

# Diffraction of light

The phenomenon **of the deviation of light** from the rectilinear direction of propagation, which is not caused by reflection or refraction. It occurs on obstacles that have a size comparable to the wavelength of light.

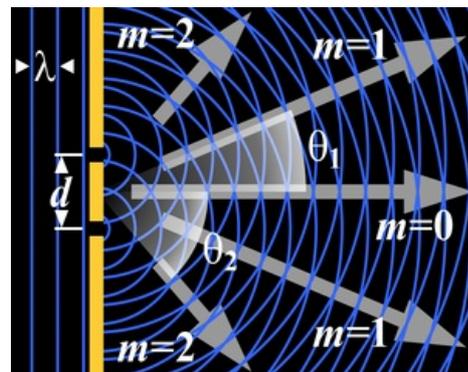
What is important is the passage of light through the slit, which according to Huygens' principle is **the source of elementary waves**.

The optical grating is formed by a large number of parallel scratches on the glass (up to 1000 per 1 mm), where the intact places represent the slits and scratches of the gap between them.

$$d \cdot \sin \alpha = k \cdot \lambda$$

$d$  = lattice constant (slit spacing),  $\alpha$  = the angle of the outgoing rays,  
 $k$  = order of the bending maximum,  $\lambda$  = wavelength of light

It follows from the equation that when white light passes through interference, a bending (lattice) spectrum is created, where red light is deviated the most and violet light the least.



two-slit diffraction

## Links

### Related articles

- Dispersion of light
- Optical grating

### Sources

- KUBÁTOVÁ, Senta. *Difrakce (ohyb) světla* [online]. [cit. 2010-09-03]. <<https://uloz.to/!CM6zAi6z/biofot-doc>>.