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(54) **INTRAOCULAR PRESSURE MEASUREMENT SYSTEM INCLUDING A SENSOR MOUNTED IN A CONTACT LENS**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

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(63) Continuation of application No. 10/128,321, filed on Apr. 22, 2002, now Pat. No. 6,749,568, which is a continuation-in-part of application No. 09/642,573, filed on Aug. 21, 2000, now Pat. No. 6,447,449.

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(52) **U.S. Cl.** 600/399; 600/405; 600/561

(58) **Field of Classification Search** 600/398, 600/399, 400, 405, 406, 561, 587

See application file for complete search history.

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(57) **ABSTRACT**

An apparatus (180) for measuring intraocular pressure (IOP) comprises a contact lens (40) including an inner surface (42) contoured to a surface portion (34) of an eye (36) and a sensor (10) disposed in the contact lens. The sensor (10) comprises a contact surface (14) for making contact with the surface portion (34) of the eye (36). The contact surface (14) includes an outer non-compliant region (16) and an inner compliant region (18) fabricated as an impedance element that varies in impedance as the inner compliant region changes shape. The sensor (10) further comprises a region of conductive material (38) electrically coupled to the impedance element of the compliant region (18) and responsive to an external signal for energizing the impedance element so that the IOP may be determined.

20 Claims, 14 Drawing Sheets

