High Power
High Speed Video
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 1850B models are designed for higher power output applications as typically required with high speed video camera frame rates in excess of 50,000 fps. Similar to a conventional 3 stage design in terms of output power and performance but with an improved inter-stage proprietary fast phosphor and a full custom designed intensifier the 1850B suffers less from inter-stage concatenating phosphor decays than conventional designs.

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) and at framing rates up to 10M fps in burst mode.

The custom designed boosted intensifier is optimized for use with modern high speed video cameras offering high gain and a fast P46 output phosphor. The intensifier output image is collected by the high performance internal relay optics matching onto an externally adjustable 50mm F mount (18mm diagonal image) supplied lens to the coupled camera system. Alternative image formats may be selected by differing coupling lenses.

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 also available.
**Specification**

**UVi**

**Model 1850B-10-S25**

### Intensifier

**Input Window**: Quartz.

**Photocathode**: S25, 200nm to > 850nm (UV to NIR) – see response curve below. Typically > 600µA/lumen (white light).

**Output Window**: Fibre-optic.

**Phosphor**: Output stage P46, Intermediary stage proprietary.

**Luminous Gain**: Maximum typically 1,000,000

**Output Diameter**: 18mm.

**Gating**: 30ns Minimum, 10ns typical (faster units 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**: 30ns to > 1ms in 10ns steps. 10ns typical minimum exposure.

**5ns and faster units available upon request.**

**Delays**: 50ns > 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)**: 130 x 85 x 180mm - including output lens.

**Weight**: < 1.5 Kg.

**Power**: 16W (16V DC @ 1A max.) via supplied adapter (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)

Invisible Vision reserves the right to modify specifications without notice.

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