

Title (en)

OPTICAL READING DEVICE FOR WRITING/READING ON/FROM MULTI-LAYER OPTICAL DISKS

Title (de)

OPTISCHE LESEEINRICHTUNG ZUM BESCHREIBEN/LESEN VON MEHRSCICHTIGEN OPTISCHEN DATENTRÄGERN

Title (fr)

DISPOSITIF DE LECTURE OPTIQUE DESTINE A LA LECTURE/ECRITURE DE/SUR DISQUES OPTIQUES MULTICOUCHES

Publication

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Application

EP 02742281 A 20020625

Priority

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Abstract (en)

[origin: WO03001512A2] An optical information reader for writing/reading of multi-layer optical disks utilizing light beam from the light source directed to optical carrier by the lens and receiving reflected or fluorescent light is described. An optical reader includes the device for the reception of reflected or fluorescent light and the detector of the disk writing/reading layer with the aim to determine a required value of compensation or correction of spherical aberration compare to the calculated one. The writing layer detector is controlling the reflected or fluorescent light signal obtained from information layer of carrier. Optical reader includes also a piezo-ceramic optical element resided in a light beam that is directed from light source to the carrier. This piezo-element has a phase difference between central and peripheral zones that depend on sign and value of voltage applied to it. An optical reader can determine a value and sign of optical aberration with high accuracy. Piezo-ceramic element reduces a spherical aberration to the accepted level at any writing layer and at any radial position of spot on record track. In such a way the average value of spherical aberration and its current value mediated by fluctuation of record layer thickness will be reduced. A piezo-ceramic device reduces aberrations by using the phase differences change between its central and peripheral zones as result of current change of record layer thickness.

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IPC 8 full level

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CPC (source: EP)

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