Much more than an eyepiece

HYPERION®-eyepieces

How to use the modular eyepiece system –
illustrated instructions for the whole range of Hyperion accessories

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Case included with purchase of Hyperion eyepiece-set

Full Set: 7 eyepieces, 5-24mm
Beginner Set: 4 eyepieces, 5/10/17/24mm

Individually packaged Hyperion eyepieces:

Scope of supply for each Hyperion 68° eyepiece:
1 2 3 4 5

1 68° Hyperion eyepiece with Phantom-Group® Coating and two Photo-threads M43 and SP54

2 dual 2" and 1¼" nosepiece

3 Soft-leather bag: provides perfect protection – takes very little space

4 Two end dust caps with inner diameters of 48mm and 45mm

5 1¼" (31,7mm Ø) Dust Cap

Ideal for binocular use: **Winged Rubber Eyeshield** (included in both sets)

Cap 48mm

Cap 45mm

2" draw tube diameter with captive groove and 2" filter thread

1¼" barrel with captive groove and filter thread, suitable for all 1¼" eyepiece-filters, as well as for the Baader 1¼" extension tube (#1905130)

End dust caps

All Hyperion eyepieces are equipped with two dust caps which protect the eye lens side. This leaves you the choice of storing the eyepiece protected from dust with rubber eye cap folded down (especially for persons who wear glasses) or folded up.

System-threads M 43 and SP 54

The Hyperion threads are located beneath the rubber eye cap, or rather beneath the thread-protecting ring (made of high-quality, non-aging silicone rubber). The large number of Baader adapter rings allows use of the Hyperion eyepiece for (almost) every task in astronomical – and nature –photography as a high-quality projection optic or as a tele-extender.

The following pages describe in detail many of the adaptations and variations that are possible with the Hyperion system.

1 System thread M43

2 System thread SP54

Variable focal lengths with Hyperion 2" finetuning rings (FTR) 14 and 28 mm

also with 2" Baader eyepiece filters

Hyperion eyepiece w. FTR 14 and 28 mm

Hyperion eyepiece with FTR 14mm (this combination is also portrayed in the picture below which features the 2" mirror star diagonal)

Available combinations of Hyperion eyepieces with Finetuning rings or 2" Baader Filter to modify the focal length and the field of view.

Effective focal length in mm	Ø Field-stop mm	with 14 mm FTR		with 28 mm FTR		with 14 + 28 mm FTR		with 2" Baader Filter*		without first group of lenses	
Hyperion**	**24.0**	**28.0**	--	--	--	--	--	--	--	--	--
Hyperion	**21.0**	**22.5**	**17.6**	**19.9**	**15.5**	**17.5**	**14.0**	**15.8**	**18.5**	**20.6**	**32.2**	**35.0**
Hyperion	**17.0**	**20.9**	**13.1**	**17.1**	**10.8**	**14.1**	**9.2**	**12.1**	**14.6**	**18.7**	**21.8**	**30.0**
Hyperion	**13.0**	**17.7**	**10.8**	**14.6**	**9.2**	**12.5**	**8.1**	**11.0**	**11.7**	**14.2**	**22.9**	**30.0**
Hyperion	**10.0**	**15.0**	**8.4**	**11.6**	**7.1**	**9.8**	**6.1**	**8.7**	**9.1**	**12.0**	**22.4**	**30.0**
Hyperion	**8.0**	**10.7**	**6.0**	**8.6**	**5.0**	**7.1**	**4.3**	**6.1**	**6.9**	**9.3**	**21.8**	**30.0**
Hyperion	**5.0**	**6.5**	**4.0**	**5.4**	**3.2**	**4.5**	**2.6**	**3.9**	**4.3**	**5.8**	**22.5**	**30.0**

* Baader 2" eyepiece filter with a height of 8 mm. Yellow column of the table: focal length, Light-Grey column: diameter of the field stop
** non variable focal length

Hyperion eyepiece with built-in 2" eyepiece filter (e.g. Infrared-blocking-filter # 2459210 A)

A variety of additional Hyperion focal lengths can be obtained at very moderate prices by using our 2" finetuning extension rings 14mm and 28mm, or even our 2" eyepiece filters. Thus an eyepiece of 5 mm focal length can be converted into one of 2.6 mm focal length – without loss of sharpness – above all, because no additional lenses are introduced into the beam, which is unavoidable when using a Barlow lens.

