

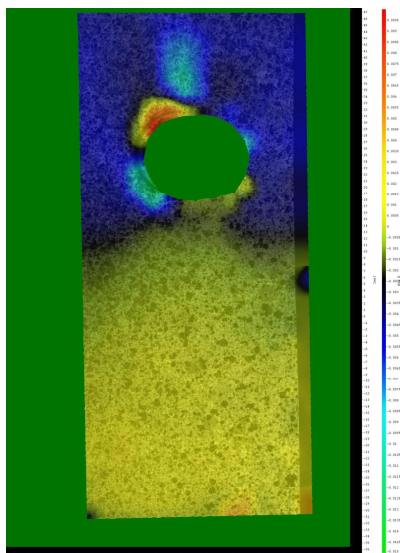


### 2 & 3D Digital Image Correlation camera and software system

A low speed progressive scan TM-2040GE camera is available for DIC work not requiring very high rate capacity in 2D. When used in conjunction with LAVision StrainMaster digital image correlation (DIC) software, test specimen displacements/strains can be determined. Local derivative calculations give the strain tensors across the entire surface, and the system provides a “virtual strain gauge” which can be placed anywhere on the sample surface, giving extremely accurate strain data.

The system has been upgraded to 3D DIC strain and deformation analysis consisting of 2x Imager E-lite 2M cameras including 50mm/f2.8 c-mount lenses, 1600 x 1200 pixel spatial resolution, and Davis StrainMaster software from LaVision.

*Figure 1. 3D Digital Image Correlation (DIC) system analysing glass-fibre reinforced composite single-lap, single-bolt bolted joint.*



*Image 2. Digital Image Correlation of a glass-fibre reinforced single-lap, single-bolt bolted joint, showing the in-plane Y strain ( $\epsilon_y$ ) with the raw speckled image superimposed in the background*