MORPHEUS® 76°

4,5 mm • 6,5 mm • 9 mm • 12,5 mm • 14 mm • 17,5 mm



For visual observation and photography









Eyepiece projection

with solar system imagers

Images of the planets require large effective focal lengths, which you can easily achieve with eyepiece projection. A longer distance between eyepiece and sensor gives you a higher magnification.

The adapter M43/T-2 *#2958080* is used to connect als items of the Astro T-2 System® to the eyepiece, including 1¼"-eyepiece clamps for video modules / solar system imagers. Or you take the C-Mount-adapter *#2958520* to screw matching cameras onto the eyepiece – tilt- and light-proof.

Required parts:

Camera module, e.g. QHY 462C *#1931026*

1¼" eyepiece clamp,
e.g. ClickLock® clamp *#2458100* (pictured)
or focusing eyepiece holder *#2458125*,
alternativly C-Mount-adapter *#2958520*

T-2 extension tube, as required:
40mm (pictured): *#1508153*
15mm: *#1508154*
7.5mm: *#1508155*

Morpheus®-adapter M43/T-2 *#2958080*

Morpheus® eyepiece



Eyepiece projection
with DSLR & system cameras



The large sensor of a DSLR or system camera gives you a large field of view even at high magnifications. This is useful for images of sun and moon as well as for nature photography with a spotting scope.

To avoid vignetting, you should keep 40 mm of distance between the Morpheus-adapter and the T-ring, if you use a fullframe DSLR; 30 mm are enough for APS-C. Use a T-2 quick-changer to align your camera horizontally or to remove it quickly from the eyepiece.



Required parts:

DSLR / system camera without lens

T-Ring for camera bayonett (e.g. Protective DSLR T-Ring for Canon, *#2958550*)

T-2-extension tubes as required, e.g.: 40mm: *#1508153* | 15mm (pictured): *#1508154* | 7.5mm: *#1508155*

Recommended: TQC/TCR quich changer (Bayonett + Ring) *#2456322*, length 15mm

Morpheus®-adapter M43/T-2 *#2958080*

Morpheus® eyepiece



AFOCAL PROJECTION

with DSLR, video- and system-cameras

Cameras with a fixed lens and a filter thread can also be combined with the Morpheus® eyepieces. The lens should be close to the eyepiece, without touching it. Our DT-rings come with a 1 mm spacer ring, to enable you to fine tune your camera's position to be as close to the eyepiece as possible without contacting the eye lens. Use the camera zoom, until the black frame around the image disappears – a tele lens is better than a wideangle lens.

Starting from the eyepiece's M43-thread, you need the M43/SP54 adapter *#2954251* and the step-up/down-rings for your lens's filter thread, or the included M43 extension *#2954250* for cameras with M43 filter thread.



REQUIRED PARTS:

Camera lens with filter thread

Hyperion-DT-ring (includes 1mm spacer ring) for SP54 and your filter thread. (M28: *#2958090* + *#2958028* | M37: *#2958090* + *#2958028* | M43: *#2954250* | M46: *#2958026* | M49: *#2958049* | M52: *#2958052* | M55: *#2958055* | M58: *#2958058* | M62: *#2958062* | there are step-up-rings from M62 to larger threads available)

Morpheus®-adapter M43/SP54 *#2954251*

Morpheus® eyepiece

AFOCAL PROJECTION

for compact cameras with Microstage II



Even compact cameras without a filter thread can be used together with the Morpheus® (and other eyeppieces) for photography – with the Microstage II Digiscoping Adapter *#2450330.* This camera holder can be used to place a small camera exactly centered behind an eyepiece. You can move it away to take a look through the eyepiece anytime, without losing the alignment. This works with almost any telescope, spotting scope and even with many pairs of binoculars!

The large eye-lense of the Morpheus® eyepieces makes it possible to use also larger compact cameras – the camera's lens should be smaller than that of the eyepiece, so that the camera does not look around the eyepiece.



