

## 3S PHOTONICS' laser diodes on their way to the Red Planet

**3S Photonics' laser technology has been integrated into one of the on-board instruments of the MSL (Mars Science Laboratory), which is part of NASA's Mars Exploration.**

**Nozay, December 5, 2011** – 3S PHOTONICS Group, a world-leading French manufacturer of optical and optoelectronic components for telecommunications networks, has offered its laser technology to the NASA's MSL (Mars Science Laboratory) mission. MSL aims to land and operate a Rover named Curiosity, a mobile robot equipped with 10 instruments, on the surface of Mars, to find out if the Red Planet has ever been inhabited.

The CNES, French Space Agency, in partnership with Quantel group and the CESR (French Space Research Institute based in Toulouse) have designed and built 2 out of the 10 instruments on board the Rover Curiosity, including the ChemCam (CHEMistry CAMera)

CHEMCAM is an elementary instrument that analyzes the rocks and the ground around the vehicle up to 9 meters away. It uses a spectroscopic analysis technique led by laser ablation. A laser shot fires at a target, causing the material to melt and plasma to emerge, which can be detected from a distance via UV-visible spectroscopy. This new technology, which has never been used, will enable the first selective analysis of Mars' rocks to be carried out without the need to move the Rover Curiosity. Based on the information retrieved from CHEMCAM, the Rover can reposition itself near to any rock in order to carry out further analysis.

In 2004-2005, 3S PHOTONICS' laser diodes were selected and integrated into ChemCam's laser for spectroscopy specially because of the process control and the performance and the high reliability of its products : key criteria for the mission.

NASA's Curiosity Rover has taken off on Saturday, 26 November 2011, onboard Atlas V rocket from the Cape Canaveral Air Force Station in Florida.

### [About 3S PHOTONICS](#)

3S PHOTONICS group is a leading provider of innovative optical products and solutions for Lasers, Sensing & Telecom markets. The Group designs, manufactures, and markets high reliability active & passive optical components and modules for the telecom, sensing & laser markets. It develops ultra-reliable fiber-optic systems including high-power fused components, optical sensors and fiber laser components. Through its Avensys Solutions division, it also provides instrumentation and integrated solutions for process and environmental monitoring systems.

More Information: <http://www.3sphotonicsgroup.com/>

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