

INTERFIRE II 850 nm INTERFEROMETER

The INTERFIRE II 850 nm has been developed for testing optics in the near infra-red waveband. This is particularly relevant for optics designed for use in the upper wavelength range of silicon-based CCTV systems. The INTERFIRE II 850 nm utilises two laser diode sources and a standard silicon-based CCD system. One laser diode is used as a marker beam and the other for the measurements at 850 nm. These are coupled into a fibre optic to give very precise alignment. The laser diodes supply plenty of power, but the sensitivity of the camera is sufficient that they can be operated at relatively low power.

The new instrument has all the functional capabilities of the INTERFIRE II family, with a 35 mm aperture, zoom and focus systems and remote control. External beam expanders are also available for the instrument. The system is also fully compatible with phase shift measurement accessories. The high sensitivity ensures reliable fringe acquisition.



the INTERFIRE II 850 nm interferometer

Applications

- Near infra-red imaging
- Scene illumination systems for surveillance
- Surveillance optics for CCD camera systems
- NIR tracking systems

Benefits

- 850 nm wavelength
- High sensitivity for high quality fringes
- Accurate measurements
- Static and phase measurement fringe analysis software
- Remote control operation
- Full range of accessories

SPECIFICATIONS

INTERFIRE II 850	
Type:	Twyman-Green Unequal Path Interferometer
Wavelength:	850 nm
Dimensions:	675 mm (l) x 260 mm (w) x 280 mm (h)
Weight:	30 kg approx.
Laser Source	High performance diode laser
Head dimensions	150 mm (l) x 81 mm (w) x 64 mm (h)
Head weight	1 kg approx
Clear aperture:	Nominally 35 mm (greater than 31.5 mm guaranteed). Expandable with accessories
Fringe detection:	Focal plane array with fringe contrast adjustments
Display:	CCIR compatible or as specific user requirements
Alignment:	Integral co-linear visible HeNe laser
Optical zoom:	Continuously variable x 1 - x 3
Remote control:	Full control of reference mirror tilt/tip Diode & HeNe lasers on/off, standby, aperture focusing, optical zoom, phase shifting fringe analysis
Accuracy (PV):	STATIC: $\lambda/20$ PHASE: $\lambda/50$
Repeatability (PV):	STATIC: $\lambda/50$ PHASE: $\lambda/1000$
Data acquisition time:	STATIC: 0.04 sec PHASE: 0.167 - 1.33 sec
Min. hardware:	Pentium® computer with maths processor, vacant expansion slot for framegrabber board

Accessories

- Aperture converters to increase the 35 mm output beam diameter
- Reference flats ($\lambda/20$)
- Transmission spheres ($\lambda/10$)
- Reference spheres ($\lambda/20$)
- Collimating lenses
- Off-axis parabolas
- Attenuators
- Precision mounts
- Vertical configurations
- Upwards/downwards looking options
- Static and phase measuring fringe analysis systems

For further information about infra-red interferometers and their applications please contact our sales department



PRECISION-OPTICAL ENGINEERING

P-O E is a part of Precision Solutions
PB76B, MBDA, Six Hills Way, Stevenage, SG1 2DA, UK.
Tel: +44 (0) 1438 754477 Fax: +44 (0) 1438 755198
www.mbdaps.com precision.solutions@mbda-systems.com



VISIBLE / INVISIBLE LASER RADIATION
 DO NOT STARE INTO BEAM OR VIEW
 DIRECTLY WITH OPTICAL INSTRUMENTS
 850, 1.55 = CLASS 2 LASER PRODUCTS
 3-5 = CLASS 2 LASER PRODUCT
 10.6 = CLASS 3A LASER PRODUCT

