

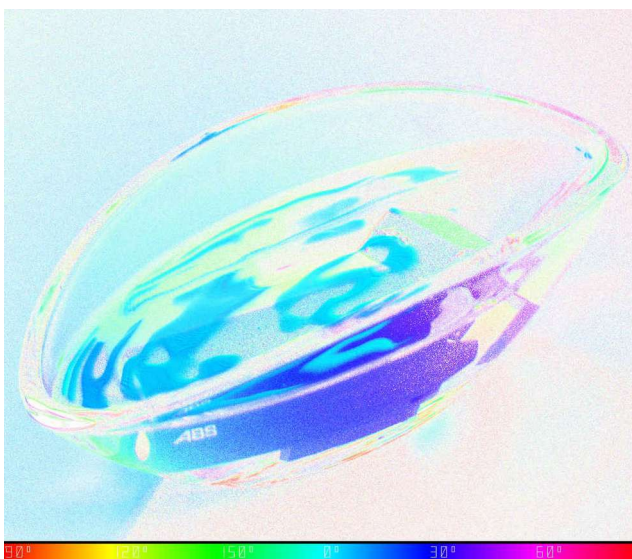
Polarization Camera
UK39396 (12 megapixel)
UK39376 (5 megapixel)

Visualise hidden things with state-of-the-art polarization sensors

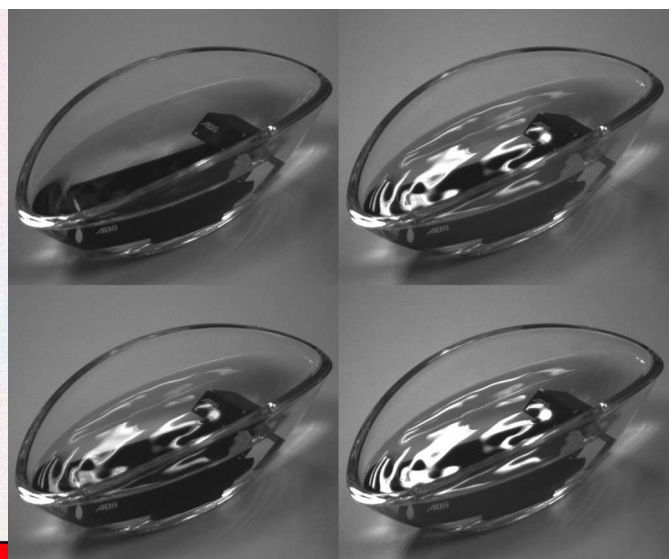
The new polarization camera family establishes another special camera series in the portfolio of the ABS GmbH. By using a modern polarization sensor, which simultaneously detects four polarization directions per macro pixel (0° , 90° , 45° and 135°), a frame rate of over 80 fps at 5 megapixels or over 30 fps at 12 megapixels resolution it is possible to display and evaluate the polarization directions and the amount of linear polarized light in real time. In addition, polarization properties such as the proportion of linear polarization (DoLP) and its angle (AoLP) can be determined. The camera with USB3.1 Gen 1 interface combines easy integration with robustness and user-friendly evaluation software. Of course, both hardware and software can be adapted to the respective application scenario. The measurement data can be used to implement a wide variety of applications:



- Detection of paint defects, coating defects, scratches (eg. on displays),
- Detection of mechanical stress in transparent materials (eg. in glass and plastics),
- Reflection avoidance as for example reflection in glass, windows or on liquids,
- Separation foreground and background eg. base to object and background suppression,
- Contrast enhancement for objects with low contrast or strong shadows,
- Improved roadside recognition by means of detection of polarization direction,
- Shape recognition in low-contrast scenes,
- Distinction between direct light and reflection,
- Cost-efficient alternative to polarimeters.



Polarization directions color coded
White = no distinct polarization component



Partial images of the four polarization directions