

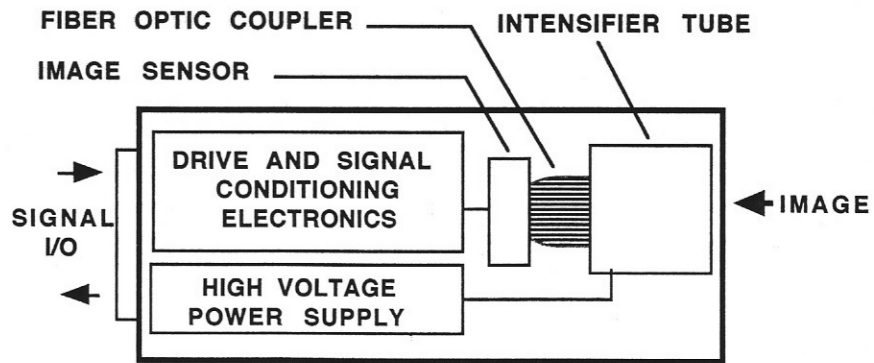
**XR/M ICCD CAMERA**

3/97-A

- \*EXTENDED RESOLUTION**
- \*FULL-FEATURED IMAGING IN COMPACT "MICRO" PACKAGE**
- \*STATE OF THE ART GEN III "ULTRA" TECHNOLOGY**
- \*LIGHT/IMAGE AMPLIFICATIONS OF 40,000**
- \*SUPERIOR RESPONSE AND LOW LIGHT PERFORMANCE**

The XR/M ICCD Camera System from Stanford Photonics is the newest in its line of high performance, low-light imaging products incorporating GEN III Ultra intensifier tube technology. The GEN III Ultra offers the highest resolution, the highest visible and near IR sensitivity and the best signal-to-noise specifications of any 18 MM input format device. Stanford Photonics uses its own proprietary bonding process to couple these tubes via fiber-optic tapers directly to the CCD image sensor. Direct fiber-optic coupling results in a five to ten-fold increase in sensitivity and higher resolution and contrast in the final video image relative to ICCD cameras using relay optics between the intensifier and image sensor.

An added benefit of fiber-optic coupling is a reduction in package size: the XR/M ICCD, complete with intensifier tube, tube power supply, sensor and camera drive electronics, has a standard envelope dimension of 2" by 2.37" by 4.75" long. This "micro" size package opens up many opportunities for covert surveillance, remote piloted aircraft and transports, robotics, submersibles and machine vision, where volume and mass are critical in the application.



"MICRO" ENVELOPE: 2.00W BY 2.375 H BY 4.75 INCHES LONG

**XR/M ICCD CAMERA COMPONENTS**

The XR/M uses a 768(H) by 494(V) pixel, 2/3-inch format interline transfer CCD backed by full-featured RS-170 drive electronics. The 2/3-inch sensor requires less image reduction (smaller taper ratio for 18mm to 2/3-inch format conversion) and therefore provides better sensitivity than coupling based on 1/2 inch devices. The final system resolution of the combined intensifier tube-taper-sensor-electronics assembly exceeds 500 TVL(H). The superior low-light response of the XR/M camera allows imaging and detection at levels below 10<sup>-6</sup> Lux .

The standard XR/M is designed for auto-gain/auto-iris lensing and complete hands-off operation. Other functions and features available on a custom basis or in other product configurations offered by Stanford Photonics include:

- |                                  |                               |                         |
|----------------------------------|-------------------------------|-------------------------|
| <b>*HIGH QE SELECTION</b>        | <b>*PHOTOCATHODE GATING</b>   | <b>*AUTO-GATING</b>     |
| <b>*72 LP/MM TUBE SELECTION</b>  | <b>*ZERO DEFECT COSMETICS</b> | <b>*MANUAL GAIN</b>     |
| <b>*120-240 HZ. FAST FRAMING</b> | <b>*CUSTOM PACKAGING</b>      | <b>*GEN II, GEN II+</b> |
| <b>*600 TVL EXTENDED RES.</b>    | <b>*OPEN FRAME OEM</b>        | <b>*DIGITAL CAMERAS</b> |

