



armstrong optical

Tel: +44 (0) 1604 654220
Fax: +44 (0) 1604 654221
Email: info@armstrongoptical.co.uk
Web: www.armstrongoptical.co.uk

Armstrong Optical Ltd
31 Caxton House
Northampton Science Park
Kings Park Rd
Northampton, NN3 6LG
United Kingdom

μPhase® Technical Data

μPhase® Sensor

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| Measurement Technique | Twyman-Green phase-shifting interferometer, convertible to Fizeau measurement mode |
| Measurement Capability | Measurement of surface topography of reflective surfaces and optics, and wavefronts of optical systems in transmission |
| Laser Wavelength | 632.8 nm; option: any one wavelength between 335 and 1064 nm upon request |
| PV Repeatability (1) | $\lambda / 400$ ($\lambda = 632.8$ nm) |
| RMS Repeatability (2) | $\lambda / 6500$ ($\lambda = 632.8$ nm) |
| Measurement Uncertainty (3) | $\lambda / 20$ ($\lambda = 632.8$ nm), on request |
| Camera Resolution | μPhase® 500: 500 × 500 pixel μPhase® 1000: 1000 × 1000 pixel |
| Digitalization | 8 bit |
| Laser Specifications | μPhase 500/1000 for 632.8 nm |
| Type of Laser | Frequency-stabilized HeNe laser |
| Laser Protection Class | μPhase® 500/1000: 2; Laser itself: 3A |
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(1) Measured PV-Repeatability of the quoted statistic is for 100 consecutive measurements of the same cavity, measured over 96% clear aperture with 16 phase averages per data set. The specification represents the 2λ value of each statistic.

(2) Measured RMS-Repeatability of the quoted statistic is for 100 consecutive measurements of the same cavity, measured over 96% clear aperture with 16 phase averages per data set. The specification represents the 2λ value of each statistic.

(3) The measurement uncertainty equals the surface of the calibration surface used for the interferometer calibration up to the specified value. TRIOPTICS supplies standard calibration surfaces with a certified accuracy of $\lambda/20$ (surface shape deformation). Higher qualities on request.

All measurements were performed on an isolated optical table.