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TSUKUDA(10) **Pub. No.: US 2023/0231060 A1**(43) **Pub. Date: Jul. 20, 2023**(54) **PHOTODETECTION CIRCUIT AND
DISTANCE MEASURING DEVICE****Publication Classification**(51) **Int. Cl.****H01L 31/02** (2006.01)**H01L 31/107** (2006.01)**G01J 1/44** (2006.01)(52) **U.S. Cl.****CPC** **H01L 31/02027** (2013.01); **H01L 31/107**(2013.01); **G01J 1/44** (2013.01); **G01J****2001/4466** (2013.01); **G01S 17/08** (2013.01)(71) Applicant: **SONY SEMICONDUCTOR
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(57) **ABSTRACT**

There is provided a photodetection circuit capable of improving distance measuring performance.

The photodetection circuit according to an embodiment of the present disclosure includes: an avalanche photodiode; a charging circuit that supplies a voltage to the avalanche photodiode; an input amplifier including a comparison circuit in which a voltage level of an output terminal changes according to a comparison result between a voltage of an input terminal connected to the avalanche photodiode and a reference voltage, and a voltage control circuit that changes a potential of the reference voltage; and a state detecting circuit that sets timing for causing the voltage control circuit to change the potential of the reference voltage on the basis of a detection result of the voltage level.

