APPARATUS AND METHOD FOR SELECTIVELY INSPECTING COMPONENT SIDEWALLS

ABSTRACT

A component inspection process includes positioning a component (e.g., a semiconductor component or other object) such that component sidewalls are disposed along an optical path corresponding to sidewall beam splitters configured for receiving sidewall illumination provided by a set of sidewall illuminators, and transmitting this sidewall illumination therethrough, toward and to component sidewalls. Sidewall illumination incident upon component sidewalls is reflected from the component sidewalls back toward the sidewall beam splitters, which reflect or redirect this reflected sidewall illumination along an optical path corresponding to an image capture device for sidewall image capture to enable component sidewall inspection. Sidewall illuminators and sidewall beam splitters can form portions of a five sided inspection apparatus that includes a brightfield illuminator, a darkfield illuminator, and an image capture beam splitter such that the five sided inspection apparatus is configurable for inspecting component bottom surfaces and/or component sidewalls in a selective / selectable manner.

Fig. 3