

Answer on Question #52232-Physics-Optics

Unpolarized light passes through two polarized sheets. The transmission axis of the analyzer makes an angle of 35 degrees with the axis of the polarizer. What fraction of the original unpolarized light is transmitted through the analyzer? What fraction of the original light is absorbed by the analyzer?

Solution

According to Malus' law the fraction of the original unpolarized light is transmitted through the analyzer is

$$\cos^2 35^\circ = 0.67.$$

The fraction of the original light is absorbed by the analyzer is

$$\sin^2 35^\circ = 0.33.$$

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