution Lunar & Planetary imaging

Why Infrared? Every observer knows the flickering stars and planetary disks when looking through an eyepiece or at your monitor. Slight differences in temperature and pressure result in a different index of refraction for "bubbles" of air. As these bubbles move, the image moves too! This effect is called "Seeing".

This change in the index of refraction becomes smaller the further you go to the infrared (longer wavelengths), and due to that, the Seeing becomes better too!

When observing with the human eye we have no options: The human eye is not sensitive to infrared light. But with the CCD or CMOS sensors from our camera we can go to the infrared part of the spectrum and enjoy the steady air.

An Infrared-Pass filter like the Astronomik ProPlanet 642 BP blocks all unwanted visual light and gives you infrared light only!

The amount of seeing is changing very fast, so there is no universal filter that will do it every time. So the Astronomik ProPlanet 642 BP is the third filter in this line of Products in addition to the Astronomik ProPlanet 742 and ProPlanet 807! When seeing is not really bad, the ProPlanet 642 BP will be usually the first choice and will give you best results as it blocks the longer IR too!

While we were developing this new filter, several observers had our prototype filters for testing. Most of them reported that the Astronomik ProPlanet 642 BP gave them the very best images compared with filters from other manufacturers. The sharpness and high contrast resulted in the best final images in nearly all situations!

Deep-Sky astrophotography of H-alpha regions:

The Astronomik ProPlanet 642 BP has already reached its full transmission of nearly 100% at the famous line of H-alpha at 656nm. -All light coming from the beautiful HII regions can reach the sensor of your camera, while all shorter light and nearly all artificial light pollution is filtered out!

# Astronomical Filters Summary – 2023

Combined with a typical astro-modified DSLR you will get a spectral window of about 40nm which results in a very dark background and a high contrast. With the Astronomik ProPlanet 642 BP installed in your camera, it's possible to do nice shoots of H-alpha regions even when the moon is up: Lunar stray light is filtered out very effectively!

"How long do I have to expose longer?" -That's a very common question from customers from all over the world. The answer is quite easy: You don't have to expose longer, you MAY expose longer!

Due to the high transmission of nearly 100% you will have the same amount of photons with a wavelength of 656nm on your sensor, whether you have the filter installed or not. But, with the Astronomik ProPlanet 642 BP installed, the background sky will be very dark, while it would be very bright -or even saturated- when imaging without the filter! The filter blocks photons with other energies and gives you a higher contrast. With the filter installed you MAY expose longer to collect more photons from your object of desire till the background is getting brighter again!

A narrow band emission-line filter like the Astronomik H-alpha filter with 12nm or 6nm FWHM will do the job much better (it blocks more of the unwanted light), but the lower price of the Astronomik ProPlanet 642 BP is very attractive for beginners in this field of astrophotography! Additional to that the real emission line filters are quite difficult to use for beginners as focusing can be quite difficult with them. With the Astronomik ProPlanet 642 BP you will usually have enough light to use the LiveView monitor on the back of your camera!

Taken all this together the new Astronomik ProPlanet 642 BP is the ideal filter for getting started in H-alpha imaging with your modified DSLR!

## Technical Data

- more than 96% transmission for wavelengths of 642nm to 840nm
- blocking of wavelengths between 350nm and 630nm
- Parfocal with other Astronomik filters
- Glass thickness: 1mm
- Completely resistant against high humidity, scratches and aging effects
- Diffraction limited, the filter will not reduce the optical performance of your telescope!
- Astronomik filters are delivered in a high-quality, long lasting, filter box
- Since 2008 we do ship filters with a completely new design. Any kind of halo or strange reflection is a matter of past

