

BORG
oasis studio

TOMY
Dream Energy

BORG

SERIES 2004

mini BORG45ED,50,60 BORG50ED,77,100,76ED,101ED,100F4,101EDF4,125EDF6.4



Photo : Comet Hale-Bopp
BORG125EDF4 Toru Minowa
Photo : H-2A Rocket
BORG76ED Kazuhisa Sasaki



Photo: Sosuke Yamauchi

SWII Set Series: Compact size, sharp images

BORG SWII telescope sets offer the best choices for a starter system

High performance



Shown with optional tripod stabilizer 3308.

■ 50ED SWII Set [0050]

The most compact system BORG makes, this telescope set provides sharp, detailed images with its high-performance 50mm aperture ED APO objective. Can be used as a secondary scope. 52mm filter thread in front of objective allows quick and easy setup for solar viewing. The telescope can be upgraded with a larger or ED APO objective lens.

Aperture	50mm
Focal length	500mm F10
Objective	ED apochromat, 2 elements in 2 groups, fully multicoated
Mount type	Fork mount on tripod (570-950mm high)
Total weight	4.2kg (9.25lbs)
OTA length	555mm
System height	700-1280mm
Accessories	H-50 [4050], SWK22 [4022], WO13.5 [4013], 2.2x barlow lens [4603], 2-piece extension tube [4604], turret holder [1401]
Magnification	10-151x (using supplied accessories)
Filter thread	52mm in front of objective and at eyepiece holder

Eco-BORG



Shown with optional tripod stabilizer 3308.

■ 77Ach SWII Set [0070]

NEW

This compact achromat system is the best choice for beginning astronomers. The newly designed achromat, made of the new Eco-glassTM, offers improved optical performance over the previous 76Ach lens. The telescope can be upgraded with a larger or ED APO objective lens.

Aperture	77mm
Focal length	500mm F6.5
Objective	Achromat, 2 elements in 1 group, fully coated
Mount type	Fork mount on tripod (570-950mm high)
Total weight	4.4kg (9.7lbs)
OTA length	540mm
System height	700-1280mm
Accessories	H-50 [4050], SWK22 [4022], WO13.5 [4013], 2.2x barlow lens [4603], 2-piece extension tube [4604], turret holder [1401]
Magnification	10-151x (using supplied accessories)
Filter thread	77mm and 82mm in front of objective, 52mm at eyepiece holder

TM Unlike traditional glass, environmentally friendly Eco-glass contains no arsenic or lead, and is slightly lighter in weight. It also improves visual performance and maintains good optical performance with existing BORG imaging correctors.

Accessories for SWII Series



A: 31.7 Sleeve, M35.4 P1 Female
B: 50.8 Sleeve

■ Erecting Prism [4801]

Innovative in-line erecting prism for right-side-up images. Inserts into 2" rear opening of scopes and accepts 1-1/4" accessories.

■ Tripod Stabilizer [3308]

Improves tripod stability and acts as an accessory tray during observing.



■ Carrying Case P [5403]

Holds all parts for SWII sets. Two compartments for tripod and optical tube assembly. 61cm long.





Photo: Sosuke Yamaguchi

High-resolution scope



Shown with optional tripod stabilizer 3308.

■ 76ED SWII Set [0581]

BORG's most popular 76ED system, this easy-to-handle, versatile, high-performance scope is the most compact 3" apochromat refractor in its class. ED apochromat shows fine surface details on Jupiter and Saturn. Low weight—no counterweight needed. Easily removed OTA can be used as a main scope, guide scope, or imaging scope. Upgradable to 101ED.

Aperture	76mm
Focal length	500mm F6.6
Objective	ED apochromat, 2 elements in 2 groups, fully multic coated
Mount type	Fork mount on tripod (570-950mm high)
Total weight	4.4kg (9.7lbs)
OTA length	540mm
System height	700-1280mm
Accessories	H-50 [4050], SWK22 [4022], WO13.5 [4013], 2.2x barlow lens [4603], 2-piece extension tube [4604], turret holder [1401]
Magnification	10-151x (using supplied accessories)
Filter thread	77mm and 82mm in front of objective, 52mm at eyepiece holder

Economical 4" scope



Shown with optional tripod stabilizer 3308.

■ 100 SWII Set [0014]

Compact, complete 4" system. Good for deep-sky viewing. Quality achromat minimizes chromatic aberration below 100x (at higher power, aberration is visible at field edge only).

Aperture	100mm
Focal length	640mm F6.4
Objective	Achromat, 2 elements in 1 group, fully coated
Mount type	Fork mount on tripod (570-950mm high)
Total weight	5.2kg (11.4lbs)
OTA length	685mm
System height	700-1280mm
Accessories	H-50 [4050], SWK22 [4022], WO13.5 [4013], 2.2x barlow lens [4603], 2-piece extension tube [4604], turret holder [1401]
Magnification	13-193x (using supplied accessories)
Filter thread	52mm at eyepiece holder

Main Features of Borg SWII Series

1. Interchangeable Objective Lenses

BORG's modular design lets you update the objective lens independently of the tube assembly. This maximizes the use of parts and performance while minimizing component count.

