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**Vintila et al.**(10) **Pub. No.: US 2024/0213060 A1**(43) **Pub. Date: Jun. 27, 2024**(54) **APPARATUSES FOR MEASURING GAP  
BETWEEN A SUBSTRATE SUPPORT PLANE  
AND GAS DISTRIBUTION DEVICE****Related U.S. Application Data**

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(2) Date: **Oct. 25, 2023**(57) **ABSTRACT**

Some embodiments provide apparatuses capable of enabling the measurement of various characteristics of a showerhead-substrate gap in a processing chamber, including at high temperatures and at low-light conditions, using an imaging system external to the processing chamber.

