



26mm Modified Plössl Eyepiece, 2" focuser



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Summary

Eyepiece for astronomical telescope, 2" barrel

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This is a version of my 26mm eyepiece but for a 2" focuser. This uses a lens set from Surplus Shed:

<https://www.surplussed.com/pages/item/L3973.html>

This set consists of three lenses (eye, middle, field), and the following printed parts:

2" housing with a 42.6mm dia. 1.5mm pitch internal thread,

Lens retainer with a matching external thread,

Three lens spacers, one each for the eye lens, middle lens, and field lens.

Flexible eye guard.

I made these from ABS except for the flexible eye guards. ABS is more durable, lighter, and has a less glossy finish than PLA. The eye guards are printed from black TPU

The vertical resolution of the print is important to get acceptable quality on the threads. I printed mine at 0.12mm vertical resolution and a speed of 20mm/s. You can print all the parts without supports, but some files may need to be flipped 180° when slicing.

I haven't yet used this eyepieces under the night sky. I have compared my previous design with a commercial 26mm Super Plössl from Meade. The 3D printed eyepiece compares very favorably to the commercial eyepiece. There's a little more distortion at the edges, and some chromatic aberration. A view of the moon shows color fringes, whereas the Meade eyepiece is color-free. Contrast is as good or better than the Meade lens, and I notice no internal reflections.

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Model files

eyepiece_lens_spacer_I3973_middle.stl

eyepiece_lens_spacer_I3973_field.stl

eyepiece_eye_guard_2_in_I3973.stl

eyepiece_lens_spacer_I3973_eye.stl

eyepiece_barrel_internal_thread_2_in_I3973.stl

eyepiece_barrel_external_thread_2_in_I3973.stl

[Find source .stl files on Thingiverse.com](#)

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