2. Turret Eyepiece Holder

This turret lets you switch quickly between eyepieces so that objects always stay in the field of view. Holds up to four eyepieces. You can also view in standard configuration, i.e., one eyepiece at a time.

3. Built-in Finder

The turret also replaces a finder scope — just flip up the turret



mirror for straight-through viewing and insert a low-power eyepiece such as BORG's H-50 [4050], for a bright, wide-field view. This shortens setup time (no finder scope to collimate) and guarantees dead-on pointing accuracy.

4. Helical Focuser

Helical focusers, usually supplied only with premium scopes, are standard equipment in all BORG scope sets. They are very useful for fine focusing in imaging or high-power viewing. (BORG scopes use a drawtube to provide rough focusing.)



Top-of-the-line SWII set



Shown with optional tripod stabilizer 330B.

101ED SWII Set [0514]

NEW

Newly designed 101ED apochromat set achieves better visual performance than previous 100ED without additional weight or size. The objective lens, made of environmentally-friendly Eco-glass⁽¹⁾, provides sharp images for digital photography.

Aperture	101mm
Focal length	640mm F6.3
Objective	ED apochromat, 2 elements in 2 groups, fully multicoated
Mount type	Fork mount on tripod (570-950mm high)
Total weight	5.3kg (11.7lbs)
OTA length	685mm
System height	700-1280mm
Accessories	H-50 [4050], SWK22 [4022], WO13.5 [4013], 2.2x barlow lens [4603], 2-piece extension tube [4604], turret holder [1401]
Magnification	13-193x (using supplied accessories)
Filter thread	52mm at eyepiece holder

⁽¹⁾ Unlike traditional glass, environmentally friendly Eco-glass contains no arsenic or lead, and is slightly lighter in weight. It also improves visual performance and maintains good optical performance with existing BORG imaging correctors.



Photo: Ikuo Takamura



Photo: Sosuke Yamauchi

5. Lightweight and Easy to Use

So easy to carry – complete sets weight just 4.2kg to 5.3kg (9.2 to 11.7 lbs). Quick setup for increased viewing time. Fork mount eliminates counterweight and switches easily between alt-az mode and equatorial mode.

6. Made in Japan for Top Quality

While most electronics are produced in other Asian countries, BORG products come from Japan. We strive to provide high-quality products at reasonable prices to our



customers.

7. Wide Variety of Accessories

The SWII sets are compatible with most of BORG's extensive selection of accessories. These accessories allow you to reconfigure your scope for use in different applications. The possibilities are limited only by your imagination!





Photo: mini BORG45ED
Noboru Nakagawa

Base system for Series 80 telescopes



Shown with optional 1 1/4" holder

■ Series 80 Tube Assembly [6000]

*Starting with this basic tube assembly, you can create your own telescope by adding a Series 80 objective, eyepieces, and mount. Components included in this assembly are shown and listed under "Modularity" on page 6 (see below).

Total weight 1.2kg (2.6lbs)
Total length 320mm
Filter thread 52mm at eyepiece holder



Interchangeable objective assembly

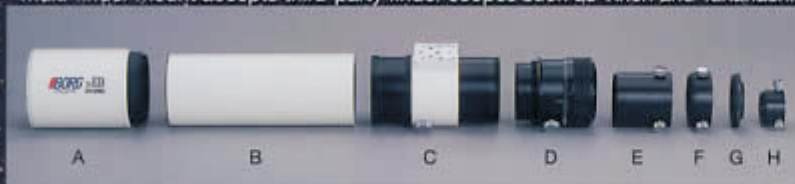
- BORG is the first company to provide interchangeable objective assemblies, allowing you to upgrade the objective lens only
- Photo-visual optical design
- Retractable objective hood for maximum compactness
- Allows you to carry and store only objective for careful transportation and storage
- Star test inspection for all lenses

mini BORG Series P12,13,14



Modularity

- Full compatibility between 50ED and 101ED
- Allows you to customize your own system
- Minimizes cost in case of damage – only the damaged part needs to be replaced
- Multi-finder mount accepts third-party finder scopes such as Vixen and Takahashi



A : 76ED objective assembly [2576] (sold separately)

B : 80mm dia. 206mm tube [7600]

C : Draw tube holder [7749]

D : Helical focuser M [7835]

E : 2" eyepiece holder S [7508]

F : 2" eyepiece holder L [7509]

G : M57 to M36.4AD [7522]

H : 1-1/4" eyepiece holder [7317] (sold separately)

These components are standard parts in the Series 80 Tube Assembly [6000]



