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(54) **SYSTEM AND METHOD FOR MITIGATING OR PREVENTING EYE DAMAGE FROM STRUCTURED LIGHT IR/NIR PROJECTOR SYSTEMS**

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This patent is subject to a terminal disclaimer.

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H04N 13/254 (2018.01)
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(58) **Field of Classification Search**
None
See application file for complete search history.

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(57) **ABSTRACT**

Systems and methods for mitigating or preventing eye damage from structured light IR/NIR projector systems. When a SL projector with a multi-light-source array that projects a SL pattern onto an object, a first camera images the light pattern projected on the object and optionally provides camera frames viewed by a user. A multi-light-source array controller is configurable to control separately an on or off status and/or an intensity of each light source in the multi-light-source array, and an algorithm is operative to detect in the first camera frames SL pattern elements projected onto the object, to detect the eyes of the user, to compare a position of each projected SL pattern element with a position of the detected eyes, and to send commands to the multi-light-source array controller to turn off or reduce the intensity of array light sources that are projected or likely to be projected onto the user's eyes.

13 Claims, 3 Drawing Sheets