

**Moonfish 15mm 70° wide angle 1.25” eyepiece.**

**Review by Michael Morris**

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For a while I have wanted an eyepiece would give me maximum magnification whilst still allowing viewing of the whole solar or lunar disc with my ETX 90. Using Ignacio Rodriguez’s excel spreadsheet ([http://www.weasner.com/etx/guests/sim\\_eyepiece\\_pc.xls.zip](http://www.weasner.com/etx/guests/sim_eyepiece_pc.xls.zip)) I identified the combinations of focal length and field of view that would give me the desired view. Because I didn’t want to risk introducing edge of field distortions I decided to restrict my options to focal length/field of view combinations that ensured that the Moon’s disc did not exceed 80% of the field of view. I thus set myself a maximum budget of £75 and came up with the following shortlist.

Make	Focal length	FOV	Mag.	Exit pupil	Price	extras
Celestron X-Cell	18mm	55°	x 69	1.3mm	£59	None
University Optics Konig II	16mm	65°	x 78	1.2mm	\$79.95	\$12.95 p + p and £12 duty + VAT
Moonfish	15mm	70°	x 83	1.1mm	£39.95	£4.45 postage.

Even though I could not find any reviews of it on the web, in the end I just couldn’t resist the crazy low price of the Moonfish 15mm. I ordered the eyepiece direct from the company’s website at [www.moonfishgroup.com](http://www.moonfishgroup.com). The eyepiece was despatched from their offices in Barcelona the next day.



Being only 2 inches tall, this short eyepiece causes a problem familiar to all ETX 90 owners who have replaced the factory finderscope with a right-angled one; where to put your nose! To solve this problem I purchased a 1 inch eyepiece barrel extension by Scopetronix ([www.scopetronix.com](http://www.scopetronix.com)) item number STEPEXT. Once you have done this, you also need a new bolt bottle. This is a 1.6 inch diameter bottle from Scopetronix, item number STEPB2.

On my first night observing with the moon two days past full the view was nothing short of stunning. The Moon filled the majority of the field of view at x 83 magnification with clear undistorted views across the whole disc. There was no sign of any aberration or fringing near the edges. The Moon was in focus across the whole disc. The focussing appeared to be critical with this eyepiece with the image going in and out of focus more readily than with my Meade 9.7mm eyepiece. Eye relief is excellent with no blackout areas. The rubber eye guard is adequate to shield the eye from stray light, even when moving your head slightly to concentrate on features near the edge of the field of view.

I'm glad I chose not to go for a higher magnification and wider field of view because I think that, for an ETX90, this magnification and field of view combination is probably close to the upper limit of what you can comfortably use to take in the whole lunar disk in one view.

A few days later I tried the eyepiece on the Sun (with a Scopetronix glass screw in solar filter). The image was bright although not as bright as I would ideally like. However, this loss of image brightness was marginal and was more than made up for by the extra detail that was apparent with the higher magnification. A little later some high cloud rolled in and the resulting lowered image brightness then made using the 15mm less desirable. Reverting to my Meade 4000 series 26mm Plossl let me squeeze the maximum detail out of the fainter, less contrasty image. If you carry out mainly solar rather than lunar observation with the ETX90 and often observe the Sun in less than ideal conditions, perhaps it might be worth considering the slightly brighter image that would be produced by the 18mm Celestron X-Cell or the University Optics 16mm Konig II.

Finally I tried the eyepiece on some bright deep sky objects. The Perseus Double Cluster (NGC 869) was surprisingly bright. On this target I noticed that there was some slight dimming of the image towards the extreme edge of the field of view. There was no apparent edge of field aberrations or fringing and stars were points right up to the edge of the field of view. I did however note that I needed to adjust the focussing very slightly when switching between object at the centre and edge of the field of view. The image was reasonably contrasty. The wide field of view was a real bonus when switching straight from a long focal length eyepiece as it was easy to locate the target in the wide field of view.

If I wanted to nitpick I would say that the contrast on this eyepiece is not as quite as crisp as on my two Meade 4000 series Plossls and my University Optics 32mm Konig II. As a result I think I will stick with the Meade and University Optics eyepieces for the more nebulous deep sky objects. However, for viewing the disc of the Moon or Sun (with an appropriate solar filter) with an ETX 90 I would recommend this amazingly good value for money eyepiece every time.