[7835]+[7000]+[5003]+Nikon FM

Digi-BORG

- Precise helical focuser with indexing
- Works as telephoto lens when used with SLR cameras
- Enjoy "digi-scoping" and "digi-BORG" with compact digital still camera
- Allows you to attach a digital video camera



[7835]+[7509]+[7410]+[7405]+Sony TRV 900



[7835]+[7509]+[7410]+[7401]+Nikon COOLPIX 990

Wide variety of Accessories

- Over 150 parts are available
- Enhance capabilities of all BORG and many third-party telescopes
- Allow individual telescope set components to be purchased separately



[7315]



[7410]



[7200]



Photo: BORG50ED
Ikuo Takamura

Series 80 OTAs and Objectives

Most compact, high-performance lens



Shown with optional finder and 1-1/4" holder

■ 50ED OTA [6050]

The recommended entry model, the 50ED has the smallest objective among the Series 80 family. The F10 ratio and tube larger than the objective provide high contrast and sharp images. Rated highly by visual observers. This compact, high-performance scope is suitable for the moon, double stars, and planets, and also makes an excellent choice for solar viewing. Upgradable to 76ED, 101ED, etc.

Aperture	50mm
Focal length	500mm F10
Objective	ED apochromat, 2 elements in 2 groups, fully multicoated
Tube diameter	80mm
OTA length	395mm
Total weight	1.5kg (3.3lbs)
Filter thread	52mm in front of objective and in 2" eyepiece holder

the "Little Giant"



ED Element

■ 50ED Objective [2550]

F10 ED element yields textbook-perfect diffraction disks around stars. An ideal choice for 40mm H-alpha solar filters. Front and rear caps included.

Aperture	50mm
Focal length	500mm F10
Objective	ED apochromat, 2 elements in 2 groups, fully multicoated
Total length	80mm
Total weight	220g (0.5lbs)
Filter thread	52mm

Eco-BORG, Eco-priced

NEW



Shown with optional finder and 1-1/4" holder

■ 77Ach OTA [6177]

This scope's newly designed achromat, using environmentally friendly Eco-glass⁽¹⁾, features a spot size less than 10 microns between 630nm and the green region. Both chromatic and spherical aberration are improved over the 76Ach. The 77Ach supersedes the 76Ach as BORG's entry-level Series 80 product.

Aperture	77mm
Focal length	500mm F6.5
Objective	Achromat, 2 elements in 1 group, fully coated
Tube diameter	80mm
OTA length	380mm
Total weight	1.6kg (3.5lbs)
Filter thread	77mm/82mm in front of objective, 52mm in 2" eyepiece holder

High-performance achromat



■ 77Ach Objective [2077] NEW

This objective provides good visual performance. Small degree of spherical aberration at C-line (H-alpha) is optimized for H-alpha narrowband filter. Made of environmentally friendly Eco-glass⁽¹⁾. Front and rear caps included.

Aperture	77mm
Focal length	500mm F6.5
Objective	Achromat, 2 elements in 1 group, fully coated
Total length	110mm (hood retracted)
Total weight	450g (1.0lbs)
Filter thread	77mm

Best selling OTA



Shown with optional finder and 1-1/4" holder

■ 76ED OTA [6077]

BORG's best selling OTA. ED element allows high-power observing of the moon, planets, and double stars. BORG's photo-visual design ensures high-quality images when used with a reducer and flattener, etc. 77mm and 82mm thread in front of objective for H-alpha filters. Makes a great guide scope.

Aperture	76mm
Focal length	500mm F6.6
Objective	ED apochromat, 2 elements in 2 groups, fully multicoated
Tube diameter	80mm
OTA length	380mm
Total weight	1.7kg (3.7lbs)
Filter thread	77mm/82mm in front of objective, 52mm in 2" eyepiece holder

BORG's standard objective lens



ED Element

■ 76ED Objective [2576]

Most popular BORG objective lens. ED element provides sharp images. Front and rear caps included.

Aperture	76mm
Focal length	500mm F6.6
Objective	ED apochromat, 2 elements in 2 groups, fully multicoated
Total length	110mm (hood retracted)
Total weight	500g (1.1lbs)
Filter thread	77mm

⁽¹⁾ Unlike traditional glass, environmentally friendly Eco-glass contains no arsenic or lead, and is slightly lighter in weight. It also improves visual performance and maintains good optical performance with existing BORG imaging correctors.



Photo: BORG100ED
Hirohisa Matsumoto

Series 80 OTAs and Objectives

A true high-quality achromat



Shown with optional finder and 1-1/4" holder

■ 100Ach OTA [6100]

Suitable for deep-sky observing. Impressive wide-field views at lower powers. Chromatic aberration and image sharpness are not a concern – if you've been looking for the perfect compact, deep-sky scope, this is it!

