

GFP2500 PoleidoscopeTM

Automated Photoelastic Stress Measurement
by Stress Photonics Inc.



FEATURES

- Automated full-field strain measurement
- Portable
- Gigabit Ethernet Image Acquisition
- C-Mount or Micro-Video Lenses
- 20 micro-strain resolution typical
- Use with dynamic loading
- TintCoat[®] compatible for brush-on coating
- Sub-fringe resolution better than 0.1 nm
- Multi-fringe range to better than 900 nm
- LED Illumination systems available

PHOTOELASTIC STRESS MEASUREMENT

The GFP 2500 is a photoelastic stress analysis system for measuring stress in mechanical components, structures and materials. The system works with a wide range of photoelastic coatings, transparent and translucent materials.

Stress Photonics paint-on TintCoat[®] simplifies photoelasticity.

The DeltaVision software provides powerful features:

- Live image monitor
- Image acquisition
- Display; strain or stress and principal direction
- Data interrogation
- Camera controls
- Powerful acquisition and processing functions
 - Ambient light removal
 - Data smoothing
 - Reference data subtraction
 - Automatic coating thickness calibration

APPLICATIONS

- Verify FEA models
- Visualize stress patterns
- Measure residual stress in glass
- Determine assembly stresses

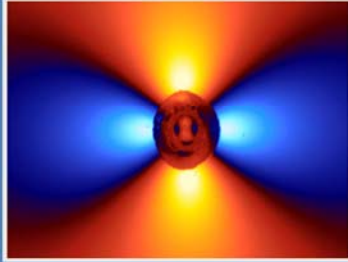
Stress Photonics

THE ANSWER IS CLEAR

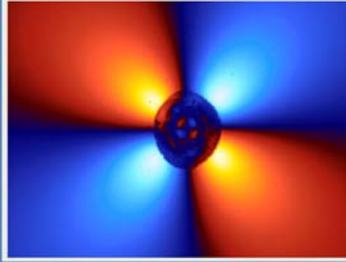
GFP2500 Poleidoscope™

Photoelastic Stress Measurement System
by Stress Photonics Inc.

PSA—Shear45



PSA—Shear0



The data acquired by the GFP 2500 can be reported in several valuable forms. The system produces two fundamental images referred to as Shear-0 and Shear-45. The Shear-0 image represents the in-plane shear strain on a 0° (horizontal) orientation. The Shear-45 image represents the in-plane shear strain on the 45° orientation. From these images and simple Mohr's circle definitions, the maximum in-plane shear and direction of the first principal strain are displayed.

LED 100 Illuminator

The LED 100 Illuminator produces achromatic circularly polarized light. It is a good match for many applications because it is easy to use and produces the high quality illumination. Use multiple units or choose the LED 200 Illuminator for applications requiring maximum light levels.



LED 100 Illuminator

Specification	Value
Port	Power and Strobe
Mounting	1/4-20 UNC standard tripod mount
Weight	500 grams
Size	165 x 50 mm
Power	350 mA maximum at 24V

GFP2500 Poleidoscope

The GFP2500 uses a kaleidoscopic lens to produce multiple images. Each image analyzed by a polarizer with a different axis. Powerful software combines the image to produce the classic photoelastic results in real-time.



GFP 2500 Poleidoscope

Specification	Value
Data and Control Port	GigE Vision GenICam
Auxiliary Port	Illuminator Strobe
Mounting	1/4-20 UNC standard tripod mount
Weight (without lens)	100 grams
Size	59 x 46 x 33 mm
Power	3.5 W

THE ANSWER
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*Stress
Photonics*

Stress Photonics Inc.
3002 Progress Road
Madison, WI 53716
USA
Phone: +1 608-224-1230
Fax: +1 608-224-1233
E-mail: info@stressphotonics.com