

# Orion® 20mm Illuminated Centering Eyepiece

#8239



The Orion Illuminated Centering Eyepiece is useful for a variety of different applications in amateur astronomy. The LED-lit crosshair pattern (Figure 1) in the eyepiece aids in polar alignment of a telescope on an equatorial mount and in alignment of a telescope's finder scope. It also helps in precisely aligning a computerized go-to telescope. Additionally, the large field of view of the 70°, 20mm eyepiece will ensure easy object acquisition.

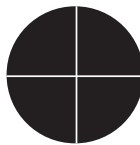


Figure 1

### Attaching the Illuminator

To attach the illuminator to the eyepiece, simply thread the LED end into the threaded hole in the side of the eyepiece. Turn on the illuminator by rotating the knurled knob clockwise. Brightness is also controlled by the knurled knob, like a dim switch. Be sure to turn the illuminator off when it is not in use, otherwise the batteries will drain unnecessarily. Turn the illuminator's knurled knob counter-clockwise until you feel a "click" indicating the unit is shut off.

### Replacing or Installing Batteries

The illuminator requires two AG-9 (or LR-45 or 936A) batteries. The batteries are installed inside the illuminator arm. To replace the batteries, simply unthread the illuminator body and carefully let the batteries drop out. Place the new batteries in the illuminator and be sure to use the correct polarity. Note that the positive (+) side of the batteries should face the switch end of the illuminator (Figure 2).

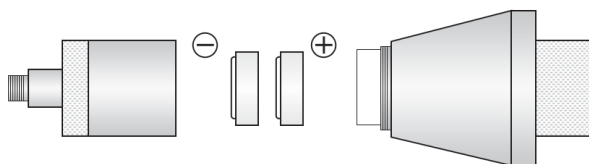


Figure 2

### Care and Cleaning of the Eyepiece

Store your illuminated reticle eyepiece in a clean, dry, dust-free place. If dust builds up on the eye lens, simply blow it off with a blower bulb or lightly brush it off with a soft camel-hair brush. Avoid touching optical surfaces with your fingers, as skin oil may ruin the optical coatings.

To remove fingerprints or smudges from the lens, use photographic-type lens cleaning fluid and lint-free optical lens cleaning tissue. Don't use household cleaners or eyeglasstype cleaning cloth or wipes, as they often contain undesirable additives like silicone, which don't work well on precision optics. Place a few drops of fluid on the tissue (not directly on the lens), wipe gently in a circular motion, then remove the fluid with a dry tissue or two. Do not "polish" or rub hard when cleaning the lens, as this may scratch it. The tissue may leave fibers on the lens, but they can simply be blown off with a blower bulb.

Never disassemble the eyepieces to clean optical surfaces!

## Specifications

Focal length:	20mm
Apparent field of view:	70°
Lens coatings:	Fully multi-coated
Eye relief:	16mm
Barrel:	1.25", threaded for Orion filters
Reticle:	Etched, single crosshair
Illuminator:	Red LED, used 2x AG-9 batteries

## One-Year Limited Warranty

This Orion product is warranted against defects in materials or workmanship for a period of one year from the date of purchase. This warranty is for the benefit of the original retail purchaser only. During this warranty period Orion Telescopes & Binoculars will repair or replace, at Orion's option, any warranted instrument that proves to be defective, provided it is returned postage paid. Proof of purchase (such as a copy of the original receipt) is required. This warranty is only valid in the country of purchase.

This warranty does not apply if, in Orion's judgment, the instrument has been abused, mishandled, or modified, nor does it apply to normal wear and tear. This warranty gives you specific legal rights. It is not intended to remove or restrict your other legal rights under applicable local consumer law; your state or national statutory consumer rights governing the sale of consumer goods remain fully applicable.

For further warranty information, please visit [www.OrionTelescopes.com/warranty](http://www.OrionTelescopes.com/warranty).



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