Aperture	100mm
Focal length	640mm F6.4
Objective	Achromat, 2 elements in 1 group, fully coated
Tube diameter	80mm
OTA length	530mm
Total weight	2.3kg (5.1 lbs)
Filter thread	52mm in 2" eyepiece holder

Quality achromat



■ 100Ach Objective [2010]

Gives pleasing achromatic views at low power. Suitable for deep-sky objects such as clusters and nebulae. Hood retracts for maximum compactness. Includes a storage bag, and front and rear caps.

Aperture	100mm
Focal length	640mm F6.4
Objective	Achromat, 2 elements in 1 group, fully coated
Total length	210mm (hood retracted)
Total weight	1050g (2.3 lbs)

High-end Series 80 OTA



Shown with optional finder and 1-1/4" holder

■ 101ED OTA [6110]

This scope's objective is a redesigned version of the 100ED that takes advantage of the new Eco-glass. This material improves visual performance, but still provides high image quality when used with any of BORG's existing imaging correctors. The 101ED supersedes the 100ED as BORG's premium 4-inch scope. Upgradable to Series 115.

Aperture	101mm
Focal length	640mm F6.3
Objective	ED apochromat, 2 elements in 2 groups, fully multicoated
Tube diameter	80mm
OTA length	530mm
Total weight	2.3kg (5.1 lbs)
Filter thread	52mm in 2" eyepiece holder

ED Eco-BORG



■ 101ED Objective [2101]

Gives an extremely sharp image of less than 2-4 microns between red and green wavelengths. Excellent for high-power planetary viewing. High performance imaging when used with BORG corrector lenses. Made of Eco-glass. Hood retracts for maximum compactness. Includes a storage bag, and front and rear caps.

Aperture	101mm
Focal length	640mm F6.3
Objective	ED apochromat, 2 elements in 2 groups, fully multicoated
Total length	210mm (hood retracted)
Total weight	1100g (2.4 lbs)

¹⁰ Unlike traditional glass, environmentally friendly Eco-glass contains no arsenic or lead, and is slightly lighter in weight. It also improves visual performance and maintains good optical performance with existing BORG imaging correctors.

100/101ED F4/F6.4 Series

Photo: BORG100AchF4PH Atsuyuki Hiroi

Big, Bright, Image Circle with Even Illumination



Camera body and mount adapter are purchased separately.

101EDF4/100Ach F4 Ray-trace diagram



115mm Tube/101mm Objective Scope



Camera body and mount adapter are purchased separately.

Medium-Format Photographic Package 101EDF6.4PH [8003]

NEW

Comes with medium-format focuser [8167] allowing you to shoot full format with Pentax 6x7 cameras.

101ED Visual Package 101EDF6.4VI [8006]

NEW

115mm diameter tube for improved image contrast over Series 80. Optional focusers available include [7835], [7837] and [FTF-15] (Feather Touch focuser). User-installable visual baffles such as [4053] or [4054] are also available as options.

101ED Tube Set 115PH [8001]

Series 115 photographic upgrade set. Lets you upgrade BORG 100Ach, 100ED, and 101ED lenses to the [8003] set. Includes hood [8334] with cap, 115mm dia. 335mm long tube [8335], finder base tube [8750] and medium-format helical focuser [8167].

101ED Tube Set 115VI [8002]

Series 115 visual upgrade set. Lets you upgrade BORG100Ach, 100ED, and 101ED lenses to the [8006] set. Includes hood [8334] with cap, 115mm dia. 335mm long tube [8335], finder base tube [8750] and visual drawtube [8317].

Largest Image Circle in its Class 100AchF4PH [8104]

We paired our 100F4 achromat and our super reducer to yield this achromatic astrograph with superb images over the entire 6x7 frame. Image quality is much better than one would expect of a typical achromat. The super reducer minimizes chromatic aberration on the film. The main advantage is the extremely flat illumination and 110mm wide image circle (larger than that of the 100ED/101ED).

F4 Eco-BORG 101EDF4PH [8112]

NEW

The combination of our new 101ED objective and super reducer achieves very sharp images over the entire 6x7 frame with a 108mm wide image circle. The best scope for the upcoming double comet event of 2004! Can also be changed to F6.3 configuration or Series 80 version.

F4 Upgrade Set A [8106]

This package allows users of our 100Ach, 100ED and 101ED objective lenses to reconfigure the scopes as F4 systems. Each set comes with a 115mm dia. hood [8334], 115mm dia., 149mm long tube [8149], finder base tube [8750], medium-format focuser [8167], and super reducer 6x7s [8044].

