

ANNOTATION

It was decided to develop an automated device for light control for the bachelor's project. The analysis of modern models of luxmeters, spheres of their application, principles of action are carried out.

The problems of application of these devices in the field of agriculture are revealed, namely at plants cultivation of the protected soil which need constant control. To improve performance of the device in this area different automation options had been chosen. The device that solves the problem not only of light control, but monitor infrared radiation and with using color sensor detection of leaves color to determine which nutrients the plant is lacking was developed.

The device was assembled on the basis of the Adafruit METRO Arduino-Compatible board. Tests were performed, such as: measurement of illuminance, light flux in the visible region of spectrum wavelengths, level of infrared radiation, determination of a certain number of test objects colors. Automation of the device for using in agriculture was successfully completed.

Keywords: illumination, automation, infrared radiation, light flux, luxmeter, photometry.