



- 1 *Provips CMOS Sensor.*
- 2 *Sensor Module.*
- 3 *Spectral Response.*

## UV-ENHANCED HIGH FRAME RATE CMOS IMAGE SENSOR

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The new high frame rate CMOS sensor of Fraunhofer IMS was developed in the frame of the EU funded project PROVIPS and was designed for spectral imaging applications. The sensor exhibits HDTV (1280 x 960) resolution with a pixel pitch of 12  $\mu\text{m}$ . To ensure sensitivity in the UV range down to 200 nm, a modified passivation layer for the CMOS process was developed.

For demonstration purpose, a high frame rate camera was assembled which enables operation via CameraLink™ interface.

### Sensor Data

- Chip size: 20 mm x 19 mm
- Photo-active area: 15.4 mm x 11.5 mm
- 1280 x 960 pixels
- Pixel pitch: 12  $\mu\text{m}$
- Full well capacity: 165 ke<sup>-</sup>
- 200 Hz frame rate (full frame)
- 4 or 8 channel analogue outputs
- Multiple ROI readout
- Enhanced UV-transparent passivation layer

### Exemplary HDTV Camera

- Sensor board
- 8 x 16-bit ADC
- FPGA-board
- CameraLink interface

