

Abstract

5 The invention relates to three-dimensional optical memory
devices and can be used in all areas of computing in which it
is necessary to record large data files on compact carriers.
The claimed device can also be used for recording, storing and
playing back video and audio recordings. A multi-layer optical
10 disc consists of a series of alternating layers of optically
transparent materials arranged in groups that comprise a layer
of a material with a refraction index n_1 enclosed between a
layer of a material with a refraction index n_2 , which satisfies
the relationship $n_2 < n_1$, and a layer of a material with a
15 refraction index n_3 , which satisfies the relationship
 $|n_3 - n_1| < 0.001$, wherein the layer with the refraction index
 n_3 contains a photosensitive compound that can exist in two
forms characterized by different optical properties.