

ABSTRACT

**METHOD AND SYSTEM FOR THE INSPECTION OF WAFERS FOR
MICROELECTRONICS OR OPTICS BY LASER DOPPLER EFFECT**

The invention relates to a method for inspecting a wafer (2) for electronics, optics or optoelectronics, comprising:

- rotating the wafer (2) about an axis of symmetry (X) perpendicular to a main surface (S) of said wafer,
- emitting, from a light source (20) coupled with an interferometric device (30), two incident light beams, so as to form, at the intersection between the two beams, a measurement volume (V) containing interference fringes arranged such that a region of the main surface (S) of the wafer passes through at least one fringe of the measurement volume, the dimension (Dy) of said measurement volume in a radial direction of the wafer being comprised between 5 and 100 μm ,
- collecting at least a portion of the light scattered by said region of the wafer,
- acquiring the collected light and emitting an electrical signal representing the variation in the light intensity of the collected light as a function of time,
- detecting, in said signal, a frequency component in said collected light, said frequency being the time signature of the passage of a defect through the measurement volume.

Figure 2