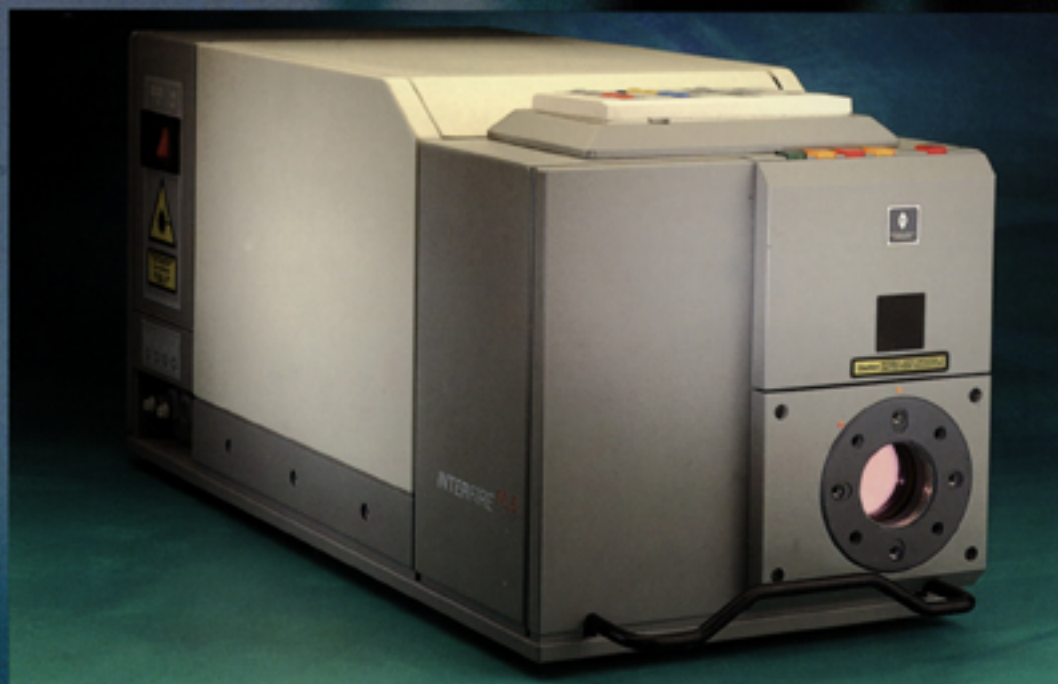


INTERFIRE

10.6



Designed for accurate testing of infra-red materials and lens systems, the **INTERFIRE 10.6** is a rugged, easy-to-use interferometer which can be configured to meet any testing need in optical and other precision industries, for production, quality control or research applications. It operates with precision and versatility and is compact and portable.

Optical Test Interferometer



**PRECISION-OPTICAL
ENGINEERING**

10.6

EFFICIENT AND CAPABLE

The **INTERFIRE 10.6** integral co-linear visible HeNe laser gives you rapid and accurate system alignment. The Twyman Green optical configuration combines with a stabilised CO₂ waveguide laser source to provide a versatile testing capability.

To meet the testing requirements of the 3-5µm wavelength band, the CO₂ laser can be replaced with another of the appropriate wavelength.

CAPABLE AND COMPATIBLE

As a precision, non-contact instrument, the **INTERFIRE 10.6** gives rapid and accurate measurement of wavefront distortion through infra-red windows and systems.

Its operating wavelength allows evaluation of certain aspheric surfaces, producing interference fringes where visible interferometers cannot, and its automatic fringe analysis complements the performance of the standard interferometer, giving it an attractive price-capability ratio.

RELIABLE AND AFFORDABLE

Reflecting Precision-Optical Engineering's position as a leading supplier in optical design, testing, sub-assembly, diamond machining and manufacture, the **INTERFIRE 10.6** has proven reliability, comes with a comprehensive operating manual, and is backed by a one year guarantee plus varying levels of technical field service and support.

