ABSTRACT OF THE DISCLOSURE

OPTICAL RECORDING MEDIUM AND RECORDING AND REPRODUCING METHOD USING THE SAME

An optical recording medium capable of recording and erasing information, includes a first dielectric layer, a recording layer, a second dielectric layer, a light reflection and heat dissipation layer, and an overcoat layer which are successively overlaid on a substrate, the recording layer including a phase-change recording material which includes as constituent elements Ag, In, Sb, Te, and N and/or O with the respective atomic % thereof being α, β, γ, δ and ε (the total atomic % of N and/or O), which are in the relationship of: $0 < \alpha \leq 6$, $3 \leq \beta \leq 15$, $50 \leq \gamma \leq 65$, $20 \leq \delta \leq 35$, $0 \leq \varepsilon \leq 5$, provided that $\alpha + \beta + \gamma + \delta + \varepsilon = 100$, and (2) having a recrystallization upper-limit linear speed in a range of 2.5 to 5.0 m/s. A recording method and a reproduction method, using this optical recording medium, are proposed.

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