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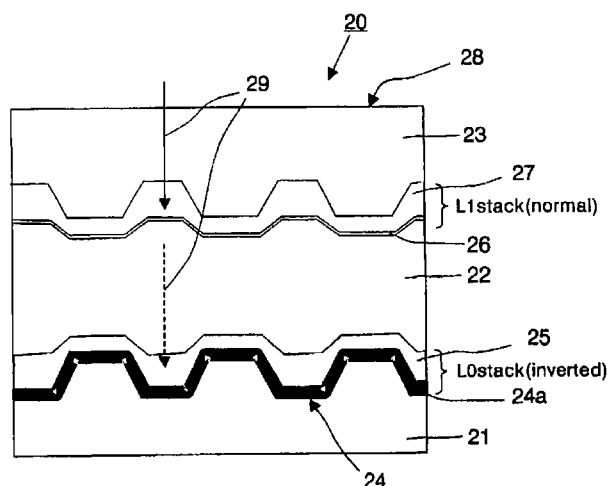
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(54) Title: OPTICAL DATA STORAGE MEDIUM AND USE OF SUCH MEDIUM



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(57) Abstract: An optical data storage medium (20) for recording by means of a focused radiation beam (29) is described. The radiation beam having a wavelength λ enters through an entrance face (28) of the medium during recording. The medium has a substrate (21) with a surface (24) including a guide groove with a depth g . An inverted stack of layers is present on the substrate (21) including a reflective layer (24a) with a complex refractive index $\tilde{n}_{M\lambda} = n_{M\lambda} - i*k_{M\lambda}$, in substantial conformity with the surface (24) of the substrate, a transparent layer (22) through which the radiation beam (29) is incident with a complex refractive index $\tilde{n}_{T\lambda} = n_{T\lambda} - i*k_{T\lambda}$ and a recording layer (25) of a material having a complex refractive index $\tilde{n}_{R\lambda} = n_{R\lambda} - i*k_{R\lambda}$ and having a thickness d_{RG} in the groove portion and a thickness d_{RL} in the portion between grooves. The recording layer is interposed between the reflective layer (24a) and the transparent layer (22). When $0.25/(3.0 + k_{M\lambda}^2) + 0.17 < g*n_T/\lambda < 0.22/(3.0 + k_{M\lambda}^2) + 0.45$ and $0.2 < (d_{RG} - d_{RL})/g < 0.5$ and $0 < d_{RG} < \lambda/n_{R\lambda}$ and $k_{R\lambda} < 0.5$ and $2 < n_{R\lambda} < 2.6$ the sign of the push pull tracking signal is reversed. In such way the inverted recording stack is tracked properly without modifications to the optical drive and backwards compatibility is achieved.

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