

Title (en)  
ELASTOMERIC OPTICAL DEVICE AND RELATED OPERATION METHODS

Title (de)  
ELASTOMERE OPTISCHE VORRICHTUNG UND ZUGEHÖRIGE BETRIEBSVERFAHREN

Title (fr)  
DISPOSITIF OPTIQUE ÉLASTOMÈRE ET PROCÉDÉS DE FONCTIONNEMENT ASSOCIÉS

Publication  
**EP 4143629 A1 20230308 (EN)**

Application  
**EP 21727645 A 20210429**

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Abstract (en)  
[origin: WO2021222583A1] The invention provides an elastomeric optical device having a first optical state and a second optical state. The device is transparent when in the first optical state and translucent or opaque when in the second optical state. The device comprises, in sequence, a first transparent electrode, a dielectric layer, an elastomer layer, and a second transparent electrode. The elastomer layer preferably has certain mechanical properties, such as a Shore 000 hardness of less than 15, and/or certain chemical properties, such as being substantially devoid of unreacted sites. The second transparent electrode is configured to compress the elastomer layer in response to an electric field between the first and second transparent electrodes, such that when the elastomeric optical device is in the second optical state, the elastomer layer is compressed between the first and second transparent electrodes. Methods of operating an elastomeric optical device are also provided.

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