ABSTRACT

System and Method for Inspecting Optical Power and Thickness of Ophthalmic Lenses immersed in a Solution

A system for producing a high contrast image of an ophthalmic lens under inspection, comprising: top camera to view ophthalmic lens through lens module; motorized mechanism for positioning top camera at two pre-programmed positions; three illumination modules; said illumination modules focusing light through ophthalmic lens under inspection, thereby producing a high contrast image of features of ophthalmic lens; wherein ophthalmic lens is contained within cuvette with optical power of positive of ten; said cuvette mounted with two optical windows, one of them being vertical and other at an angle; said cuvette having transparent bottom glass suitably designed to position ophthalmic lens under inspection; said cuvette designed to be filled with saline solution; accurately calibrated test object positioned to achieve image of ophthalmic lens overlaid with image of pattern present on test object; additional illumination source comprising laser diode; and second camera to view ophthalmic lens through slanted optical lens module.

Figure 1