Invisible vision

Making the invisible visible

UVi Camera Intensifier

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 (> 20ns 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 faster shuttering speeds are available upon request.

3 Judges Drive, Norwich NR4 7QQ UK +44 (0) 1603 458538 www.invisiblevision.com

Specification UVi Model 1850-10

Intensifier	**Full Custom, integral MCP design.**
Input Window	Quartz.
Photocathode	S20 / S25, 200nm to > 850nm (UV to NIR). Typically 600µA/lumen (white light).
Output Window	Fibre Optic.
Phosphor	Proprietary green, decay – typically 10µs.
Gain	Up to 400,000 (‘photon counting’).
Output Diameter	18mm.
Gating	30ns Minimum (standard unit).
Resolution	27 lp/mm.

Optics	
Input	F – mount.
Internal	Integral f/1.4 lens system.
External	Mated f/1.4 lens with F/C mount supplied.
Output Image Format	Maximum usable diameter 17.5mm.

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	30ns to > 1ms in 10ns steps.
Delays	50ns > 10ms in 10ns steps.
Burst mode / Multiple Exposure	Up to100 consecutive 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 AC/DC adapter and leads (90-264VAC).
Temperature	0ºC to 40ºC, non-condensing humidity.
Construction	Aluminium housing.
Mounting	1/4-20 UNC thread on base.
Documentation and Software	Supplied on CD.
Packaging	Flight box.

CE and RoHS (Pb free)

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