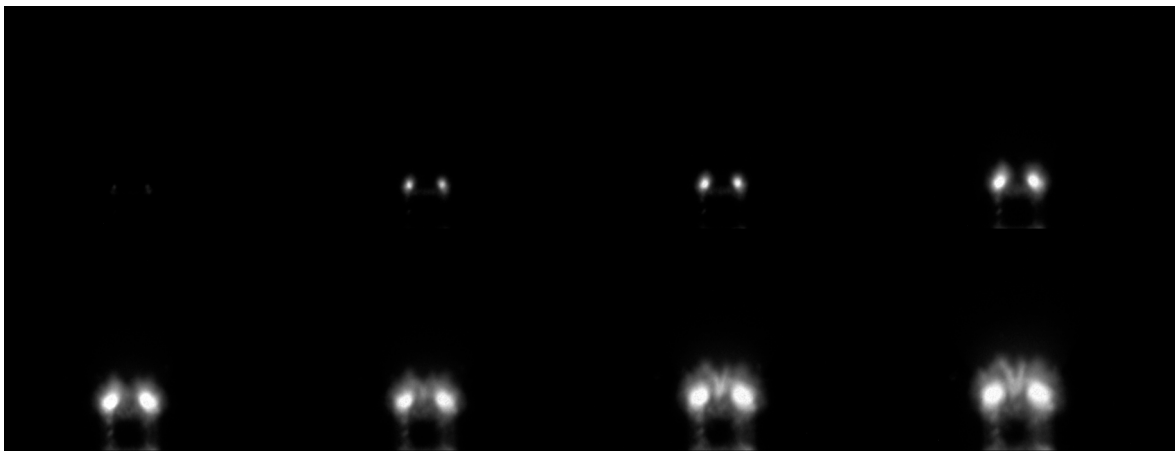




# Specialised Imaging

## Application Note 5

### Ultra-high speed recording turning on a Dual Micro Bridge Wire Detonator



#### IMAGING PARAMETERS

The SIMD8 Framing camera with Infinity Long working Distance microscope running at 1:5 magnification giving a horizontal field of view of 1.6 mm, thus giving about 2.5  $\mu\text{m}$  resolution at the field of view. Trigger timing was accomplished with internal triggers from the SIMD8 and external time delay generator.

#### EQUIPMENT PARAMETERS

The SIMD8 was programmed to take an 8 image sequence with initial delay of 1.3  $\mu\text{s}$ . The camera was programmed for equally spaced interframe times of 5 nanoseconds, 200 Million fps. Exposure times were programmed for 5 ns in all frames. Grain was set for Gain 1 out of 8 Steps on all frames. Light was supplied by self luminosity of the event.

#### OVERVIEW OF EXPERIMENT

The Dual Micro Bridge wire was positioned in the field of view of the long working distance microscope and critical alignment was done using an x-y stage adjustment. The lens was protected by a thin sheet of glass between the event and the lens. The lens was used at the minimum closed aperture to increase the depth of field as much as possible and due to the brightness of the event we had adequate light. Delay Timing and interframe times were verified using a calibrated oscilloscope and the monitor pulses from the camera which correspond to the exposure times and interframe times.

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