



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 (from 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.
S25, 200nm to > 850nm (UV to NIR) – see response curve below.
Typically > 600 μ A/lumen (white light).
Fibre Optic.
Proprietary green, decay – typically 10 μ s. Others i.e. P46 available.
Maximum > 400,000 ('photon counting').
18mm. (Alternative 25mm format also available).
30ns Minimum, 10ns typical (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
Outputs
Protection

All electronics/controls included within unit.

Menu driven LCD control panel / indicators.
USB port and graphical user interface s/w.
Crystal controlled timing accuracy.
30ns to > 1ms in 10ns steps. 10ns typical minimum exposure.
5ns and faster units available upon request.
50ns > 10ms in 10ns steps.
Up to 100 consecutive programmed delays/exposures per trigger.
User programmable 0 to 100% (12 bits).
TTL Positive, TTL Negative.
Make / Break (self powered).
Composite video frame / field synchronization.
User Programmable TTL shutter monitor.
User Programmable TTL 'strobe' output.
Automatic over-brightness (user controlled).

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 AC/DC adapter and leads (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)

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