



# ED "S" APO REFRACTORS



## Vixen ED 81S, ED103S and ED115S APOs

These are Vixen's top-line APO refractors: made in Japan with new ED "eco-glass" (lead and arsenic free). These scopes have faster focal ratios and a more compact length compared to the prior ED 80S and ED 102S telescopes. In fact, the big ED 115S is shorter than the old ED 102S! The new optics are especially good at suppressing the dispersion of violet light — this avoids halos and blooming around images of bright stars. Coupled with a medium f/7.7 focal ratio, the ED "S" series provide a sharp, color-free image of high contrast for both visual and photographic applications. The big Vixen 60mm drawtube means these refractors can handle the full line of Vixen drawtube accessories. Vixen finishing touches include standard flip-mirror, carry handle, and focus tension/lock.

Works great with any Vixen equatorial mount.

### Telescope Specifications with and without ED 0.67x Focal Reducer

Telescope			Model #	Accessories
Obj. Diam.	F.L. @ f/ratio " with ED 0.67x "	(backfocus) "	OTA Dimensions Length x Tube Diameter x Weight	Finder, E.P. adapter, mounting
<b>ED81SWT OTA SX-Trim</b>			<b>TS-OR-2608</b>	
81mm 3.2"	625mm @ f/7.7	(150mm)	600mm / 23.6" x 90mm x 2.3-kg / 5.1-lb	Dot Finder 2" holder, 1¼" flip mirror w/T-threads tube rings/dovetail plate
	419mm @ f/5.2	(100mm)		
<b>ED103SWT OTA SX-Trim</b>			<b>TS-OR-2609</b>	
103mm 4.1"	795mm @ f/7.7	(150mm)	820mm / 32.3" x 115mm x 3.6-kg / 7.9-lb	7x50mm 2" holder, 1¼" flip mirror w/T-threads tube rings/dovetail plate
	533mm @ f/5.2	(101.4mm)		
<b>ED115SWT OTA SX-Trim</b>			<b>TS-OR-2616</b>	
115mm 4.5"	890mm @ f/7.7	(150mm)	940mm / 37" x 125mm x 4.4-kg / 9.7-lb	7x50mm 2" holder, 1¼" flip mirror w/T-threads tube rings/dovetail plate
	596mm @ f/5.2	(98.2mm)		

### Review of Vixen ED 103S (without reducer)

*The Moon was sharp with no color at all. The contrast was great with Plato and the Alpine Valley showing a wealth of detail as did Copernicus. Out of curiosity, I set the zoom at the 8mm setting and inserted it in a 3x Barlow (that's almost 300x) with no image breakdown on the Moon and I actually felt I could have gone higher.*

— Johnson, Pernel. "Vixen ED103SWT Apochromatic" Astromart.com Reviews. Dec. 15, 2005