BENEFITS

- Portable and compact
- Easy to set-up and operate
- Visible alignment laser
- Remote control operation
- Non-contact and precise
- Transmitted wavefront measurement for IR materials/systems
- Compatible with a wide range of standard accessories plus customised accessories to meet every testing need
- Versatile yet affordable



SYSTEM TESTING



HOMOGENEITY



FLAT SURFACES



DOMES TESTING



CERTAIN ASPHERICS



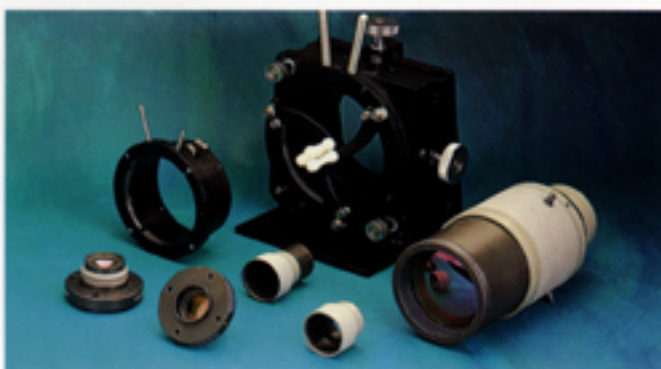
FEATURES

- *Designed for development, test or production laboratories.*
- *Accurately measures:*
 - Wavefront aberration of thermal imaging lenses.*
 - Optical homogeneity of IR materials.*
 - Flatness of optical surfaces.*
- *Rapid alignment and operation with full remote control, or by local console.*
- *Compact, lightweight design with integral handles for easy transportation.*
- *Video output can be computer interfaced - compatible with all popular fringe analysis packages.*
- *Aperture focussing for optimum fringe imaging.*
- *Optical zoom.*
- *Full range of optional accessories.*
- *Fully interlocked and safe.*

STANDARD ACCESSORIES INCLUDE:

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

In addition we can supply custom accessories to meet any optical testing requirement.

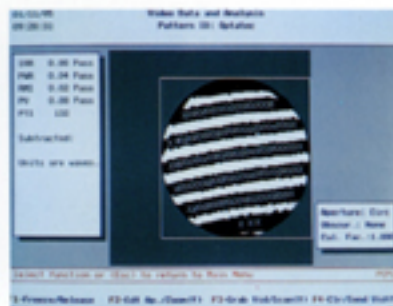
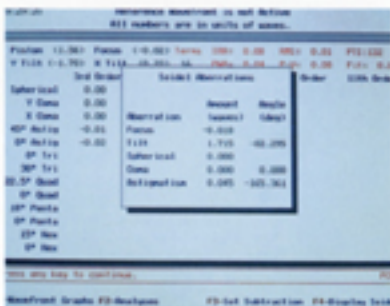


FRINGE ANALYSIS

FOTI-APEX is a versatile software package running on a standard PC with a framegrabber board enabling both simple routine tests and advanced system studies.

- Menu driven software
- Pass/fail criteria: irregularity, power, PV, rms
- Low cost analysis of open or closed fringes
- Full Wavefront Analysis including:
 - Modulation Transfer Function (MTF)
 - Point Spread Function (PSF)
 - Slope error
- Zernike analysis up to 49 terms
- Reference subtract

A flexible, low cost system for both component and system evaluation in production and research areas.



INTERFIRE 10.6 SPECIFICATIONS

Type:	Twyman-Green Unequal Path Interferometer
Wavelength:	10.6 μ m (others available on request)
Dimensions:	675mm (L) x 260mm (W) x 280mm (H)
Weight:	35kg approx
Laser type:	Water-cooled waveguide CO ₂ (others available on request)
Cooler:	Separate unit with non-drip interconnects
Power supply:	Mains a.c. to separate d.c. power supply unit 220-240v, 50Hz or 110v, 60Hz
Clear aperture:	35mm. Expandable with accessories
Fringe detection:	Pyroelectric vidicon with fringe contrast adjustments
Display:	CCIR compatible or as specific user requirements
Alignment:	Integral co-linear visible HeNe laser
Optical zoom:	Continuously variable x1 - x3
Remote control:	Full control of reference mirror tilt/tip, CO ₂ and HeNe lasers - On/off, standby, aperture focussing, optical zoom and camera gain/offset

FOTI-APEX

Accuracy (PV):	$\lambda/50$
Repeatability (PV):	$\lambda/100$
Data acquisition time:	0.04 sec
Data set:	240 x 240 pixels
Min/max no. of fringes:	3/28
Minimum hardware:	80386 computer with maths co-processor, Apex framegrabber board, 640 Kb RAM

FOR FURTHER INFORMATION ABOUT THIS PRODUCT AND ITS APPLICATIONS,
PLEASE CONTACT OUR SALES DEPARTMENT.



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