



First-order diffraction 18° at 600 nm
500 lines/mm 25 x 34 mm grating

Tape **grating sheet**
over cut out

Smartphone Spectroscope

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Materials:

- This sheet printed on 160gsm dark coloured paper
- Diffraction grating sheet Edmund Optics 54.509, cut long side in nine pieces each 34mm, cut short side in six pieces each 25mm
- Sticky tape

Tools:

- Scissors
- Smartphone or tablet, with built-in camera

Method:

- Cut out spectroscope on solid line
- Cut a 1mm slit (or as small as possible) where indicated.
- Fold up spectroscope such that black surface is inside and fix with tape
- Fix diffraction grating over hole with sticky tape
- Place grating onto smartphone camera lens

Use:

- Point slit toward light source (fluorescent tube etc.)
- Adjust camera zoom
- View spectrum on smartphone

Warning: Do not view the sun with your eye

For further details and an instructional video see:
<https://astro3d.org.au/education-and-outreach/diy-smartphone-spectroscope/>