

Press Release

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New and unique: HPV-1 high-speed camera A view into a previously unknown world

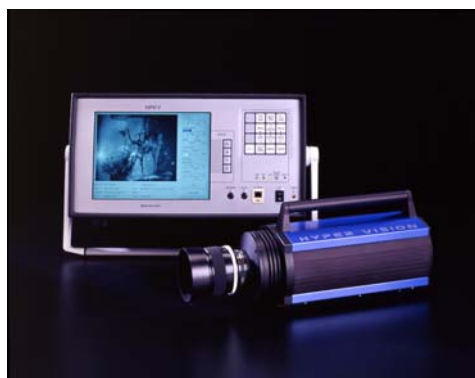
**Frame rates of one million frames per second (fps) /
Unique chip architecture enables high-speed acquisition /
Suitable for many different types of industries and application**

Shimadzu, one of the world leaders in analytical instrumentation, offers material science researchers and engineers a view into previously invisible worlds with the new high-speed camera HPV-1. This camera actually freezes phenomena which occur in the microsecond range – at a rate of 1 million frames per second (fps). At the highest recording speed, it takes only one thousandth of a second to acquire the first until the last frames.

The HPV-1 provides new insights into mechanical and machine processes as well as into chemical reactions. This includes research into hydrodynamic processes, degradation processes, propagation of shock waves or the visualization of production processes. The HPV-1 also supports applications in the life sciences, medical technology and sports science.

The heart of the high-speed camera is the unique architecture of the IS-CCD chip with integrated memory storing 100 separate images. This enables detailed analysis of high-speed phenomena. Even at weak illumination, the chip enables high scan rates of one million fps. The resolution of 81,000 pixels (312 x 260) will not deteriorate, even at the highest scan rates. With conventional high-speed video cameras, on the other hand, the resolution often decreases with increasing acquisition speed.

Software is installed in the associated control unit, enabling the observation of high-speed processes after only a few settings. The images can be stored in all commonly used formats such as AVI, BMP or TIFF.



Caption: HPV-1 Hyper Vision high-speed camera

For further editorial questions, please contact: Uta Steeger
Shimadzu Europa GmbH, Albert-Hahn-Str. 6-10, 47269 Duisburg, Germany
Tel.: +49 (0) 203-7687410, E-mail: us@shimadzu.de

Additional information is available on Shimadzu's website: www.shimadzu.de

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