For marginal cost such experimentation is possible. You will discover how much your telescope can achieve, exceeding the recommended range of magnification without an additional Barlow lens. You will experience surprising results especially with refractors. With real apochromats the usable exit pupil may be considerably smaller than the literature recommends!

Hyperion eyepiece with 1¼" barrel unscrewed

Finetuning 2" extension ring 28 mm # 2958228

Finetuning 2" extension ring 14 mm # 2958214

2" stop ring with captive brass locking ring and two locking screws # 2958027

Front Hyperion lens element, built into the 1¼" barrel.

Hyperion eyepiece

2" stop ring #2958027

Finetuning ring 14 mm #2958214

1¼" Hyperion barrel with built-in negative lens group

The M48 filter thread is located here!

To remove the first group of lenses, all Hyperion eyepieces must only be opened here (exception 24 mm).

Disassembling the eyepiece elsewhere will void the warranty!

Combination of the Hyperion eyepiece and the 14 mm finetuning ring as well as the 2" stop ring

The stop ring prevents the eyepiece barrel from hitting the mirror star diagonal or prism.

Adaptation of Hyperion eyepieces onto Zeiss Diascope spotting scope

Hyperion eyepiece used as Diascope-camera adapter – an excellent substitute for much more expensive Zeiss Diascope Photoadapter

Video-camera, e.g. Sony HDV

Hyperion DT-ring SP 54 / M 37 # 2958037

Hyperion extension DT-ring 11 mm SP 54i / SP 54 a # 2958090

Hyperion eyepiece

1¼" Baader Diascope bayonet-adapter # 2454500 with built-in captive brass locking ring – slipped over and fastened onto the chromium-plated eyepiece barrel

Carl Zeiss Diascope 85 T*FL

www.hyperion-eyepieces.com

Visual Observation:

The Hyperion 21-/17-13-/8 mm eyepieces may be adapted to the Zeiss spotting scope with the aid of a bayonet-adapter #2454500

... and if everything fails...

... for instance – if you want to use a small digital camera without lens thread for afocal projection-photography... why not use our

Baader-Microstage II Digiscoping Adapter (#2450330) – it will solve all adaptation problems!

The Baader Microstage II Digiscoping Adapter enables camera adaptation onto almost any telescope, spotting scope and many binoculars.

The camera support arm rotates to the side for visual aiming (with ClickStop action!). The camera remains completely adjusted and is ready for shooting the image when the support arm is clicked back into working position.

The whole family of Hyperion 68° eyepieces:

5 mm	8 mm	10 mm	13 mm	17 mm	21 mm	24 mm
#2454605	#2454608	#2454610	#2454613	#2454617	#2454621	#2454624

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Authorized Hyperion Dealer:

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We reserve all rights.

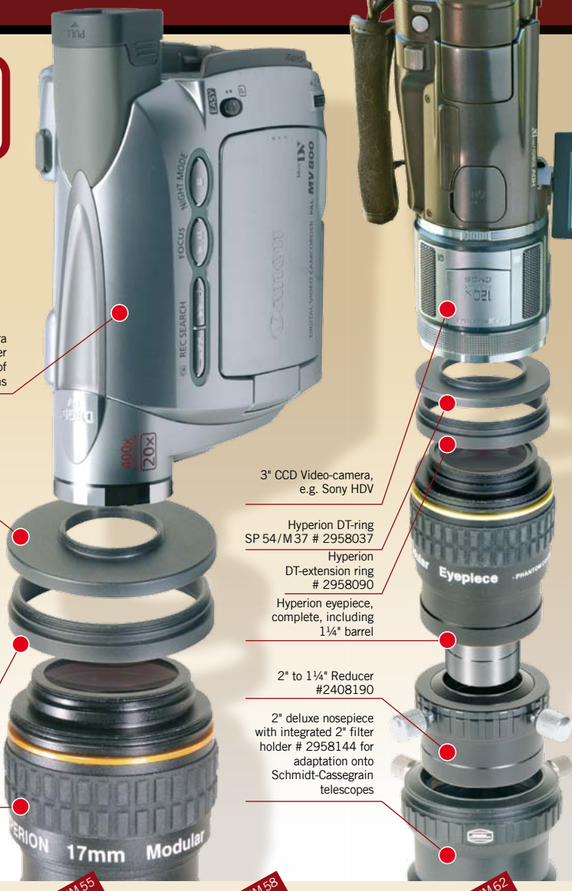
Hyperion eyepieces classical eyepiece projection

