



Representing an advanced analytical tool available to our clients, the Digital Image Correlation (DIC) is a non-contact optical method of measuring three-dimensional deformation that may be the result of an applied load or a change in temperature. This advanced system documents, calculates and analyzes the displacements and deformations in three dimensions, based on the undeformed state, or reference state. The result is an array of virtual strain gages on the surface of the material being tested, which provides a localized level of detail not possible with traditional strain gages or extensometers. This is particularly useful for composite testing and analysis, and has been used extensively to verify Finite Element Analysis.

■ **Features and Benefits**

- Three-dimensional shape capture
- Localized strain information and material response of surface
 - › Strain and displacement in the x, y, and z directions at any point
 - › Line strains from any two points
 - › Area strains from a range of points
 - › Graphical representation of all points
- Enabling strain measurement method for unique geometries or test setups where extensometers or strain gages cannot be utilized

■ **Applications**

- Full-field strain in X, Y, Major, Minor, Shear Poisson's Ratio
- Shape capture and comparison
- Verification of FE models

■ **Capabilities**

- 0.2 to 14 inches fields of view for 2D/3D capture
- Microscopic field of view for 2D capture
- Mechanical and thermal strain capture up to 2400°F for select tests
- Two-sided capture possible
- High speed capture available

