

FOA-60 (Fluorite Ortho Apochromat)

2 lenses TOA with front fluorite and 2nd crown lens

Fluorite lens is positioned on top and the 2nd lens is positioned with rather long distance, which causes perfectly corrected spherical aberration on each frequencies of light similar to TOA.

Strehl ratio is 96.1% on visual in original OTA, and with 4-lenses Extender 1.7xQ, strehl ratio becomes 99.8% on visual use. In addition, its strehl ratio in more than 99% keeps on full size chips.

This is superior than TOA and is most high performance in the Takahashi range.

Recently, many telescopes with rather short focal length becomes popular for the astro photographic use but despite of this, visual performance becomes inferior. Among those telescopes, FOA-60 is superior on visual performance, and when it actually observed, you can recognize clearly at first sight.

Despite of long focal length, the total tube length is rather short because of long range optical design. With OTA only, the tube length is about 5% shorter, and FOA-60Q (with Ext.1.7xQ) is about 25% shorter (about 230mm), with which it can be convenient in hand carry for long tour.

Photographic performance with Flattener 0.93x:

The above flattener is applying shorter focal length, fl=495mm (f/8.2). It gains near center images to full size field in less than 10 micron flat image. For the deep sky photography, it is a little dark, but for the solar eclipse, the focal length is best matching for photography of corona.

It is also good for the bird watching photography.

Visual performance with Extender 1.7xQ:

When you add the Extender 1.7xQ between the body and focuser housing, it becomes FOA-60Q, fl=900mm (f/15). This is almost best high performance OTA with non spherical aberration. The strehl ratio in 99% can be available covering almost all visible radiation, Despite of only 60mm effective aperture, it gives clear image even in 300 times magnification. For the extended photography of lunar surface or planet, it is recommended very much and suitable as well as best focal length for corona and prominence.