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(57) Abstract :

An eyewear selection and virtual try-on system, comprising a body 101, a user-interface to receive user inputs including intended usage occasion, lens type, and eye-related preferences, a C-shaped chin-rest 102 to accommodate a user's chin, an electrochromic display 103 to capture, analyse, and generate biometric, dermatological, facial geometry, and ocular response data of the user for eyewear suitability assessment, a projection mode in which the display 103 becomes opaque or frosted when a second voltage is applied, thereby functioning as a projection surface, a pair of multi-wavelength LED arrays 106 to simulate at least daylight, indoor lighting, and screen illumination to analyse eye strain response and colour perception accuracy, a projector 108 to project images of recommended eyewear onto the electrochromic display 103 to enable a virtual try-on experience, and a storage cavity 109 to store a plurality of physical eyewear frames of different shapes, sizes, and designs.

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