Malus’ law

Numero P5.4.1.4

Descrizione

The aim of the experiment P5.4.1.4 is to derive Malus’s law: when linearly polarized light falls on an analyzer, the intensity of the transmitted light is

$I = I_0 \cdot \cos^2 \varphi$

I_0: intensity of incident light

φ: angle between direction of polarization and analyzer

Dispositivi

Richiesto	Dispositivo
0/1	Halogen lamp 12 V, 50/100W
0/1	Halogen bulb 12 V/100 W, G6.35
0/1	Holder with heat protection
0/1	DC power supply unit 1...32 V/0...20 A
0/1	Iris diaphragm
0/1	Lens in frame, f=100 mm
0/2	Polarisation filter
0/1	Solar cell, STE 2/19
0/1	Holder for plug-in elements
0/1	Digital multimeter 3340
0/1	Optical bench, S1 profile, 1 m
0/1	Clamp rider with clamp 45/65
0/5	Clamp rider with clamp 45/35
0/1	Safety adapter sockets, black, set of 6
0/1	Safety experiment cable, 50 cm, red
0/1	Safety experiment cable, 50 cm, blue
0/2	Safety experiment cable, 50 cm, black