

Answer on Question #50750-Physics-Nuclear Physics

Light frequency 1.5 times the threshold frequency is incident on photo sensitive material. The frequency is $1/2$ and intensity becomes double. The photo electric current becomes....

Solution

When the frequency of incident light is halved its value becomes less than the threshold frequency ($f' = \frac{1}{2}f = \frac{1}{2} \cdot 1.5 f_{threshold} = 0.75 \cdot f_{threshold} < f_{threshold}$) and the photo electric current stops i.e. becomes zero.

Answer: Zero.

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