



**nitamericas**  
INCORPORATED

**FEATURES**

- UV to NIR spectral response, Fast Gating to 10ns
- High Gain/Sensitivity
- Frame rates to > 1,000,000 fps with HSV
- Up to 2,000,000 fps in burst mode
- Integral control panel and external USB control
- Exceptional resolution to >75 lp/mm (with 25mm output diameter)
- Photocathode: S20 (UV biased, UV to Visible) or S25 (Visible biased, UV to NIR)
- Phosphor: P46 (decay typically < 1  $\mu$ sec)

# SUVi Series

High Power  
High Speed Video Camera Intensifiers



## SUVi Camera Intensifiers

- Ultra High Resolution
- Ultra Fast Shutter Speeds
- Customized for UV to Near IR Imaging
- Superior Gain Boosting Performance
- Optimized for Digital High Speed Video



The Invisible® Vision Super-UVi (SUVi) series of patented camera intensifiers are designed for the most exacting scientific applications.

They offer an unparalleled resolution of over 75 lp/mm coupled with extremely high output power/life and linear signal amplification necessary for quantitative data capture.

Easily synchronized and optically lens coupled to a high speed video camera, each video frame may be programmably gated from 50ns and upwards in 10ns steps to repetition rates of up to 1MHz.

Available with either S20 or S25 photocathodes, the unique patented system offers deep UV to visible response (200 to 900nm) with modest system gain into a P46 (green) fast decay output phosphor, but

may also be coupled to a front end MCP derived intensifier (reducing linearity & MTF/resolution) for higher gain or faster gating.

Typical applications are in PIV for fluid dynamics, combustion studies, electric discharge, biomedical and ballistics as well as many other high speed and ultra high speed macroscopic imaging requirements.

The SUVi is easily programmed by its integral menu driven LCD display/control panel or via its USB interface and software to synchronize to external TTL or video signals; offering multiple programmable exposures and delays from 30ns at repetition rates of up to 1MHz and beyond in 100 frame burst trigger mode. Advanced features such as a fully user programmable output shutter monitor and an independent output strobes complement the system.

# SUVi 25 Series Camera Intensifier

## Intensifier

Input Window .....	Quartz.
Photocathode .....	S20 or S25, 200nm to > 900nm (UV to NIR).
Output Window .....	Glass.
Phosphor .....	P46 (Green) - decay < typically 1 $\mu$ s.
Gain .....	Typically 100 (dependent upon photocathode selected)
Output Diameter .....	25mm.
Gating .....	50ns Minimum (standard unit). 30ns absolute minimum.
Resolution .....	75 + lp/mm.

## Optics

Input .....	F – mount.
Internal .....	Integral f/1.2 lens system.
External .....	Mated f/1.4 lens.
Output Image Format .....	Maximum usable diameter 25mm.

## 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 .....	50ns to > 1ms in 10ns steps (will allow faster gating).
Delays .....	50ns > 10ms in 10ns steps.
Burst mode / Multiple Exposure .....	Up to 100 consecutive programmed delays/exposures per input trigger.
Triggering .....	TTL Positive, TTL Negative.
.....	Make / Break (self powered).
.....	Comp. video frame / field synchronization option.
Outputs .....	User Programmable TTL shutter monitor.
.....	User Programmable TTL 'strobe' outputs.
System Photon Gain .....	Combination of relay optics and intensifier. > 10.

## Environmental

Dimensions (approximate) .....	285 x 168 x 230mm - including output lens & handle.
Weight (approximate) .....	11Kg.
Power .....	150W (90-264VAC).
Temperature .....	0°C to 40°C, non-condensing humidity.
Construction .....	Aluminium housing.
Mounting .....	3/8-20 UNC thread on base.
Documentation and Software .....	Supplied on CD.
Packaging .....	Flight box.

Typical SUVi 25-S20 Photocathode Response

