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(54) **SCANNING 3D IMAGING DEVICE WITH POWER CONTROL USING MULTIPLE WAVELENGTHS**

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(58) **Field of Classification Search**

CPC G01S 17/10; G01S 17/89; G01S 17/93; G01S 7/486

See application file for complete search history.

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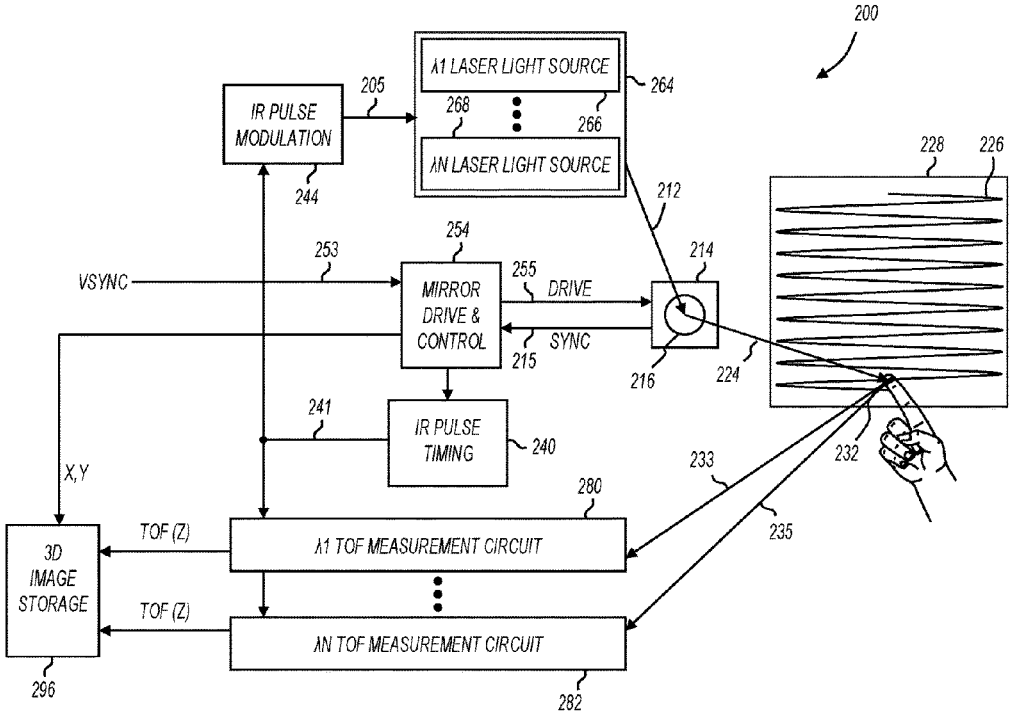
(57) **ABSTRACT**

Laser light pulses of at least two different wavelengths are reflected off a scanning mirror. A first time-of-flight distance measurement circuit receives reflected light pulses of a first wavelength and determines distances. A second time-of-flight distance measurement circuit receives reflected light pulses of a second wavelength and determines distances. The laser light pulses of different wavelengths may be interleaved in time to increase resolution. The laser light pulses of different wavelengths may also be used for detecting safety violations and/or power control.

11 Claims, 22 Drawing Sheets