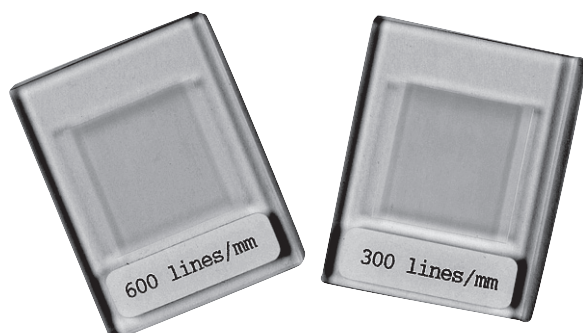


U19511 Grating 600 lines/mm

U19512 Grating 300 lines/mm

Instruction sheet

6/03 ALF



Transmission grating for spectroscopic examinations and for experiments on diffraction and interference. Suitable to resolve the Na-D lines.

1. Safety instructions

- To avoid scratching or soiling the surface of the grating, hold the slide only by its edges.

2. Description, technical data

Gratings with 300 resp. 600 lines per mm, mounted on glass carrier. Both gratings have a high resolution power, provide a sharp, bright spectrum and are suitable for use in precision spectrometers such as spectrometer-goniometer U14416.

The 300 line grating U19512 enables particularly well measurements to be taken of the separation of Na-D lines.

Dimensions:	38 mm x 50 mm
Size of grating:	24 mm x 24 mm
No. of lines:	300 resp. 600 lines / mm
Grating constant:	3,3 μm resp. 1,7 μm

3. Operation

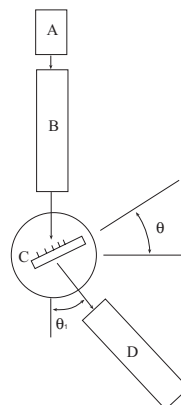
Note: The grating has a stronger spectrum on one side. For best results mount the diffraction grating in such a way, that the grating faces the light source.

3.1 Demonstration of diffraction by a grating

- Mount diffraction grating in holder (e.g. Multi-component holder U21810)
- Grating must be brought into a parallel beam of light.
- Diffraction can be observed.

3.2 Use of a spectrometer and goniometer

- Mount diffraction grating in holder of spectrometer-goniometer.
- Adjust the angles according to illustration.
- View the light diffracted by the line grating through the spectrometer telescope. Diffraction of higher order can be observed.
- If a sodium lamp is used, the doublet may be viewed when $\theta = 10,5^\circ$ and $\theta_1 = 21^\circ$.



- A: Light source
- B: Collimator
- C: Grating
- D: Observation tube