METHOD OF WRITING TO AN OPTICAL DATA STORAGE MEDIUM, METHOD OF ~~READING~~ READING FROM AN OPTICAL DATA STORAGE MEDIUM, AND OPTICAL DATA STORAGE MEDIUM

Cross-Reference To Related Application

[0001] This application claims the benefit of priority of Singapore patent application No. 201207248-4, filed 28 September 2012, the content of it being hereby incorporated by reference in its entirety for all purposes.

Technical Field

[0002] Various embodiments relate to an optical data storage layer, an optical data storage medium and an optical data storage assembly.

Background

[0003] Optical data storage is widely used as an effective and permanent method of data storage. Using the current binary coding system, the smallest data structures that can be achieved with visible light has been achieved in the form of Blu-ray. The ability of creating 6-layer Blu-ray discs with a total capacity of 150 GB has been demonstrated.

[0004] It has also been reported that ultraviolet (UV) lasers have been used to read data, but presumably due to the incompatibility between UV and polymer based disks, this technology has not yet been brought to the market.

[0005] In addition, current research directions involve the use of near-field techniques such as near-field scanning optical microscopy, and exploiting the evanescent near field. Spot sizes are being reduced to the order of 50 nm. The major drawback of this method is the requirement to bring the substrate to within 10 - 25 nm of the read head, which would call the removability of the disc into question.

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