Model part #	101EDF4PH [8112]	100AchF4PH [8104]	101EDF6.4PH [8003]	101EDF6.4VI [8006]
Lens configuration	6 in 6 groups (One ED)	6 in 5 groups	2 in 2 groups ED apochromat	2 in 2 groups ED apochromat
Aperture (mm)	101	100	101	101
Focal length (mm)	400	400	640	640
F ratio	4	4	6.3	6.3
Image circle dia (mm)	108	110	100 with [8670]	100 with [8670]
Tube dia (mm)	115	115	115	115
Length (mm)	395	395	520	430
Weight (kg)	3.3	3.2	2.9	2.5
Parts included	Hood and cap, 149mm long tube, finder base tube, medium-format focuser, super reducer 6x7s	Hood and cap, 335mm long tube, finder base tube, medium-format focuser	Hood and cap, 335mm long tube, finder base tube, visual drawtube	Hood and cap, 335mm long tube, finder base tube, visual drawtube

125ED F6.4 Series

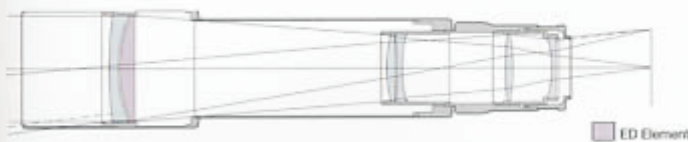
Photo: BORG125EDF4 Koichi Hakone

Large Astrograph 125mm F4



Camera body and mount adapter are purchased separately.

125EDF4 Ray-trace Diagram



800mm Focal Length System for 6x7 Photography



Camera body and mount adapter are purchased separately.

125EDF6.4PH [8125]

A reasonably priced 800mm focal length system for 6x7 photography. Very lightweight OTA (4.3kg/9.5 lbs) can be used with most mounts. 83mm internal diameter focuser with 75-micron indexing and two set screws for superb fine focus control. When used with optional multi-flattener 6x7 [8670], yields 95mm image circle with 75% illumination at 88mm diameter, 28mm spot size at 100mm diameter will satisfy the most demanding astrophotographer. Modular design for high portability is ideal for overseas travel.

125F6.4 Visual System



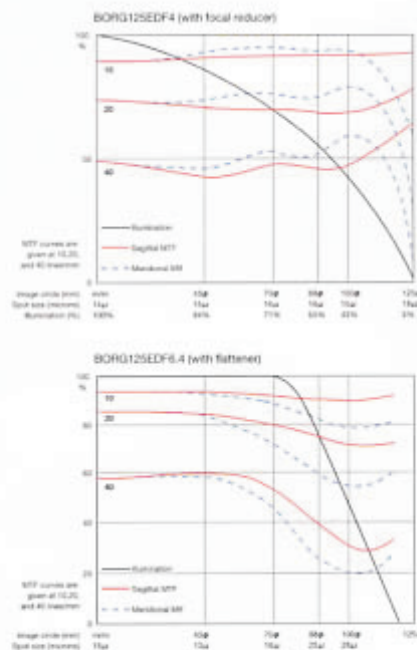
[7750], [7835], [7364] and [7317] are purchased separately.

125EDF6.4VI [8126]

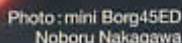
BORG's photo-visual design makes the 125EDF6.4 a great visual scope too. Image contrast can be improved with optional visual baffle [4051]. Light weight (3.9kg/8.6 lbs) and modular system design allows use with a simple altazimuth mount for quick setup and viewing.

125EDF4/6.4PH [8464]

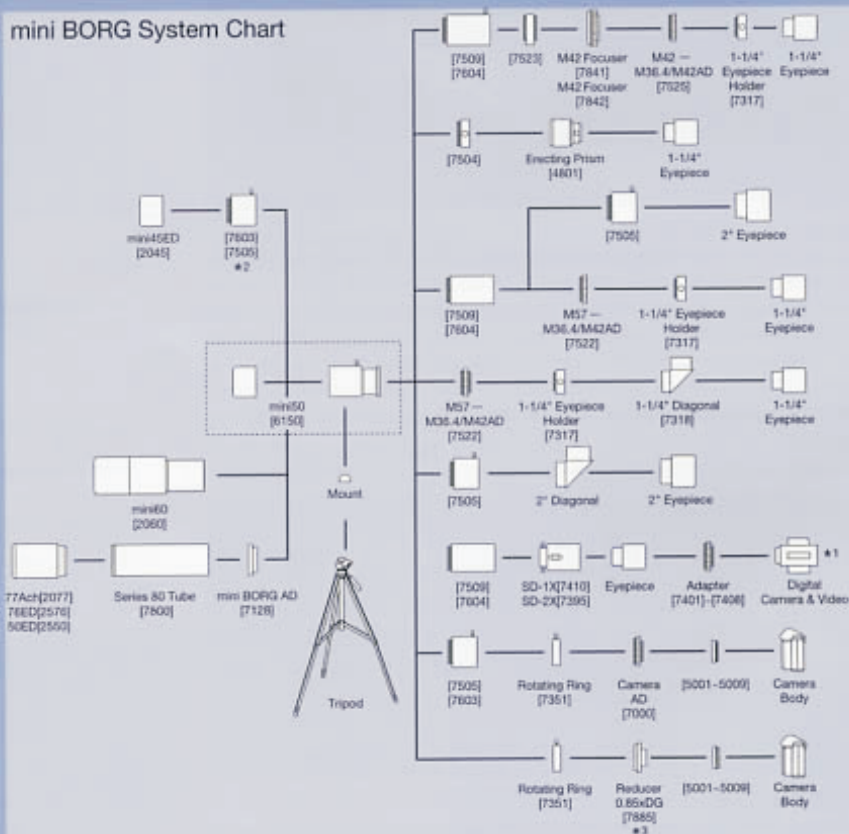
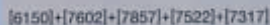
F4/F6.4 high-quality imaging and F6.4 visual use in one reasonably priced package. You configure the system for F4 (500mm) or F6.4 (800mm) depending on the object being imaged/viewed. 78mm F4 super reducer lens provides good illumination to edge of image. Yields 83mm image circle even at F4. With total weight of just 4.5kg (9.9lbs), this can be mounted on a Takahashi EM10 mount. Modular design lets you carry all parts individually.



