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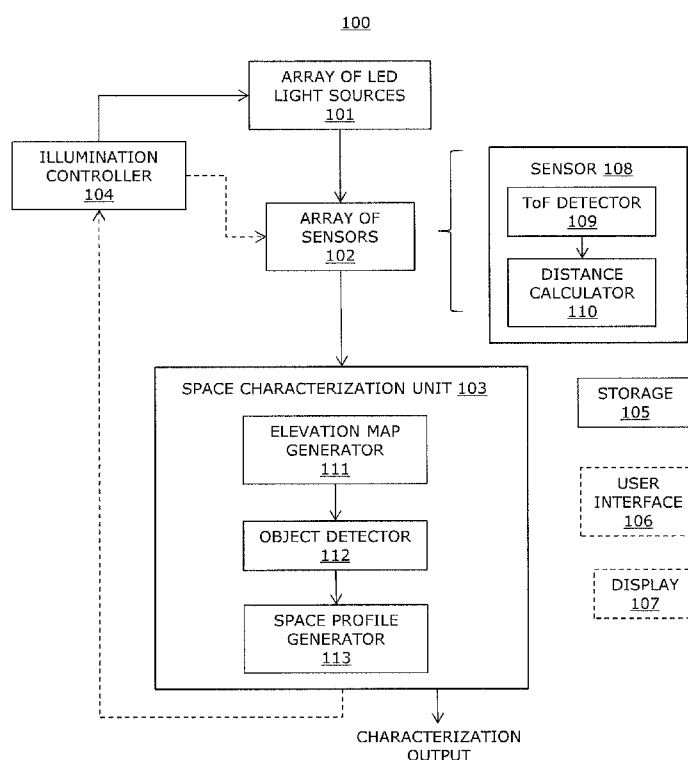
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[Continued on next page]

- (54) **Title:** SENSORY LIGHTING SYSTEM AND METHOD FOR CHARACTERIZING AN ILLUMINATION SPACE



- (57) **Abstract:** Disclosed herein is an illumination system including an array of LED light sources for emitting light encoded with a modulation pattern, an array of sensors and a space characterization unit. The array of sensors receives emitted light scattered by an object. Each sensor determines a distance between the corresponding light source and the object using the modulation pattern. The space characterization unit uses the distance from each sensor to generate an elevation map indicating a presence of the object.



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