

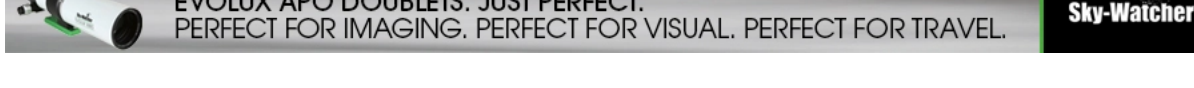


Two Premium Erecting Prism Diagonals Compared: William Optics vs StellaMira

Home > Reviews > Two Premium Erecting Prism Diagonals Compared: William Optics vs StellaMira

By: [Lee Pullen](#) Published: Feb 01, 2023

*A diagonal is an important but easily overlooked component. This review tests two premium erecting prism diagonals: the **William Optics 1.25" 90-deg Erecting Prism Diagonal with Helical Focusing** (MSRP \$91), and **StellaMira 1.25" 90° Erecting Prism Diagonal** (MSRP £69 / \$85). Which is worth your money?*



On the left is a William Optics 1.25" 90-deg Erecting Prism Diagonal with Helical Focusing, and on the right is a StellaMira 1.25" 90° Erecting Prism Diagonal. Credit: Lee Pullen

Regular diagonal or erecting prism?

Two common issues often encountered by beginner stargazers relate to the humble diagonal, an unassuming but vital part of a telescope that connects the optical tube assembly to an eyepiece. Budget diagonals bundled with beginner telescopes can be poor quality, with low reflectivity that manifests as dim views. Also, conventional diagonals – even expensive dielectric models – give flipped-orientation views, which can be confusing for someone starting out in the hobby.

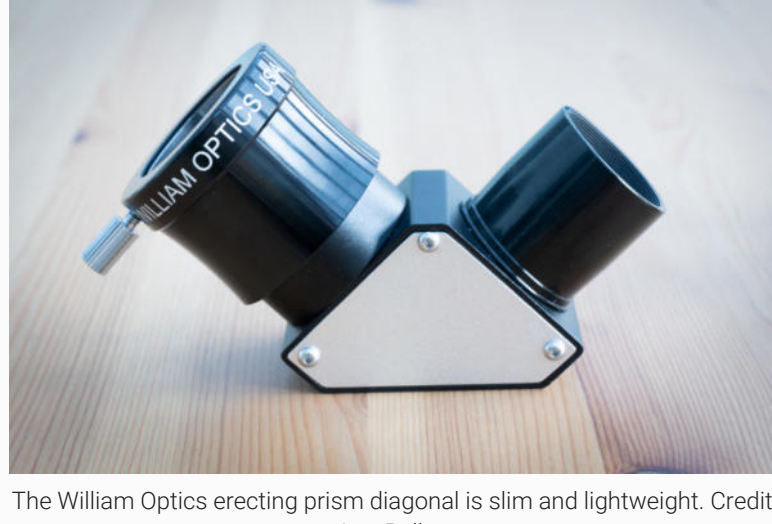
The solution to both these issues is a high-quality erecting prism diagonal. The main plus point of this design is that they give correct up/down and left/right orientation. This is essential for terrestrial observing. For stargazing, it's convenient to skip the mental gymnastics that can come from the flipped views given by regular diagonals.

The main downside is that they produce a diffraction spike when viewing the brightest stars and planets. This appears as a straight stripe of light that goes through the middle of the object, extending quite a long way on either side. Some stargazers find this to be objectionable in the extreme, while for others it's a minor annoyance. The only way to know which camp you fall in is to try one for yourself, perhaps at a star party. While you're there, compare the view through an erecting prism diagonal to a high-quality dielectric diagonal. In principle, the dielectric will offer a slightly brighter view but the two erecting prism diagonals tested here are of such a high quality that this is unlikely to be an issue.

Head-to-head

I was eager to pit two premium erecting prism diagonals – the William Optics 1.25" 90-deg Erecting Prism Diagonal with Helical Focusing, and StellaMira 1.25" 90° Erecting Prism Diagonal – against each other.

The William Optics' body is a bit slimmer and a little lighter, weighing in at 6.45oz (183g) compared to the StellaMira's 7.65oz (217g).



