

METHOD AND APPARATUS FOR ONLINE CONTACT LENS EVALUATION

ABSTRACT

A selectively marked contact lens having, in one aspect, marks in an optical zone region on a surface thereof and, in another aspect, different marks outside an optical zone region of the lens, for an in-vivo lens. With the lens in-vivo, the subject's eye is illuminated and the lens is imaged. A fast algorithm is used to determine the mark coordinates in relation to a measured pupil coordinate to determine position and/or orientation of the contact lens. A wavefront aberration measurement can also be obtained simultaneously with the contact lens position measurement, as well as pupil size. A fast algorithm provides for online measurements; i.e., at a repetition rate of 10Hz or greater, over a selected time interval. Blinking periods are determined and anomalous lens position and/or wavefront information is discarded. A most frequently occurring wavefront and/or contact lens position/orientation is determined over the selected time interval.

FIG. 1



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