The Image Converter Tube acts as an electronic shutter in photographing extremely short duration events such as explosion phenomena.

The 6839 Image Converter Tube operates as an electronic shutter when pulsed. The tube contains an electron lens, a photocathode (the source of electrons), and a phosphor screen transducer which converts the electrical energy into light. The tube acts as a diode, having two consecutive cylinders forming the lens system, with the electrons from the cathode being electrostatically focused on the phosphor screen by the tube geometry. An external lens focuses the subject object on the cathode of the tube and when a short duration voltage pulse is applied to the tube at some predetermined time, the incident image is reproduced on the phosphor screen. Any short duration event is then instantaneously recorded on photographic film facing the phosphor screen.