

METHOD AND SYSTEM TO DETECT CHIPPINGS ON SOLAR WAFER

ABSTRACT OF THE DISCLOSURE

A chipping defect detection system for detecting a chipping defect at chamfer edge of a solar wafer, said solar wafer being substantially regular or square shape having straight edge and chamber edge, comprising: (a) a plurality of imaging means for pickup images of the position of the solar wafer and being positioned horizontally to the focusing plane of the solar wafer; (b) a plurality of illumination means to provide light for the imaging means while in operation thereof; (c) a conveyor belt for transporting the solar wafer horizontally in the course of chipping detection operation; (d) a sensing means providing a signal to trigger the imaging means to start an image capture; and (e) a strobe light driver which is triggered by the imaging means to drive the illumination means such that the imaging means provides an exposure time which coincides with the illumination means, thereby the chamfer edges are located at the out-of-focus position at the same position being sensed by the sensing means, and the image captured by the imaging means being not sharp is the chipping on the chamfer edges of the solar wafer. The present invention also discloses a method of chipping defect detection on a solar wafer.

(FIG. 7)