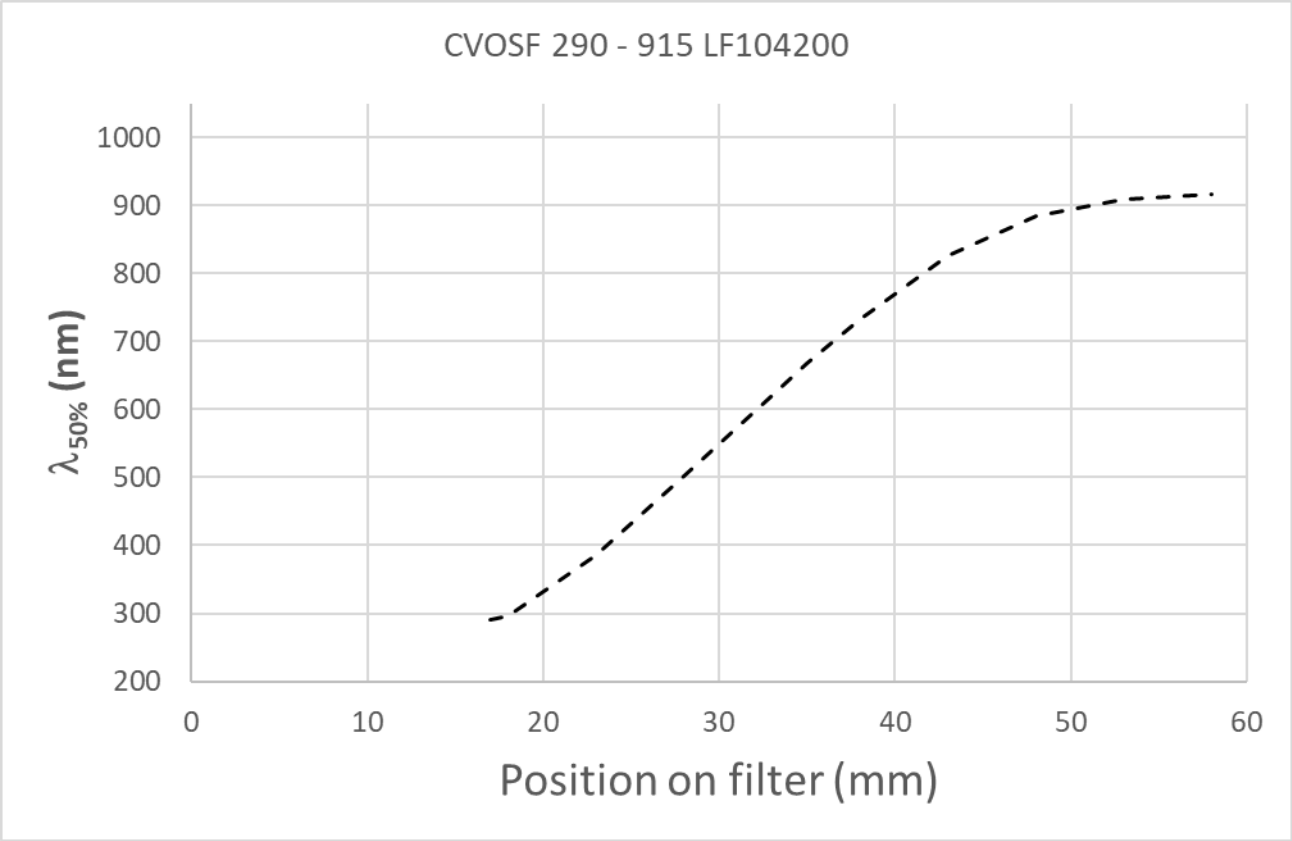
Data Sheet

CVOSF 290 - 914 (LF104200)

Continuously variable long-wavelength-pass filter with $\lambda_{50\,\%}$ travelling from ~290 nm to ~915 nm from ~17 mm to ~58 mm. The section from 0 - ~17 mm is uncoated.

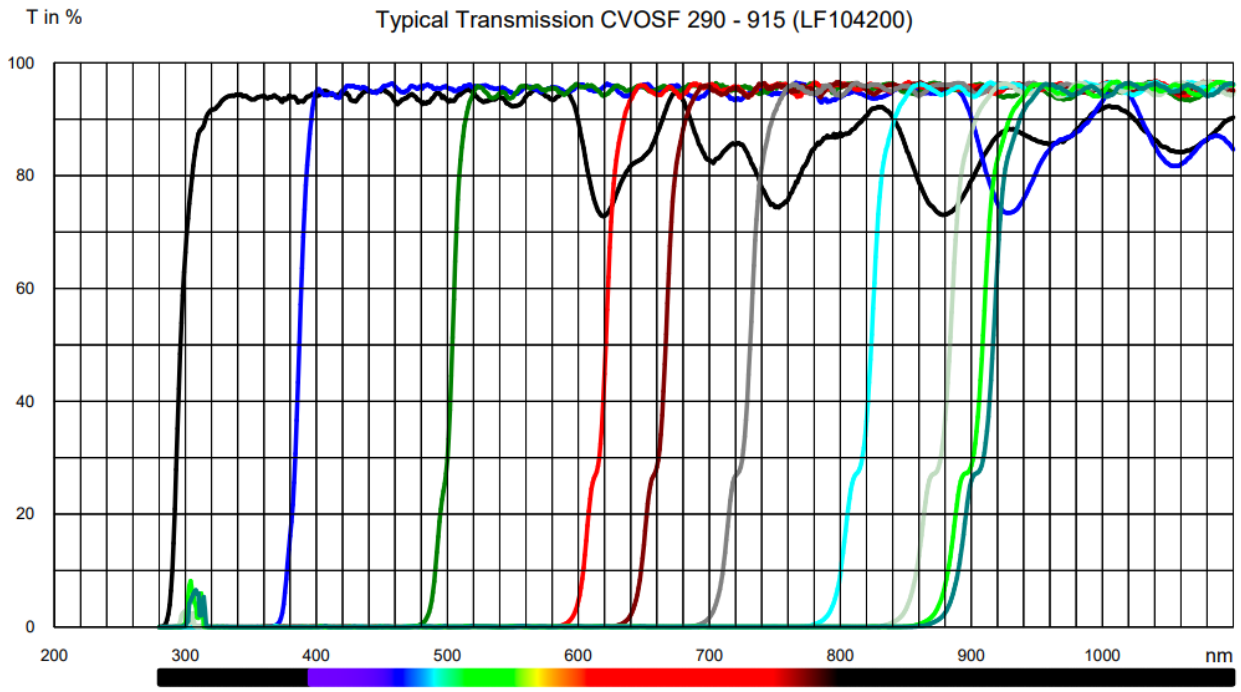
The filter is designed as a Continuously Variable Order Sorting filter for a sensor array-based spectrometer and can be cut to fit a specific wavelength range (see an example on the last page of this Data Sheet). The order sorting filter is intended to be located close to the sensor array preventing higher orders from the grating to get through to the detector.



