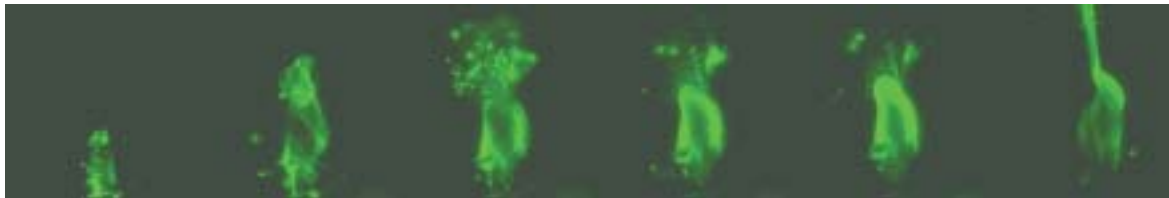


## SIL



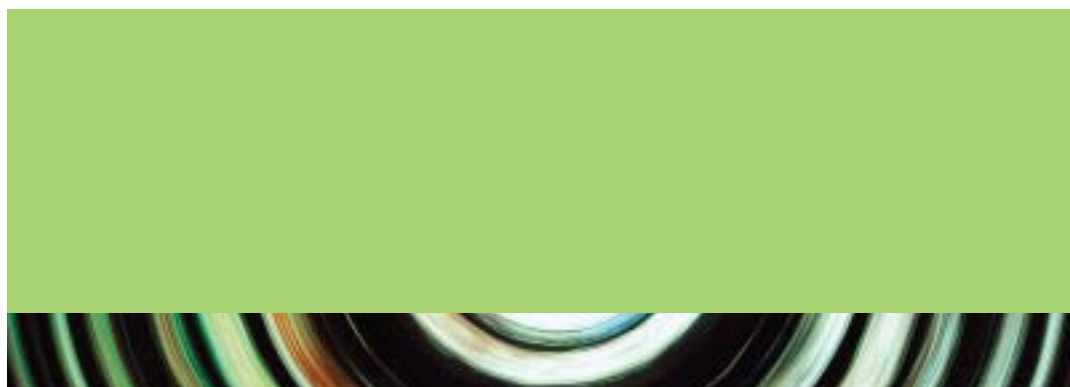
Specialised Imaging lens intensifiers are a family of custom designed gated image intensifier systems to improve the sensitivity of high-speed video and image converter cameras.

Extensive triggering facilities allow the SIL to be readily interfaced to most manufacturer's high-speed cameras, and in particular to high-speed video systems. Constructed around high gain MCP intensifiers these units provide a wide range of sensitivity, gain and resolution options to satisfy even the most demanding imaging applications. The comprehensive range of operating parameters are programmed from the intuitive local keypad or from a remote PC via Ethernet link, which also allows archiving and loading of timing set-ups. The intensifier photocathode can be selected to optimise sensitivity within the range of UV, through visible, to near infra-red. Triggered synchronously at high speed, these devices allow the fast framing rates and short exposure times necessary to investigate rapidly evolving processes.

Image input to the intensifier is provided through a standard lens mount (C-mount or Nikon F-Mount according to user requirement). The captured images are relayed to the camera via suitable high aperture lenses, attached to the output Nikon F-mount that is fitted as standard.

## Features

- High gain & high resolution Image Intensifier
- Up to 100,000fps with electronic shuttering down to 50ns
- Extensive triggering facilities
- Flexible outputs for triggering external events or instruments
- Choice of lens mounts
- Compact, rugged mechanical design
- Intuitive operation from the integral keypad
- Computer controlled via Ethernet



# specifications



## OPTICAL

Front Lens mount C-mount or F-mount (others available on request)  
 Output Coupling F Mount lens fitting (others available on request)

## INTENSIFIER

	SIL40HG50	SIL40NG50	SIL25HG50	SIL25NG50
Front Window	Fused Silica	Fused Silica	Fused Silica	Fused Silica
Output Window	Glass	Glass	Glass	Glass
Photocathode	S20	S20	S20	S20
Input Area (diameter)	40mm	40mm	25mm	25mm
Spectral response (minimum)	15mA/W @ 214nm 55mA/W @ 450 nm 17mA/W @ 800 nm	17mA/W @ 214nm 55mA/W @ 450 nm 10mA/W @ 800 nm	15mA/W @ 214nm 48mA/W @ 450 nm 17mA/W @ 800 nm	20mA/W @ 214nm 53mA/W @ 450 nm 17mA/W @ 800 nm
Radiant Gain (W/W @ 500nm)	100,000	10,000	100,000	10,000
Limiting resolution (Typical)	22 lp/mm	30 lp/mm	27 lp/mm	40 lp/mm
Output Phosphor	FS/10µs decay	FS/10µs decay	FS/10µs decay	FS/10µs decay

## MECHANICAL

Mounting 1/4 BSW standard Tripod mount in base  
 Support Adjustable lens/camera support bars

## TIMING PARAMETERS

System Clock 100MHz, quartz crystal controlled.  
 Inherent Delay <100ns  
 Exposure Time 20ns - DC in 10ns steps independently variable  
 Inter Exposure Time 50ns - 25ms in 10ns steps independently variable  
 Number of exposures Up to 64 in pulsed mode. D.C. focus available  
 Unlimited in REP (synchronous) mode

## INPUT/OUTPUT SIGNALS

Triggers (2 off) Electrical signal (50Ω BNC connector)  
 Threshold variable from 2-50V  
 Rising or falling edge  
 Positive or Negative polarity  
 Make/Break  
 50Ω or 1KΩ termination  
 Composite video, multi-standard  
 Local keypads with LCD display  
 Trigger Output Pulse width and position user programmable minimum width 20ns  
 TTL into 50Ω  
 Aux Outputs Pulse width and position user programmable minimum width 20ns  
 TTL into 50Ω  
 4 available  
 Camera Interface Remote Control via standard Ethernet

## ENVIRONMENTAL

Storage temperature -10°C to +70°C  
 Operating temperature -5° to +40°C  
 Humidity 10 - 90% RH non condensing  
 Vibration shock 10 - 40Hz Max. 10g in any direction  
 EMC Meets all EC harmonized standards



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