Be careful when mounting the camera!

All adaptations must me done thoughtfully. Before screwing lens and eyepiece together, make sure that the lens can't touch or scratch any part of the eyepiece. When in doubt, use the 1 mm spacer ring (SP54) included with the DT-rings or the included 7.5mm M43 extension – sometimes it is only a matter of a tenth of a millimeter.



Always in focus with spotting scopes, binoviewers and telescopes

The design of the Morpheus® eyepieces requires as little back-focus (optical length) as possible. Their image plane is not located as deep in the housing as usual, so that you can use them on practically all spotting scopes with 1¼" clamps. The 2" nosepiece is a part of the housing to save even more optical length. This is great e.g. for Newtonian telescopes, which were optimized for visual observations. Especially Dobsonians often have a close focus point. You can reach focus with all Morpheus® eyepieces.

If you use the 2" clamp of your focuser and the eyepiece must be placed farther away, simply use a 2"/1¼"-reducer – e.g. our 2" Pushfix-reducer *#2408151*, which can be used as a standard 1¼" eyepiece clamp or attached permanently to the eyepiece.

The lean design of these eyepieces was optimized for use with binoviewers. Other wide-angle eyepieces try to impress you with mighty housings, while the Morpheus® are no larger or heavier than absolutely necessary.



Optical Design

(17,5 mm Morpheus® eyepiece shown)



Important note:
To protect them from dirt and environmental conditions, the Morpheus® eyepieces are sealed waterproof and must not be opened.

If the housing is opened, the warranty will be void!

8 lenses in 5 groups, among them one ED- and two Lanthanum-elements

Morpheus® eyepiece range



4,5 mm | 6,5 mm | 9 mm | 12,5 mm | 14 mm | 17,5 mm

Optical Properties
of all Morpheus® eyepieces

Full Field Sharpness: The sharp, flat 76° field is unsurpassed by any other modern wide field eyepiece. On-axis sharpness and contrast rivals the Zeiss Abbe II eyepieces, while delivering nearly equivalent performance over the full field. Stars remain diamond pinpoints as you move away from center, and the field remains flat and in focus, even in short focus telescopes.

Long Eye Relief: Morpheus® pushes the envelope of comfortable wide field viewing further than ever before, delivering close to 20mm of eye relief along with best-in-class optical performance. Eyeglass wearers can comfortably take in the full field, and users of Binoviewers will find that Morpheus® are the ultimate eyepieces for viewing with two eyes.

Low Distortion: The highly sophisticated optical design delivers exceedingly low distortion (angular magnification distortion). Planets and lunar features retain their shapes as they transit the field and the true field sizes match the theoretical value. Many companies exaggerate at this point and deliberately use off axis distortion magnification as a means to advertize blown "apparent" field sizes. You will be able to compare this given field size of 76° and find it to be close to or exceeding the true value, calculated from the apparent field size and focal length.

Immersive Views: Comparing many eyepieces, we found that the subjective 'spacewalk' feeling is not just a function of field of view. We found two additional primary factors played into the equation – Eye Relief and Ease of Viewing. So, with this information in hand, we set out to design a new eyepiece with a field of view greater than 74° that meets all of the other optical parameters necessary to deliver a truly "immersive" viewing experience where the eyepiece essentially disappears – which is even more impressive with a binoviewer.

Phantom Coating® Group: Pioneered in the Hyperion® lineup, the Phantom Group Multi-coatings have been further optimized for use in the Morpheus and index-matched to each of the different glasses.

Optimized Internal Baffling: As with all Baader Planetarium eyepieces, the internal mechanicals have been fully ray-traced and baffled to eliminate the effects of stray-light.

Mechanical Properties
of all Morpheus® eyepieces

Optimized for Binoviewing: Every last bit of space has been squeezed out of the main body to minimize its size, giving maximum nose clearance for binoviewing.