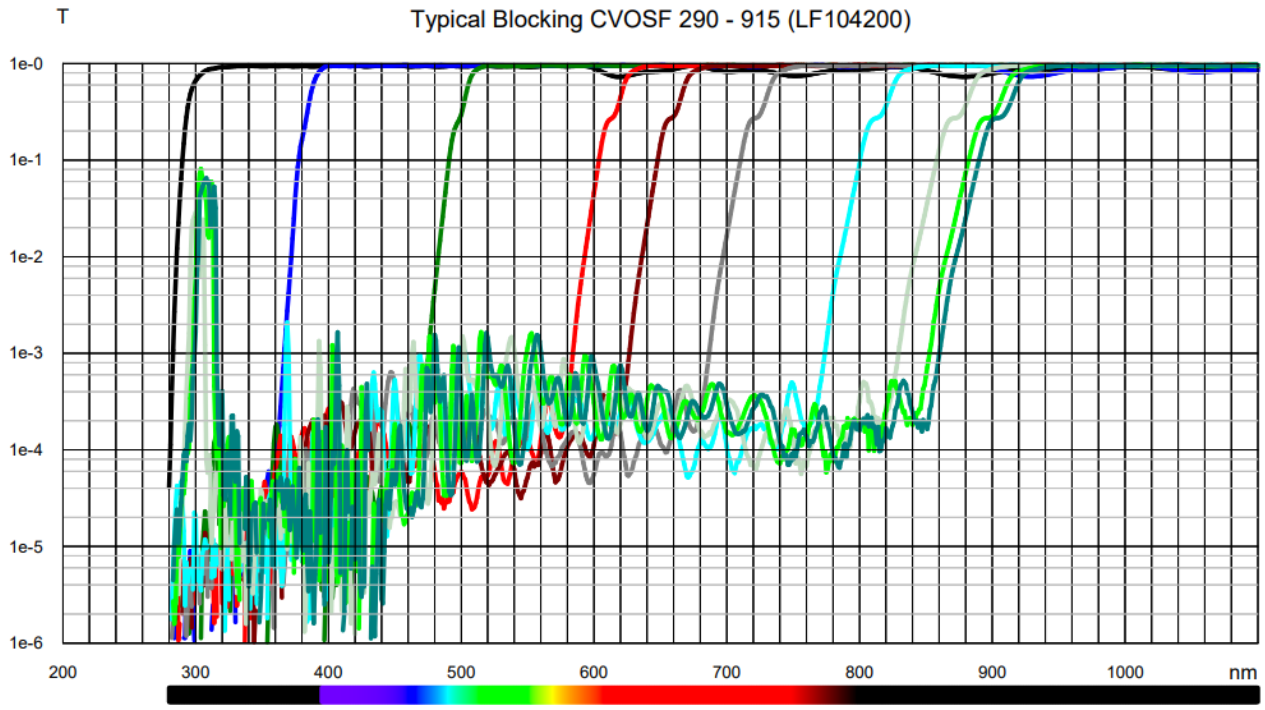
NOTE: If the filter is being used for wavelengths above ~900 nm it is important to ensure that the 1st order wavelength is at least ~5% longer than the filter edge wavelength for the upper part of the wavelength range.

Data Sheet

Typically measured transmittance of CVOSF 290 - 915 (LF104200)



Typically measured blocking of CVOSF 290 - 915 (LF104200)



Data Sheet

Example of use case for LF104200

Spectrometer:

- Wavelength range: 200 – 1050 nm
- Detector/filter length: 28 mm

Filter:

By using the 28 mm section of the filter cut from the position on the filter from 12 mm to 40 mm, the uncoated region will be ~5 mm long, and the following performance can be expected:

- Minimum transmission for $\lambda_{1st} - 20\ nm < \lambda < \lambda_{1st} + 20\ nm$: 90%
- Maximum transmission at 2nd and 3rd order wavelengths: 0.16%

As a rough guideline, if a CVOSF can be placed so that $1.1*\lambda_{50\%}$ is shorter than the 1st order wavelength, and $0.8*\lambda_{50\%}$ is longer than the 2nd order wavelength, the CVOSF can be used for that spectrometer.

Please, note that actual specifications will be agreed with each customer, taking into account the spot size, angle of incidence and opening angle of the beam incident on the filter.