The William Optics erecting prism diagonal is slim and lightweight. Credit: Lee Pullen



StellaMira's offering also has excellent build quality but is a little bigger and heavier. Credit: Lee Pullen

To compare diffraction spikes, I observed intently through both for 30 minutes, concluding that the spikes produced by both diagonals were essentially identical. The StellaMira may have been *slightly* better, but it's honestly hard to say and the difference was marginal at best. Suffice to say, if you've tried one of these erecting prism diagonals and found the spike overly distracting, you won't find any joy with its competitor and will be happier with a conventional diagonal.

The brightness of images viewed through both was also so close that I couldn't make out any difference. So far then, no clear reason to choose one over the other.

The stand-out feature of the William Optics offering is its helical focuser, and it's here that things got really interesting. The function works well; once your eyepiece has been secured into the diagonal, the eyepiece can be rotated to adjust the focus. If your telescope lacks precision focussing control then this is a real boon. However, if you're using a zoom eyepiece then it's actually quite a frustrating feature, as twisting the eyepiece to adjust its focal length also changes the focus.

I did encounter a minor frustration with the StellaMira, the locking thumbscrew sits so close to the eyepiece that when tightened it was *almost* making contact with my Baader Hyperion Universal Zoom Mark IV eyepiece (MSRP \$309, review for AGT [here](#)), with its diameter of 2.09in (5.3cm). This is something to bear in mind if you plan on using particularly chunky eyepieces.



Large eyepieces may come into contact with the StellaMira's thumbscrew. Credit: Lee Pullen.

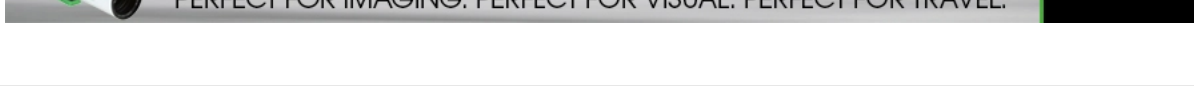
Recommendations

So, which to choose? If you're using a zoom eyepiece, then the StellaMira 1.25" 90° Erecting Prism Diagonal will be best as you can zoom your eyepiece without changing its focus. If your telescope lacks a method of achieving precision focus, then the William Optics 1.25" 90-deg Erecting Prism Diagonal with Helical Focusing comes out on top. The William Optics is also the winner if you have particularly chunky eyepieces or if you're trying to build a very lightweight rig where every gram counts. The image quality delivered by both these erecting prism diagonals is excellent.

William Optics 1.25" 90-deg Erecting Prism Diagonal with Helical Focusing

MSRP: \$91
Website: williamoptics.com

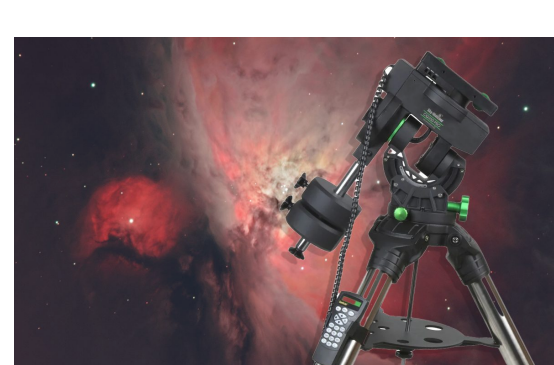
StellaMira 1.25" 90° Erecting Prism Diagonal
MSRP: \$85
Website: www.firstlightoptics.com



About Lee Pullen
<http://Urbanastrophotography.com>

Lee Pullen is a science writer and communicator from the city of Bristol, UK. He has a degree in Astronomy and a master's in Science Communication. He began his career writing for organisations including the Hubble European Space Agency Information Centre and the European Southern Observatory, as well as becoming Staff Writer for the International Year of Astronomy 2009, the world's largest ever science outreach initiative. Lee runs the website UrbanAstrophotography.com

RELATED POSTS



Sky-Watcher CO-350 Pro Review: A (Semi-) Portable Titan
When it comes to astrophotography, sometimes less is more. But when it comes to having a capable mount to drive your gear, sometimes more...

[Read More](#)



Price and Quality in a High-Power Zoom: SVBONY 3mm-8mm Zoom Review
Here's a low-cost zoom eyepiece that actually works well. I was surprised! I've never been a fan of zoom eyepieces. Most suffer from variable...

[Read More](#)



A New Bandpass Combination for Imaging: Antlia ALP-T Dual Band SII / H-beta Filter Review
Multi-narrowband filters for one-shot color cameras are rapidly becoming more popular for their light-pollution-defeating benefits and the speed of using a one-shot color camera...

[Read More](#)



FOLLOW US ON



CONTACT

info@AstroGearToday.com