Model part #	125EDF4/6.4PH [8464]	125EDF6.4PH [8125]	125EDF6.4VI [8126]
Lens configuration	6 in 6 groups (One ED)	2 in 2 groups ED apochromat	
Aperture (mm)		125	
Focal length (mm)	500/800		800
F ratio	4/6.4		6.4
Image circle dia (mm)	F4:83 F6.4:95	95 (w/multiflattenner and 6x7 format)	
Tube dia (mm)		115	
Length in mm (w/hood)	F4:530 (610)	700 (780)	610 (690)
Weight (kg)	F4:4.5	4.3	3.9
Parts included	Hood and cap, 208/380mm long tubes, finder base tube, medium-format focuser, super reducer 6x7	Hood and cap, 380mm long tube, finder base tube, medium-format focuser	Hood and cap, 380mm long tube, finder base tube, visual drawtube



If you've ever wanted a telescope that can go anywhere and be ready for use on a moment's notice, this is it! mini BORG scopes are little in size but big on optical performance. Now featuring the new mini 60 in addition to the 50 and 45ED. Which mini BORG will you choose?



- ★1 Upside down image in this configuration.
★2 May be attached behind the tube holder.
★3 Does not work with 50ED, 76ED and 77Ach.



Photo: mini BORG50
Kenichi Moriyama

mini BORG50 The Original Mini

The Fun mini BORG



[7522] and [7314] are purchased separately.

mini BORG50 Ray-trace diagram



■ mini BORG50 [6150]

Aperture	50mm
Focal length	250mm F5
Objective	Achromat, 2 elements 1 group, fully coated
Back focus	70-115mm
Outer tube diameter	60mm
Length	168-215mm
Weight	340g
Includes mounting block	
Drawtube focus travel	45mm
Filter thread	52mm in front of objective and hood
Rear thread	M57/P0.75

Features:

- Spotting scope (w/optional erecting prism [4801])
- Finder scope (w/optional finder bracket [7751])
- Guide scope
- 250mm F5 telephoto lens
- M57 thread accepts most BORG accessories
- 6x magnification with 2" 40mm eyepiece
- Easily attaches to H-alpha solar filter
- Take eyepiece projection shots with 7410



■ Sample Configuration 1

mini BORG50 [6150]
M57 to M36.4AD [7364]
1-1/4" eyepiece holder [7317]
Basic system with drawtube focuser



■ Sample Configuration 2

mini BORG50 [6150]
M57 to M42AD [7523]
M42 helical focuser [7842]
M42 to M36.4/42AD [7525]
1-1/4" eyepiece holder [7317]
Includes helical focuser for fine focusing
control



■ Sample Configuration 3

mini BORG50 [6150]
M57 to M42AD [7523]
M42 helical focuser [7842]
M42 to M36.4/42AD [7525]
1-1/4" eyepiece holder [7317]
Fork mount [3101]
Universal attachment block [3102]
Complete compact scope set, includes mount
with slowmotion controls for tracking

■ mini BORG Drawtube [6160]

Length 123mm to 168mm
Weight 210g
Front thread M57/P0.75 male
Rear thread M57/P0.75 female
Includes mounting bracket (1/4"-20 thread hole)



■ mini BORG50 Objective [2050]

Aperture	50mm
Focal Length	250mm F5
Objective	Achromat, 2 elements in 1 group, fully coated
Length	52mm
Weight	110g
Filter thread	52mm in front of objective and hood
Rear thread	M57/P0.75 female





Photo: mini BORG45ED
Miki Takeda

mini BORG60 The "Giant" Mini

A mini BORG with bright images



[7523], [7542], [7525] and [7317] are purchased separately.

mini BORG60 Ray-trace diagram



★ Below : with mini BORG Reducer [7885]

■ mini BORG60 [6161]

Aperture	60mm
Focal length	325mm F5.4
Objective	Achromat, 2 elements in 1 group, fully coated
Back focus	73-118mm
Outer tube diameter	60mm
Length	260-307mm
Weight	450g
Filter thread	62mm filter in front of hood
Rear thread	M57/P0.75 female

