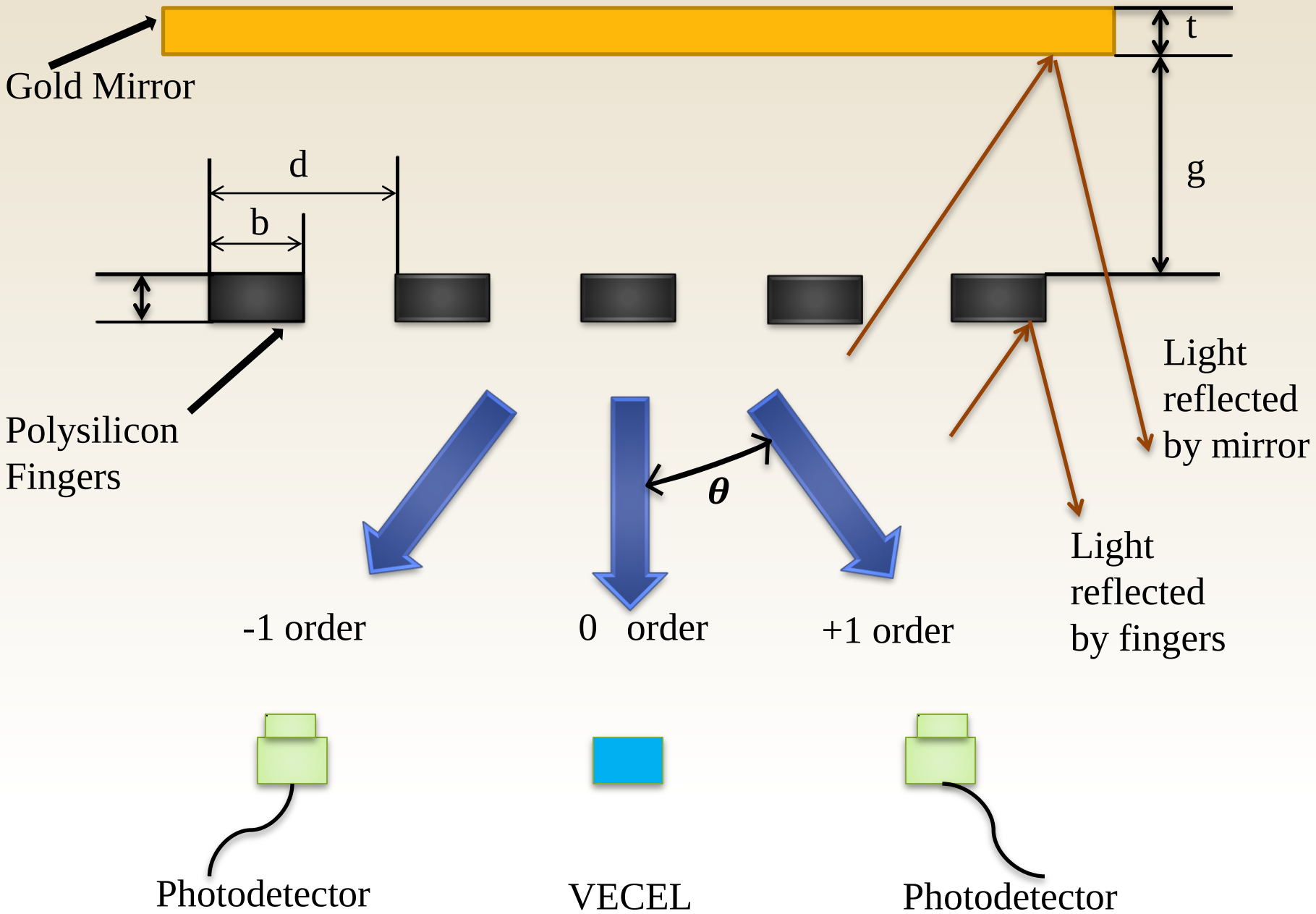
# Sensing scheme



# Light intensity

| Parameter | Value | Expression |
|---|---|---|
| t | 1[um] | Thickness |
| b | 2[um] | Width of finger |
| d | 4[um] | Grating period |
| g | 10[um] | Distance between fingers and mirror |
| λ | 0.85[um] | wavelength |
| θ | 0—90[deg] | Diffraction angle |

$$I_m(\theta) = B\left(\frac{\sin(\alpha/2)}{\alpha/2}\right)^2\left(\frac{\sin(N\alpha)}{\sin(\alpha)}\right)[1+(-1)^m\cos(\Phi)]$$

$$\alpha = \frac{\pi d}{2\lambda}\sin(\theta)$$

$$m = \frac{d}{\lambda}\sin(\theta)$$

$$\Phi = 4\pi g/\lambda$$

Equal to 1 with principle maximum

Change with the movement of the diaphragm!