

ABSTRACT

Disclosed is a substrate detection device. The substrate detection device comprises an illumination unit, an imaging unit, a storage unit, a search unit, and a determination unit. The illumination unit is configured to irradiate an imaging region including a plurality of substrates with illumination light, wherein the plurality of substrates are inserted into a plurality of holding slots of a substrate holder. The imaging unit is configured to capture an image of the imaging region and generate a captured image, wherein the captured image includes a plurality of pixel blocks representing the side surfaces of the plurality of substrates. The storage unit is configured to store a reference grid, a plurality of detection positions, and a reference width of a side surface of a single substrate, wherein the reference grid includes a search area and defect areas, and the plurality of detection positions include at least two detection positions arranged for each holding slot. The search unit is configured to search for the pixel blocks within the reference grid in the captured image at each detection position, and output search information of the pixel blocks in the reference grid. The determination unit is configured to determine holding states of the plurality of substrates in the corresponding holding slots based on the search information. The present invention can promptly discover abnormal substrates on the substrate holder.