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(57) Abstract :

The present disclosure relates to a system (100) to measure the tear volume on an ocular surface by measuring the tear meniscus height in the eye of a user (110). The system (100) aims at providing a non-invasive test for measuring the tear meniscus height and measuring the tear fluid in the eye of a user (110) to detect dry eye disease in the user (110). The infrared camera in the system (100) captures a thermal image of the eye and measures and detects the quality and status of the meibomian gland based on the dataset fed into the system. The system (100) is also designed to measure the lipid layer and its thickness through infrared images and diagnose a dry eye condition in the eye. The system (100) uses advanced image processing techniques to analyse the images and measure the height of the tear meniscus and the lipid layer instead of inserting any measuring device near the surface of the eye. It provides a portable solution for ophthalmologists to detect dry eye in a user (110).

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