

Diode Laser on the advance: Omicron Sets Trends with the DVD-Production of the next Generation

Rodgau (mas) - In co-operation with Memorytech, one of the world's greatest manufacturer of CDs and DVDs, Omicron Laserage Laserprodukte GmbH based in Rodgau has developed a particular diode laser for the production of DVDs in HD-format. With it Omicron treads completely new paths in laser technology proving to the contrary what critics thought to be impossible in respect of the production of DVD press patterns on a glass substrate, the so called DVD-Mastering with diode laser: the innovative equipment from the series of Laser Diode Modules (LDM) by Omicron is able to create the structural resolution of less than 200 nanometers in one photoresist as required for the HD-DVD format. Gas lasers with an emission-wave-length of 351 nanometers or less had been used so far. The new diode laser by Omicron with a wave length of 375 nanometers put into practice what had thought to be impossible. Furthermore it does not require a cost intensive acusto-optical AO-modulator any more as the Omicron diode laser can be modulated analogously in a direct way with up to 350 megahertz thus being by 30 percent faster than the AO-modulators. While the manufacture of a glass master by means of a gas laser requires approx. three hours the exposure time of the Omicron diode laser is only two hours.

The main advantage of the latest Omicron innovation is shown in the economic efficiency of the system. The Omicron diode laser is hardly bigger than a mobile phone and requires just the thousandth part of the current a 50 times bigger gas laser would need. Furthermore the acquisition costs of this equipment for the manufacture with diode lasers is many times more favourable and existing DVD manufacturing equipment can be converted without problem.

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Besides the expected life time of a diode laser is five to ten times higher in comparison to a gas laser. Eventually these economical aspects are the reason for a user-friendly sales price of the new DVD-generation.

This way Omicron could provide a clear competition advantage to HD-DVD in the competition of the two rival DVD-formats. While the manufacture of the Blu-Ray-Disc is still in experimental stage the application of the new Omicron laser allows it Memorytech already today to manufacture any quantity of HD-DVDs in series in a cost-effective way.

The new LDM lasers with wave lengths of 375 to 980 nanometers can be seen on the laser fair "World of Photonics in Munich from June 13. to 16.

For further information about the Omicron laser products please contact www.lasersystem.de.

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Note:

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