Tele Vue 24mm Panoptic

by David Knisely click to email author

Suggested Retail Price: $295

Introduction

The terms "wide field" and "well-corrected" often don't seem to go together all that often when it comes to many eyepieces. However, TeleVue has produced their line of Panoptic oculars which tends to have a good reputation when it comes to getting the requirement of good correction in wider fields. The 24mm Panoptic is one of the more popular eyepieces in the amateur astronomy community, and is a good example of what happens when a wide-field design is properly executed and not "pushed" merely to yield more field.

Description

The 24mm Panoptic, or "the 24 Pan" as it is often referred to, is a 6-element wide-field eyepiece which is the longest focal length Panoptic Tele Vue offers in an 1.25" format. It is slightly wider than some 1.25" eyepieces, being about 1.9 inches wide at its widest and about 2.9 inches in total length, with a weight of 0.51 lbs (231 grams). Its upper eye-end is tapered and has a rubber eyeguard which can be folded down. The eye lens is about 19mm wide and all optical

surfaces are fully multi-coated for excellent light transmission and contrast. The eyepiece field stop is 27mm, which was verified by a direct measurement.

The 1.25" barrel is nicely machined (including the Tele Vue "safety groove" and standard filter threads) and is long enough (0.8 inches) that it should fit nicely in some of the foam holes found in many eyepiece cases. The black main body of the eyepiece has rubber knurling to aid in gripping the eyepiece, and although somewhat heavier than some 1.25" eyepieces, the 24 Pan can be easily gripped securely in one hand. It certainly isn't heavy enough to unbalance most Dobsonians. The finish of the eyepiece is excellent, with no cosmetic defects noted.

This eyepiece goes somewhat beyond the 60 to 65 degree apparent field of some wider field 1.25" eyepieces like Erfles and Konigs, with a listed apparent field of 68 degrees. On the test bench, I measured the 24 Pan's Apparent Field at 69.7 degrees right to the edge of the visual field edge. The edge of the field was quite well defined, which was a pleasant surprise when compared against a few other eyepieces I have tried to measure.

The eye relief is listed at 15mm, and this seemed to be close to what I was able to roughly judge. I was able to see perhaps 3/4ths of the field of view using my glasses, but I preferred to just extend the eyecup and dispense with my glasses to see the whole thing. Indeed, the eyecup nicely positioned my eye and head to keep me centered on the target.

Performance

The 24mm Panoptic definitely performs as well as it looks, being perhaps one of the very finest 1.25" eyepieces I have ever used. I tried it on a 4 inch f/6 refractor, my 10 inch f/5.6 Newtonian, and my NexStar 9.25GPS Schmidt-Cassegrain, and in all three cases, the images produced were outstanding. I compared the 24 Pan with my old 24mm Konig, and the Panoptic was vastly better in almost every way (except perhaps weight and cost).

The stars showed as pin-points nearly all across the entire field of view, with no significant field curvature, astigmatism or chromatic aberration present. Some slight pin-cushion distortion was seen, but it was not terribly bad (certainly no worse than with other 1.25" eyepieces). There also was no blackout or kidney beaning visible. At the *very* edge of the field, there was a barely perceptible star enlargement and the presence of a small amount of lateral color (ie: a short faint bluish "ray") on very bright stars. However, this degradation was not very noticeable unless you were really looking for it and it certainly did not impact the overall performance. The contrast of the view in the eyepiece was quite high, and I really enjoyed seeing the darkness of the field maintained almost right up to some fairly bright objects.

On deep-sky objects, this eyepiece really shines, with its wide-field and low to moderate power combination being a real asset. In my 4 inch f/6 refractor, the view of the Milky Way was stunning, with the eyepiece providing a whopping 2.58 degree true field. Even in my NexStar 9.25" f/10 SCT, the 24 Pan gave me 40 minutes of arc of true field at 98x, nicely filling a "gap" I have between my 30mm WideScan III and my 14mm Meade Ultrawide. On galaxies in particular, the 24 Pan brings out some of the finer details without pushing the power too much.

I also tried the 24mm Panoptic on an 8 inch f/5 Newtonian, and for once, I could actually see the coma that the *telescope* produced, which is normally partly or completely obscured by the horrid outer field aberrations found with most of my other lower-cost 1.25" eyepieces. With the Tele Vue Paracorr installed in the 8 inch f/5, that coma essentially vanished, so again, the only aberration seen was the previously mention very slight lateral color at the *very* outermost edge of the field. Clearly, the 24 Pan is one of the best eyepieces available in its focal length range.

Summary

The Tele Vue 24mm Panoptic is a wonderful eyepiece which provides excellent performance in a moderate focal length package. It is perhaps the finest 1.25" fixed focal length wide-field eyepiece I have ever used, and fully lives up to the promise of its cost.

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