

UVi 1850 Series

18mm Format
High Speed Video Camera Intensifier



FEATURES

- UV to NIR spectral respons
Fast Gating to 5ns
- High Gain/Sensitivity
- Frames rates to > 1,000,000
fps with HSV
- Up to 20,000,000 fps in burst
mode
- Integral control panel and
external USB control
- Exceptional resolution
- Choice of optimized
photocathodes & phosphors

CUSTOMIZED OPTIONS:

- Photocathode: S20 (UV
biased, UV to Visible) or S25
(Visible biased, UV to NIR)
- Phospor: Proprietary Green
(decay typically 10 μ sec)
or P46 (decay typically < 1
 μ sec)
- Ultra Fast Gating: up to
100ns, 10ns or 5ns in 10ns
steps

UVi 1850 Series Camera Intensifier

- 18mm Output Diameter
- Ultra Fast Shutter Speeds
- Customized for UV to Near IR Imaging
- Superior Gain Boosting Performance
- Optimized for Digital High Speed Video Cameras



The Invisible® Vision UVi series of camera accessory intensifiers are designed to add low light, extended spectral range (from UV to NIR) and fast gating in a compact and all inclusive, easy to use lens coupled package. Typical applications are in combustion, electric discharge, biomedical and ultra-high speed stroboscopic or shuttering techniques with high speed or conventional video cameras.

The UVi is easily programmed by its integral menu driven LCD display/control panel or via its USB interface and software to synchronize to an external TTL or video signal; offering multiple, digitally programmed gain, delays and exposures (> 10ns in 10ns steps) at input trigger rates to > 100,000 per second and up to 20,000,000 per second in burst mode.

The novel, custom designed intensifier is optimized for use with modern high speed video cameras offering high gain

and a proprietary phosphor with fast decay (including a small 'tail') and efficient green output. The intensifier output image is collected by the high performance internal relay optics matching into either an externally adjustable F or C mount (18mm diagonal image) supplied lens on the coupled camera system. The user may easily select alternative image formats by an alternative choice of objective lens.

Advanced features such as a fully user programmable output shutter monitor and an independent output strobe complement the system.

Alternative UVi models optimized for specific spectral responses, phosphors, intensifier formats or fast shuttering speeds are also available.

Intensifier Full Custom, integral MCP design.
 Input Window Quartz.
 Photocathode S25, S20, 200nm > 600nm (UV to Visible) - see response curves below.
 Typical white light response between 100 to 150µA/lumen.
 Output Window Fibre-optic.
 Phosphor Proprietary green, decay – typically 10µs. Others i.e. P46 available.
 Luminous Gain Maximum > 150,000.
 Output Diameter 18mm (Alternative 25mm format also available).
 Gating 100ns Minimum (5ns and 10ns options available upon request).
 Resolution 27 lp/mm.

Optics

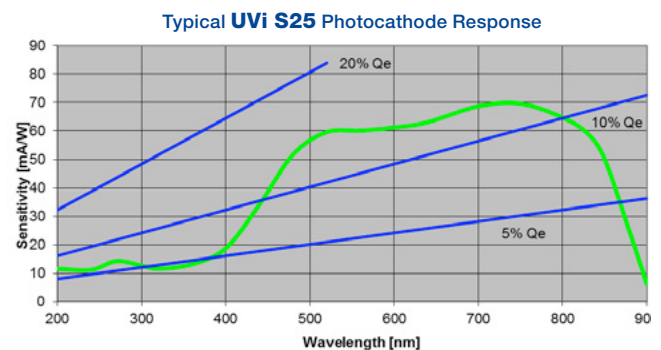
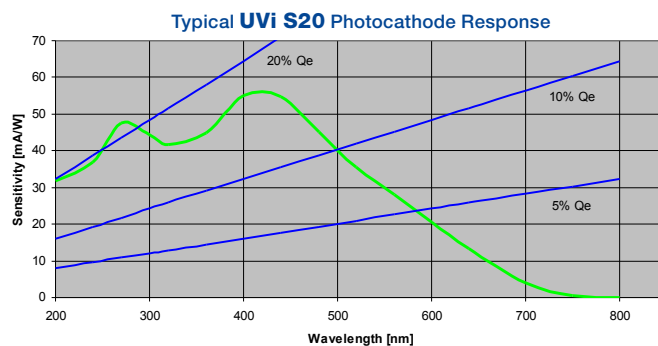
Input F – mount.
 Internal Integral f/1.4 lens system.
 External Mated f/1.4 lens.
 Output Image Format Maximum usable diameter 17.5mm. (25mm format also available).

System

..... All electronics/controls included within unit.
 Menu driven LCD control panel / indicators.
 USB port and graphical user interface s/w.
 Crystal controlled timing accuracy.
 Exposures 100ns to > 1ms in 10ns steps.
 5ns and 10ns options available upon request.
 Delays 30ns > 10ms in 10ns steps.
 Burst mode / Multiple Exposure Up to 100 programmed delays/exposures per input trigger.
 Gain Control User programmable 0 to 100% (12 bits).
 Triggering TTL Positive, TTL Negative.
 Make / Break (self powered).
 Comp. video frame / field synchronization.
 Outputs User Programmable TTL shutter monitor.
 User Programmable TTL 'strobe' output.
 Protection Automatic over-brightness (user controlled).

Environmental

Dimensions (approximate) 105 x 85 x 180mm - including output lens.
 Weight < 1.5 Kg.
 Power 16W (16V DC @ 1A max.) via supplied adapter (90-264VAC).
 Temperature 0°C to 40°C, non-condensing humidity.
 Construction Aluminium housing.
 Mounting 1/4-20 UNC thread on base.
 Documentation and Software Supplied on CD.



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