Features:

- Same concept as mini BORG50
- 44% brighter than mini BORG50
- Smallest and lightest 60mm aperture scope
- 325mm F5.4 telephoto lens
- For astronomical observing, bird watching and digital photography

NEW



■ Sample Configuration 1

mini BORG60 [6161]
2" eyepiece holder L [7509]
M57 to M36.4AD [7364]
1-1/4" eyepiece holder [7317]
Basic set with drawtube focuser



■ Sample Configuration 2

mini BORG60 [6161]
M57 to M42AD [7523]
M42 helical focuser [7842]
M42 to M36.4/42AD [7525]
1-1/4" eyepiece holder [7317]
Includes helical focuser for fine focusing control



■ Sample Configuration 3

mini BORG60 [6161]
M57 to M42AD [7523]
M42 helical focuser [7842]
M42 to M36.4/42AD [7525]
1-1/4" eyepiece holder [7317]
Fork mount [3101]
Universal attachment block [3102]
Complete compact scope set, includes mount with slow motion controls for tracking

■ mini BORG60 Objective [2060]

Aperture	60mm
Focal Length	325mm F5.4
Objective	Achromat, 2 elements in 1 group, fully coated
Length	145mm
Weight	220g
Filter thread	62mm in front of hood
Rear thread	M57/P0.75 female

This objective lens is all you need to upgrade your mini BORG45ED or mini BORG50 to a mini BORG60. Produces sharp images at magnifications up to 100x.



Photo: mini BORG45ED
Miki Takada

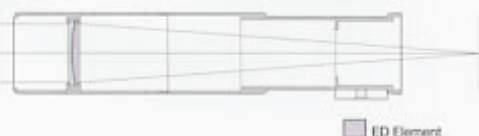
mini BORG45ED The Razor-sharp Mini

Smallest APO in the industry



[7523], [7841], [7525] and [7314] are purchased separately.

mini BORG45ED Ray-trace diagram



■ mini BORG45ED [6145]

Aperture	45ED
Focal length	300mm F6.6
Objective	ED apochromat, 2 elements in 2 groups, fully multicoated
Length	168-215mm
Back focus	120-165mm
Outer tube diameter	60mm
Weight	380g
Filter thread	52mm filter in front of hood and objective
Rear thread	M57/P0.75 female
Includes mounting bracket	

Features:

- World's smallest commercially available APO
- 300mm F6.6 telephoto lens (standard)
- 255mm F5.6 telephoto lens (with optional reducer [7885])
- Great performance at up to 150x magnification
- 50mm more back focus than Mini 50 and 60 allows a wider selection of accessories



■ Sample Configuration 1

mini BORG45ED [6145]
2" holder L [7509]
M57 to M36.4AD [7364]
1-1/4" eyepiece holder [7317]
Basic set with drawtube focuser



■ Sample Configuration 2

mini BORG45ED [6145]
M57 to M42AD [7523]
M42 helical focuser L [7841]
M42 to M36.4/42AD [7525]
1-1/4" eyepiece holder [7317]
Includes helical focuser for fine focusing control



■ Sample Configuration 3

mini BORG45ED [6145]
M57 to M42AD [7523]
M42 helical focuser L [7841]
M42 to M36.4/42AD [7525]
1-1/4" eyepiece holder [7317]
Fork mount [3101]
Universal attachment block [3102]
Complete compact scope set, includes mount with slow motion controls for tracking

■ mini BORG45ED Objective [2045]