# Astronomical Filters Summary – 2023

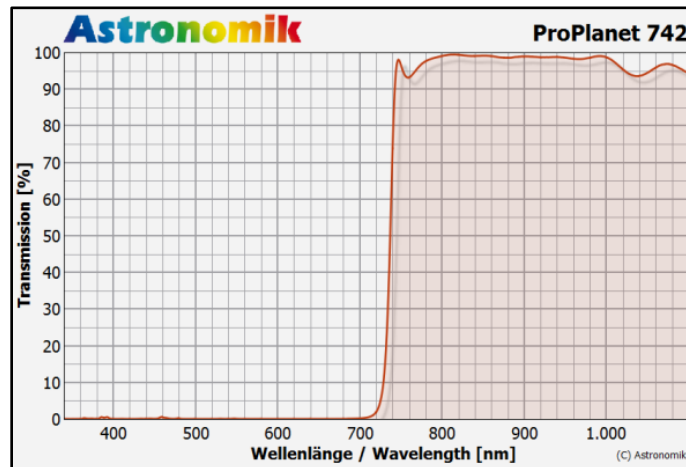
Filter: [Astronomik ProPlanet IR 742 filter](#)

Manufacturer	Size	Type	Application	Cost
<a href="#">Astronomik</a>	1.25"	Specialized	Imaging	1.25" = <a href="#">\$120</a>

## Comments

Planetary/Moon and Sun?.

## Wavelength Chart



## Manufacturer Description

Ideal filters for the reception of the moon and planets, notably Mars, with telescopes from 6" (150mm) aperture.

The ProPlanet IR 742 only allows infrared light with wavelengths of more than 742 nm to pass. In this wavelength range the effects of seeing are significantly lower than in the visible spectrum of the human eye. This allows much sharper images than are usually obtained from your device and location. Another advantage is that the sky background of advanced dawn is dark and so the filter even allows photography of the planets and the moon at daylight.

## Main Use

The Astronomik ProPlanet IR 742 cuts off the visible part of the spectrum and allows the light of wavelengths longer than 742nm to pass. Due to this behavior the part of the spectrum that is most sensitive to bad seeing is rejected. This approach does a big improvement to the imaging of planets and the moon. The image is more steady than the image in the visible light with nearly identical exposure times.

## Other Uses

- Besides astrophotography the filter allows you to get stunning results in nature photography. If an EOS-Clip Filter is used in an MC modified DSLR you get tremendous results imaging the flora. The filter cuts off the part of the spectrum where Chlorophyll looks green and shows its high reflectivity in the near infrared. If trees are photographed in spring and summer under blue skies you get stunning images with white trees and clouds in front of a near black background.
- Darkens the background during twilight.
- Imaging of bright planets, stars and comets by day.
- Imaging of young stars in dust clouds and stellar nurseries.



# Astronomical Filters Summary – 2023

## Alternatives

When the seeing is very bad and the instrument is 10" (250 mm) or larger, the Astronomik ProPlanet IR 807 may be the better choice.

## Suitability

- Visual observation (dark skies): Unsuitable, the eye is insensitive at this spectrum
- Visual observation (urban skies): Unsuitable, the eye is insensitive at this spectrum
- Film photography: It depends,
- CCD photography: Reasonable, for special IR photography (as chlorophyll)
- DSLR photography (original): Unsuitable
- DSLR photography (astro modified): Unsuitable
- DSLR photography (MC modified): Very good, for IR daylight photography
- Webcam / Video (Planets): Very good, rejects problems with seeing
- Webcam / Video (Deep Sky): Very good, rejects problems with seeing

## Technical Data

- more than 96% transmission for wavelengths of 742nm to 1100nm
- blocking of wavelengths between 350nm and 730nm
- Parfocal with other Astronomik filters
- Glass thickness: 1mm
- Completely resistant against high humidity, scratches and aging effects
- Diffraction limited; the filter will not reduce the optical performance of your telescope!
- Astronomik filters are delivered in a high-quality, long lasting, filter box
- Since 2008 we do ship filters with a completely new design. Any kind of halo or strange reflection is a matter of past

