



*Making the invisible visible*



## 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 (> 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 (25mm) or faster shuttering speeds are also available.

## Intensifier

Input Window  
Photocathode

Output Window  
Phosphor  
Luminous Gain  
Output Diameter  
Gating  
Resolution

### **Full Custom, integral MCP design.**

Quartz.  
S20, 200nm > 600nm (UV to Visible).  
Peak response typically > 50 mA/W - see response curve below.  
Typical white light response between 100 to 150µA/lumen.  
Fibre-optic.  
Proprietary green, decay – typically 10µs. Others i.e. P46 available.  
Maximum > 150,000.  
18mm (Alternative 25mm format also available).  
10ns Minimum (faster units available upon request).  
27 lp/mm.

## Optics

Input  
Internal  
External  
Output Image Format

F – mount.  
Integral f/1.4 lens system.  
Mated f/1.4 lens.  
Maximum usable diameter 17.5mm. (25mm format also available).

## System

Exposures  
Delays  
Burst mode / Multiple Exposure  
Gain Control  
Triggering

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

Outputs

Protection

## Environmental

Dimensions (approximate)  
Weight  
Power  
Temperature  
Construction  
Mounting  
Documentation and Software  
Packaging

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

## **CE and RoHS (Pb free)**

Invisible Vision reserves the right to modify specifications without notice.

The Invisible logo is a trademark of Invisible Vision Ltd.

© Invisible Vision Ltd. 2007. All rights reserved.

