

Press Release:

Valved Mercury Evaporation Source HGS

May 11th 2007

Germany – Weil der Stadt, MBE Komponenten, a manufacturer of ultra high vacuum (UHV) and molecular beam epitaxy (MBE) components and systems handed over the first “new generation” Hg source HGS to the Fraunhofer Institute for Applied Solid-State Physics (IAF) in Freiburg, Germany.

The new Valved Mercury Evaporation Source HGS is designed for evaporation of elemental Hg in UHV and MBE systems. It has been developed in cooperation with Dr. C.R. Becker from the University of Würzburg and is now built under license.

The source consists of a thermostat-heated evaporator reservoir, the independently heated valve and injector units and an external large capacity equalizing tank with additional refill container. The connection between reservoir and equalizing tank provides continuous hydrostatic refill of the evaporator, sustaining a constant liquid level. Consequently, a precise flux stability of better $\pm 0.1\%$ is achieved. The temperature of the heated evaporator is precisely controlled to better $\pm 0.03\text{K}$.

Typical applications of the HGS are growth of Hg based compounds and heterostructures in II-VI MBE, as well as the production of MCT devices like $\text{Hg}_{1-x}\text{Cd}_x\text{Te}$ infrared photodiodes.

About MBE Komponenten GmbH:

MBE Komponenten, based in Weil der Stadt, close to Stuttgart, Germany, is specialized in UHV and MBE equipment. The product range includes various evaporation sources like effusion cells, gas sources, valved crackers, e-beam evaporators and substrate manipulators, as well as MBE systems.

For more information please visit our web site at www.mbe-components.com

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