# Astronomical Filters Summary – 2023

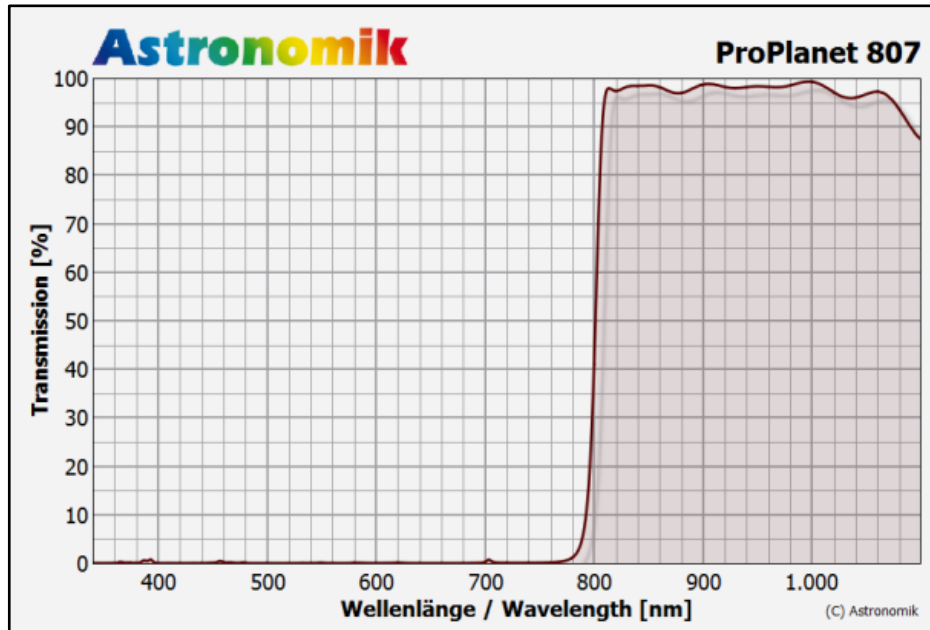
Filter: [Astronomik ProPlanet 807 IR-pass filter](#)

Manufacturer	Size	Type	Application	Cost
<a href="#">Astronomik</a>	2.0"	Specialized	Planetary Imaging	1.25" = <a href="#">\$130</a>

## Comments

Planetary, Moon & Sun.

## Wavelength Chart



## Specifications

See below

### Manufacturer Description

Ideal addition to the Astronomik ProPlanet IR 742 for imaging the moon and planets, with telescopes larger than 10" (250mm) when the seeing is poor.

This filter is an ideal complement to the ProPlanet IR 742 for use with converted DSLR cameras, CCD cameras and Webcams. The effects of seeing are distinctly reduced. It is your entry into previously unknown dimensions of photography of the moon and the planets.

The ProPlanet IR 807 only allows infrared light with wavelengths of more than 807 nm to pass. In this wavelength range the effects of seeing are significantly lower than in the visible spectrum of the human eye. This allows much sharper images than are usually obtained from your device and location. Another advantage is that the sky background of advanced dawn is dark and even allows photography of planets and moon at daylight.

Main Use: The Astronomik ProPlanet IR 807 cuts off the visible part of the spectrum and allows the light of wavelengths longer than 807nm to pass. Due to this behavior the part of the spectrum that is most sensitive to bad seeing is rejected. This approach does a big improvement to the imaging of planets and the moon. The image is more steady than the image in the visible light.

# Astronomical Filters Summary – 2023

## Other uses

- The Astronomik ProPlanet IR 807 is designed to be an addition to the Astronomik ProPlanet IR 742, if the seeing is extremely bad and a larger telescope is used.
- For most cameras the exposure times doubles, compared to the Astronomik ProPlanet IR 742 or imaging in visible light, if the Astronomik ProPlanet IR 807 is used.
- Darkens the background during twilight.
- Imaging of bright planets, stars and comets by day.
- Imaging of young stars in dust clouds and stellar nurseries.

## Alternatives

If the seeing is not so bad or if the telescope is smaller than 10" (250mm) we recommend the use of the Astronomik ProPlanet IR 742.

## Suitability

- Visual observation (dark skies): Unsuitable, the eye is insensitive at this spectrum
- Visual observation (urban skies): Unsuitable, the eye is insensitive at this spectrum
- Film photography: Unsuitable
- CCD photography: Reasonable, for special IR photography (as chlorophyll)
- DSLR photography (original): Unsuitable
- DSLR photography (astro modified): Unsuitable
- DSLR photography (MC modified): Good, for IR daylight photography, longer exposure time
- Webcam / Video (Planets): Very good, rejects problems with seeing, particularly with telescopes larger 250 mm aperture
- Webcam / Video (Deep Sky): Very good, rejects problems with seeing, particularly with telescopes larger 250 mm aperture

