

Title (en)

DEVICE AND METHOD FOR MEASURING HEIGHT IN THE PRESENCE OF THIN LAYERS

Title (de)

VORRICHTUNG UND VERFAHREN ZUR MESSUNG DER HÖHE IN GEGENWART VON DÜNNSCHICHTEN

Title (fr)

DISPOSITIF ET PROCEDE DE MESURE DE HAUTEUR EN PRESENCE DE COUCHES MINCES

Publication

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Application

EP 16816597 A 20161207

Priority

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Abstract (en)

[origin: WO2017108400A1] The present invention relates to a device for measuring heights and/or thicknesses on a measurement object (24) such as a wafer, comprising: (i) a first low-coherence interferometer arranged to combine, in a spectrometer (18), a reference optical beam (17) and a measurement optical beam (16) from reflections of said light on interfaces of the measurement object (24), so as to produce a band spectrum signal (41) with spectral modulation frequencies; (ii) movement means (21) for varying the relative optical length of the measurement (16) and reference (17) optical beams, and means for measuring position information representing said relative optical length; (iii) electronic and computing means (20) arranged to determine at least one spectral modulation frequency representing an optical path difference between the measurement optical beam (16) and the reference optical beam (17), and to determine, using said position information and said at least one spectral modulation frequency, at least one height and/or thickness on said measurement object (24); and (iv) second optical means for measuring distance and/or thickness (27) with a second measurement beam (28) incident on the measurement object (24) according to a second surface opposite the measurement beam (16). The invention also relates to a method implemented in said device.

IPC 8 full level

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