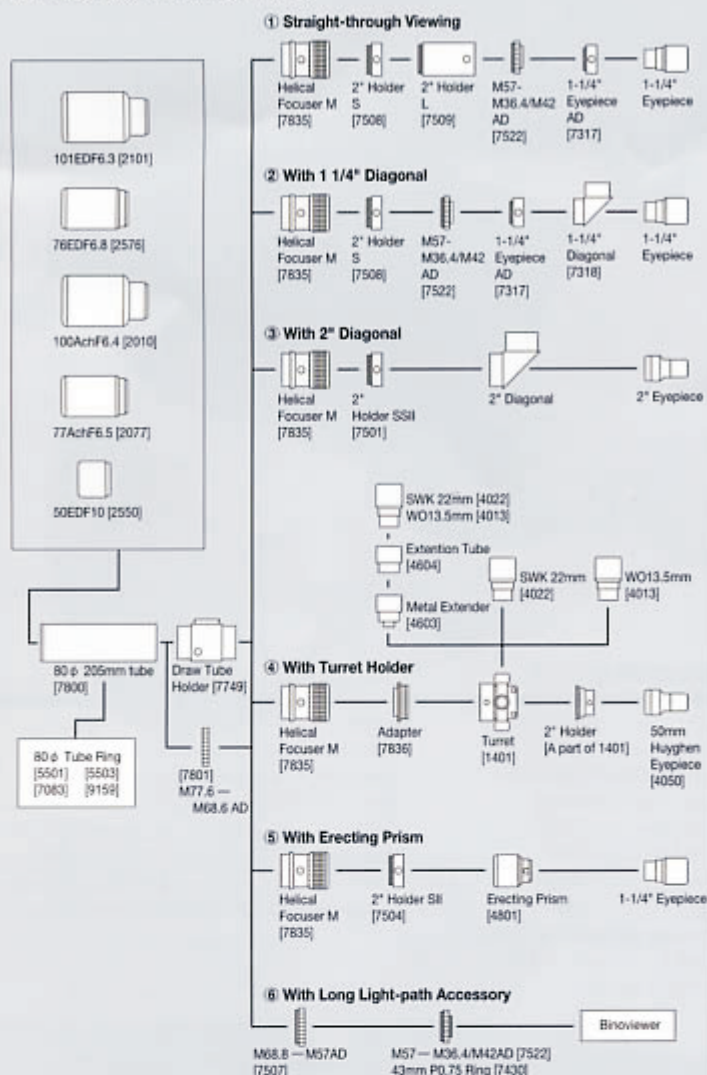
Aperture	45mm
Focal length	300mm F6.6
Objective	Apochromat, 2 elements in 2 groups, fully multicoated
Length	52mm
Weight	110g
Filter thread	52mm in front of hood and objective
Rear thread	M57/P0.75 female

The world's smallest ED objective. Gives very sharp images. Best match with current digital imagers. Versatile – can be used as an imager, guide scope, spotting scope, finder, etc.

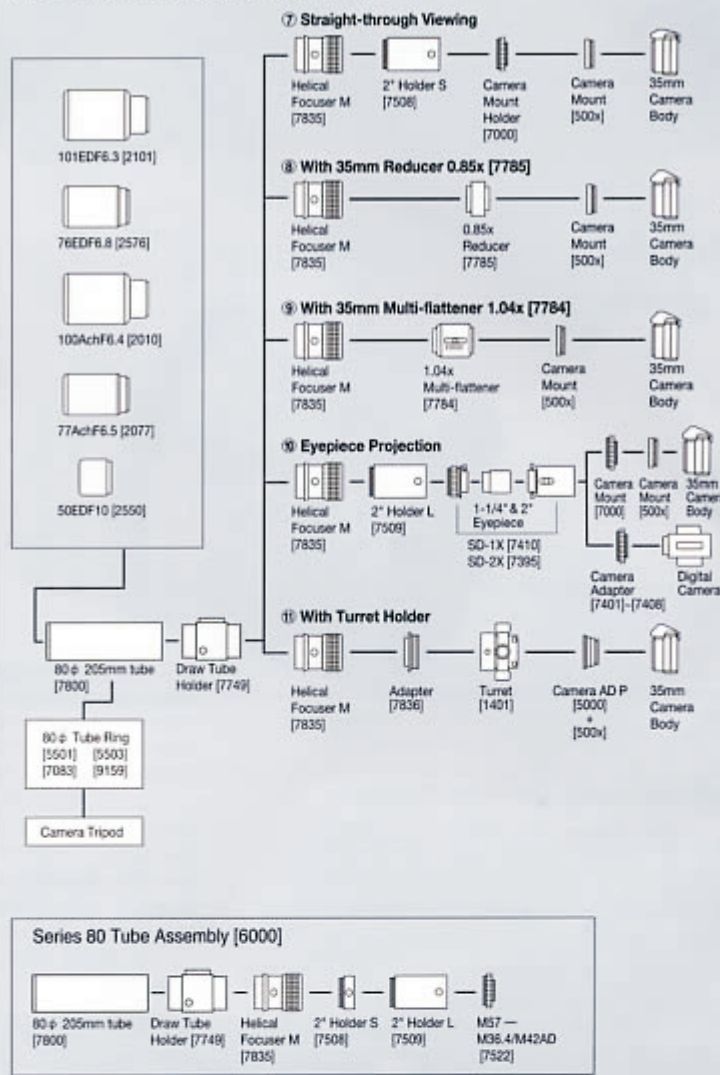


BORG80 ϕ Tube Set System Chart

(A) Visual System Configurations



(B) Photographic System Configurations



BORG Telescopes are designed and manufactured in Japan.

"BORG" comes from a contraction of two Japanese words: * BOENKYO (telescope)

* DOGU (equipment)

This is combined into "BOGU" which becomes "BORG" for the non-Japanese-speaking world. And we also like the fact that "BORG" is a shortening of "cyborg", which is itself a combination of "cybernetic organism" implying that man and machine are working together as one.



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Caution

Do not look directly at the sun through the telescope or its finder. Blindness or permanent eye damage may result. Please read the "Safety Instructions" carefully for proper use. Improper use of the product could lead to bodily injuries or physical damage.

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