

## **BLINK DETECTION SYSTEM FOR ELECTRONIC OPHTHALMIC LENS**

### **ABSTRACT**

A blink detection algorithm and associated circuitry for an ophthalmic lens comprising an electronic system is described herein. The blink detection algorithm is implemented in the system controller which is part of an electronic system incorporated into the ophthalmic lens. The electronic system includes one or more batteries or other power sources, power management circuitry, one or more sensors, clock generation circuitry, control algorithms and circuitry, and lens driver circuitry. The blink detection algorithm implements the steps of sampling, at a predetermined rate, light incident on an eye of an individual and at least temporarily saving collected samples, determining when an eyelid is open or closed in order to divine the number, time period and pulse width of the blinks from the collected samples, calculating a number of blinks and the duration of the blinks in a given time period, and comparing the number of blinks, the durations of the blinks in the given time period, and the time between blinks in the given time period to a stored set of samples to determine patterns in blinking.

**Fig. 1**