



**nitamericas**  
INCORPORATED

**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 µsec) or P46 (decay typically < 1 µsec)
- Ultra Fast Gating: up to 100ns, 10ns or 5ns in 10ns steps

# UVi 1850 Series

18mm Format  
High Speed Video Camera Intensifier



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).

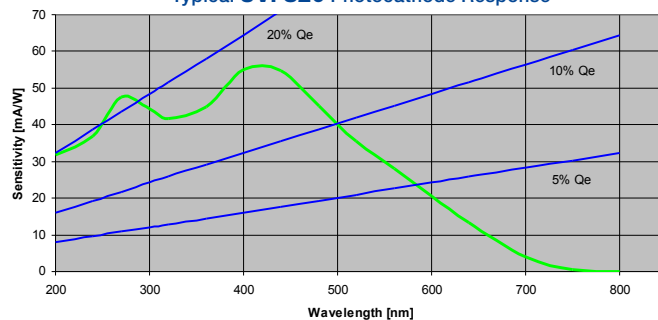
### System

..... 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.

Typical UVi S20 Photocathode Response



Typical UVi S25 Photocathode Response