Weight reduction: The eyepiece housing consists of hard aluminium alloy with industrial quality UV-stabilized anodizing. Every effort has been made to eliminate unnecessary weight – especially in view of effective binoviewing. The weight of all Morpheus-eyepieces essentially are the lenses inside plus the best protection and water resistance we can supply.

Foldable Eyecups: The folding rubber eyecup incorporates an integral M43 threaded metal attachment ring. This threaded attachment enables the eyecup to be soft and compliant, while keeping the eyecup securely attached to the eyepiece when folded or extended. The second included special winged version provides the ultimate comfort and exclusion of stray light necessary for binoviewing with eyeglasses. These eyeguards have been developed to provide the optimal comfort and eye spacing for most users and eye glass wearers. The eyeguards also protect the M43-thread which is used for adapting a camera, as described on the back of this brochure. The M43-extension can be used for setting the eye relief as well as for adapting a camera.

Safety Features: The 1¼" and 2" barrels of each Morpheus incorporate our new Slip-Protect Safety Kerfs. The ideal safety compromise between smooth barrels and wide undercuts. The numerous shallow kerfs give additional grip and security from inadvertent drops from smooth sided barrels, without the annoying problems sometimes caused by traditional wide undercuts. Wide waffle-patterned rubber grip ring gives an extra measure of handling security.

Luminescent Labeling: The labeling glows in a soft green, if the eyepiece has been in the light for some time, or if it has been illuminated directly with a flashlight. This allows you to recognize immediately which focal length you have in your hand – even in the darkest night.

Belt pouch: Not enough space at the telescope? The pouch does not only protect the eyepiece – you can even use it as a belt pouch or attach it to your tripod – the focallength indicator helps to find the right eyepiece.

Scope of Delivery
of all Morpheus® eyepieces



Morpheus®-eyepieces not only give you sharp images, they also come with many useful accessories. The round soft folding rubber eyecup 2 (by default mounted on the eyepiece 1) is securely attached with a metal M43 attachment thread, so it can be easily extended or folded for eyeglass use without fear of coming detached (see below); the winged eyecup 3 is helpful for observations with a binoviewer.

The included 7.5mm M43 extension 4 allows adjusting of the eye relief (see right) as well as adaptation of many compact cameras. Three dust caps 5 protect the eyepiece when you don't need it – no matter which eyecup you are using. The cordura holster 6 can be attached to your belt or to many tripods – by using the focallength indicator 7 you'll always find the eyepiece you're looking for.



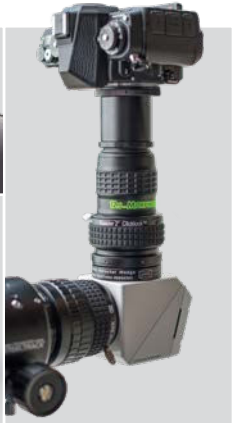


Application Examples

How will you use your Morpheus® ?

















MORPHEUS® 76° HIGHLIGHTS

(at the example of 17,5 mm Morpheus® 76°)



Rubber/Metal foldable eyecup (M43-threaded)
includes finetune M43 extension ring

Phantom Coating® Group
offers exceptional contrast and transmission

Real 76° field of view
enables a Spacewalk-Feeling with sharp stars all across

Distortion is absent
Moon and planets remain round and sharp all across the field in a motorless telescope

~ 20 mm eye relief
ideal for eyeglass wearers

M43 Photo/Video-thread
for connecting a wide variety of cameras. T-2 thread optionally available

Designed for Binoviewing
w. lots of „nose-space" and 55 mm max. diameter

Wafered rubber grip ring

Luminescent Labeling
find the right focal length eyepiece with ease

Hard Aluminium Alloy
with industrial quality UV-stabilized anodizing

1¼" and 2" nosepiece
– requires very little backfocus

Safety Kerfs
No slipping, no tipping, no locking when changing eyepieces

For further information please visit

www.baader-planetarium.com/en/morpheus

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