

Green light (527.3nm)

V(V)	I(μ A)		

1. Describe the relationship between light intensity and the peak current:

2. According to the data, plot the graphs of voltage against current and find the stopping voltage V_s of each light:

red light: _____, yellow light: _____, green light: _____

3. Given the equation of Photoelectric effect $h\nu = V_s e + W$, find the working function W.

Planck's constant $h = 6.626 \times 10^{-34} \text{ m}^2 \text{ kg} / \text{ s}$, Optical frequency ν ,
 Electron charge $e = 1.9 \times 10^{-19} \text{ C}$.

4. Plot a graph of stopping voltage V_s against optical frequency ν , and find the value of h/e .