



Spectrograph optics for astronomical telescopes

Optical Surfaces Ltd

is a leading producer of **ultra-high precision optical components** and **systems** for **telescope spectrographs**.

The main function of a telescope spectrograph

is to separate light into its component colours (or wavelengths) to reveal information about the chemical content, temperature and motion of distant planets, comets, stars, interstellar gas clouds and galaxies.



Image caption: One of two uncoated $f / 2.2$ off-axis parabolic mirrors prepared for the Fibre-fed Extended Range Optical Spectrograph (FEROS) at the European Southern Observatory (ESO). (courtesy: Optical Surfaces Ltd)



Benefiting

from a unique underground facility, where temperatures remain constant year-round and vibration is practically non-existent, Optical Surfaces Ltd can routinely produce spectrograph optics including flats, lenses, mirrors and prisms that stretch the limits of conventional optical fabrication techniques.

Investment

in a range of interferometers enables Optical Surfaces Ltd to undertake one-to-one testing of even the largest diameter telescope spectrograph optics. Topographic and fringe analysis provides precise testing of surface roughness and confirms the wave front of various surface forms. Operating a rolling program for calibration of test optics where possible to national standards and production approval to ISO 9001-2015 ensures that the quality of telescope spectrograph optics from Optical Surfaces Ltd. is second to none.

Optical Surfaces Ltd

is a trusted precision optics supply partner to the international astronomy community. In recent years, the company has produced key optics for the SPIRou and ESPaDOnS spectrographs at the Canada-France-Hawaii telescope (CFHT), the Narval stellar spectropolarimeter on the 2m Bernard Lyot Telescope in the French Pyrenees, the High-Resolution Optical Spectrograph (HROS) based on the 8m Gemini Telescope in Chile and the Fibre-fed Extended Range Optical Spectrograph (FEROS) at the European Southern Observatory (ESO).

To read a telescope spectrograph optics

customer story please visit <https://optisurf.com/new-star-found/>. To discuss your specific telescope project optical requirements with the Optical Surfaces team please contact the company on +44-208-668-6126 or email aris@optisurf.com.

Optical Surfaces Ltd

has been producing high precision optical components and systems for nearly 60 years. The company's ISO 9001-2015 approved manufacturing workshops and test facilities are deep underground in a series of tunnels excavated in solid chalk where temperature remains constant, and vibration is practically non-existent. With such stable conditions testing, particularly with long path lengths, becomes quantifiable and reliable.



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