

WRITE-ONCE INFORMATION RECORDING MEDIUM, INFORMATION
RECORDING METHOD, INFORMATION RECORDING DEVICE, INFORMATION
REPRODUCTION METHOD, INFORMATION REPRODUCTION DEVICE AND
METHOD FOR MANUFACTURING INFORMATION RECORDING MEDIUM

ABSTRACT

In an information recording medium in which storage capacity per recording layer has increased so much that the size of an SBM varies with those of spare areas, there is mutual dependence between a DDS and an SBM and it is difficult to retrieve disc management information as intended. In an information recording medium according to the present invention, if the largest space is allocated to an user data area, the number of blocks to store a space bitmap is N_i (where $N_i \geq 2$). But if the smallest space is allocated to the user data area, the number of blocks to use is smaller than N_i . In such an information recording medium, if the number of blocks to store the space bitmap of a recording layer is M_i (where $1 \leq M_i \leq N_i$) and if M_i is equal to or greater than two, the space bitmap is divided into the 1st through M_i^{th} space bitmaps, each of which has a size that is still equal to or smaller than one block even when combined with a DDS, and each space bitmap is stored in an associated one of M_i blocks in a disc management area.

Figure 10