ABSTRACT OF THE DISCLOSURE

METHOD AND APPARATUS FOR EVALUATING ABERRATIONS OF OPTICAL ELEMENT FOR USE WITH OPTICAL DEVICE

A method for evaluating aberrations of an optical element such as optical head for use with an optical system such as DVD. In this method, light is transmitted through the optical element and then diffracted into 0, ±1, ±2, ... order diffraction lights, for example. Among others, first and second lights (e.g., 0 and +1, 0 and -1, +1 and -1, or 0 and ±1 order diffracted lights) are overlapped to form an image shared by the first and second lights. Then, light intensity at first and second points in the shared image are detected. At this moment, light intensity at the first and second points are changed. Then, a phase difference in light intensity of between first and second points is determined. Using the phase difference, aberrations of the optical element are determined.

Fig. 7