

ABSTRACT

The objective of the diploma project is to develop a mobile ophthalmoscope with additional functionalities that can be utilized in the field of medicine.

Within the framework of this project, extensive research has been conducted to explore the theoretical foundations aimed at ensuring precise and detailed examination of the fundus of the eye. A device for assessing and diagnosing the condition of the eyes has been meticulously designed. The optical system of the device has been meticulously modeled, and meticulous component selection has been performed. A comprehensive electrical circuit diagram and assembly drawings have been meticulously developed.

The work is presented in a comprehensive manner, spanning 72 pages (excluding appendices), encompassing three chapters, accompanied by 36 illustrations and referencing 22 relevant scholarly sources.

Keywords: ophthalmoscope, ophthalmoscopy, visible radiation, mobile ophthalmoscope, optical system.