## Technical Data

- more than 97% transmission for wavelengths of 807nm to 1100nm
- blocking of wavelengths between 350nm and 790nm
- Parfocal with other Astronomik filters
- Glass thickness: 1mm
- Completely resistant against high humidity, scratches and aging effects
- Diffraction limited; the filter will not reduce the optical performance of your telescope!
- Astronomik filters are delivered in a high-quality, long lasting, filter box
- Since 2008 we do ship filters with a completely new design. Any kind of halo or strange reflection is a matter of past

# Astronomical Filters Summary – 2023

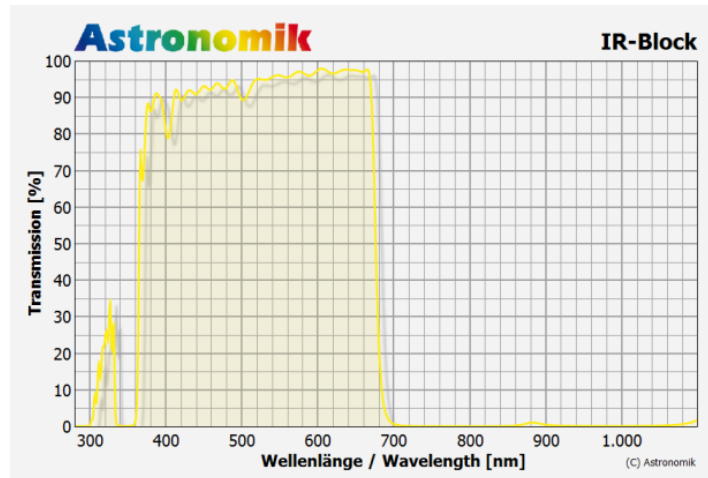
Filter: [Astronomik IR-Block](#)

Manufacturer	Size	Type	Application	Cost
<a href="#">Astronomik</a>	2.0"	Broadband	Application	2.0" = <a href="#">\$130</a>

## Comments

Comments Here.

## Wavelength Chart



## Specifications

Details

### Manufacturer Description

Infrared-blocking filter for digital photography. The filter should be used as a standard at all imaging applications with sensors having a low sensitivity in the UV, e.g. Webcam, DSI and LPI from Meade or most video systems. Put this filter in front of your camera and you will get rid of all problems caused by IR like bright halos around all objects and a very soft overall image.

If you compare the transmission data of the Astronomik IR-blocker with the data from other sources, you will notice, that most other manufacturers would call this already an UV-IR blocker. The filter we call an "UV-IR blocker" is superior to any UV-IR blocker from other manufacturers worldwide!

The IR-blocker is optimized for systems with focal ratios between f/0.5 and f/50. The typical transmission is higher than 99%.

### Main use

The IR Blocker gives you a perfect parfocal filter. It blocks all IR light without modifying the visual part of the spectrum. It is also great as a dust protection for your telescope and camera.

### Alternatives

You should think about using the UV-IR blocker if your camera has a high sensitivity at short wavelengths. Think about using the MC Clear glass if you have a system without any refracting elements. If you do color imaging from light polluted places, please think about using the CLS CCD filter for the luminance data instead!

# Astronomical Filters Summary – 2023

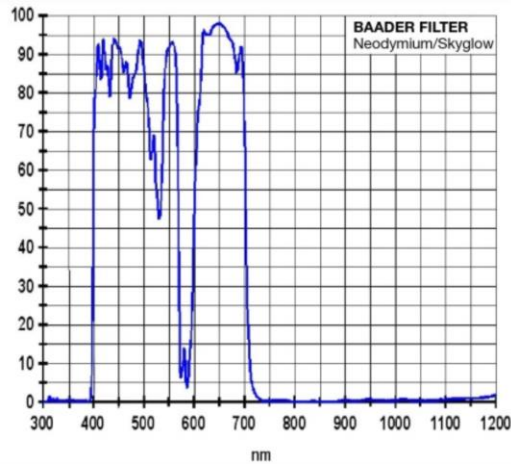
Filter: FilterName

Manufacturer	Size	Type	Application	Cost
ManufacturerLink	1.25" 2.0"	Broadband	Application	1.25" = \$?? 2.0" = \$??

## Comments

Comments Here.

## Wavelength Chart



## Specifications

Details

## Manufacturer Description

Description