Lasers pecialist Omicron supports acively the development of laser technology in research and science

Rodgau (mas) –Omicron Laserage Laserprodukte GmbH based in Rodgau shows activities also in the non-commercial field an is actually involved in contributions for laser technology in six research and scientifical projects at different institutes and companies among which two running co-operations are actually of significant importance:

At the **joined project "Transformat"** promoted by the federal ministry of education and research (BMBF) Omicron is the responsible project partner for laser structuration of layer systems. The work-rate of Omicron focusses on the development of the laser systems required for structured transformation and appropriate control software applying different diode, solid state and gas laser systems with wave lengths between 400 and 540nm. For the activation of the quick galvanometer scanners, Omicron develops a software to write given 3D structuration pictures such as PCB layouts on the layers to be structured.

Objective of the "Transformat" project is the development of innovative layer materials with transformable multifunctional features for application in Molded Interconnect Devices (MIDs).
It is a question of injection molded switching supports, so incetion molded plastic parts with integrated electrically conductive printed lines on which electronic components can be soldered or stuck conductively. Thus MIDs can take over the function of conventional PCBs as used until now. The tree-dimensional injection molded part thus forms the housing part or a functional component and at the same time serves as a PCB for the setup of electronic circuits.

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Due to the further transformable features such as the variable transparency of layer systems this project exceeds the mere application as MID. During this project new materials are developed allowing the integration of optical, electrical, tribological and decorative functions into mechatronic systems. The project is limited from September 1, 2002 until August 31, 2005. At the time being a possible patent application is examined. Please find further information under www.transformat.com

At the **joined project "Arche"** initiated by Fraunhofer Institute the development team of Omicron provides its technical know-how and the practical experience in the field of material exposure by laser technology. In this connection Omicron supplies red as well as blue diode lasers adapted to the requirements of the system. In the center of the project there is the development of a colour micro-film laser exposure for the long term archiving of digital and digitalised documents with simultaneous use and processing of these data in digital networks or in analogue form thus providing the long term conservation of cultural goods, especially of library and archive goods.

The background of this project is that at the time being there is no technical possibility to conserve coloured cultural goods such as documents, pictures, manuscripts and prints with acceptable expenditure of work and cost in original condition and free from risks over a longer period of time. The objective of "Arche" until the end of the project at February 28, 2006 is the development of a integrated system for the safe and color-true faithful long term archiving of optical data
This project is to start an effective and affordable protection of cultural assets in order to conserve threatened cultural assets also for coming generations in mostly original conditions and to make them available on a large scale in digitalized form.

3.760 digits, 54 lines of approx. 65 strokes each

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