M43/T-2 adapter ring # 2958080 fits the smaller M43 system thread of the Hyperion eyepiece. Thus every Hyperion eyepiece can be used as a classical projection eyepiece. The whole range of adapter rings of our Baader Astro T-2 System® for moon- and planetary photography is available for this purpose. With eyepieces of 5mm and 8mm focal length, highest projection magnifications are easily attained.

Using SP 54 connecting rings, the objective of the camera and the Hyperion eyepiece may be connected with a minimum of separation distance.

All adaptation requires careful handling. Before connecting the eyepiece tightly to the camera, please make sure that the lens surface of the camera lens is not touched or scratched by any part of the eyepiece.

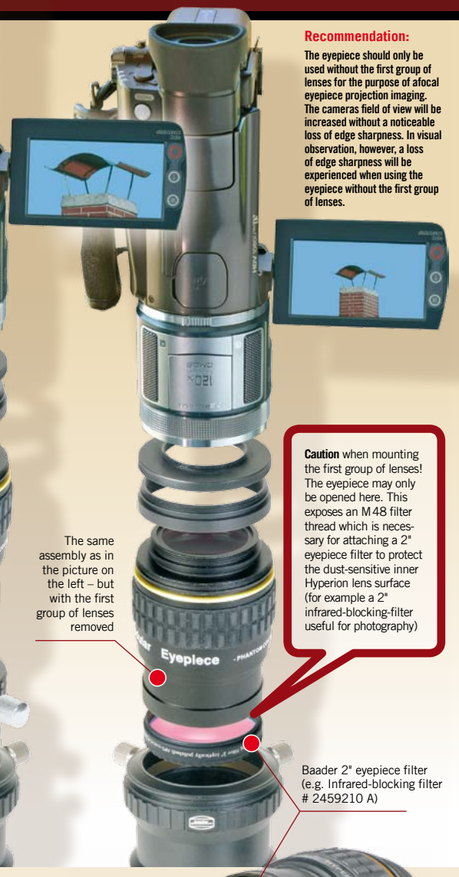
Hyperion eyepieces afocal projection with DSLR-cameras



Hyperion eyepieces afocal projection with video-cameras

Recommendation:

The eyepiece should only be used without the first group of lenses for the purpose of afocal eyepiece projection imaging. The cameras field of view will be increased without a noticeable loss of edge sharpness. In visual observation, however, a loss of edge sharpness will be experienced when using the eyepiece without the first group of lenses.



Caution when mounting the first group of lenses! The eyepiece may only be opened here. This exposes an M 48 filter thread which is necessary for attaching a 2" eyepiece filter to protect the dust-sensitive inner Hyperion lens surface (for example a 2" infrared-blocking-filter useful for photography)

Baader 2" eyepiece filter (e.g. Infrared-blocking filter # 2459210 A)

M43/T-2 Adapter # 2958080

For adapting to the Astro T-2 System®

Adapter system SP 54 –for afocal Projection:

The Hyperion DT-rings SP 54 are optimized to provide the shortest possible distance between the eye lens of the eyepiece and the digital camera lens. Only in this way a fully illuminated photographic field is possible without vignetting

One adjustment spacer ring made of hard plastic for the SP 54 thread is part of each Hyperion DT-ring free of charge. With these spacer rings (each ring has a thickness of only 1 mm), differences in mechanical heights may be adjusted, to be able to adapt the camera front lens as close as possible, without having to use the 11 mm extension ring (# 2958090). Caution when mounting the camera! Camera-front lenses may be too close to the first lens of the Hyperion eyepiece only by a tenth of a millimeter. When mounting the Hyperion-eyepiece onto any camera-front-lens, always proceed with the greatest care, possibly using the additional spacer ring.

Please consult our Astro-accessory pricelist to find further adapter rings, including the Astro T-2 System®.