

## Compact image intensifier/converter

**Range of Intensifier tube options**

**Up to 40lp/mm resolution**

**Gate times down to 10ns**

**Comprehensive triggering  
for High-speed video  
and other cameras**



The Specialised Imaging SIL3 image intensifier is the latest generation of intensifier that can be synchronised to almost any high-speed video, conventional video or stills camera.

Maximum equivalent frame rates ranging from 100,000fps to 1,000,000fps and minimum gate (exposure) time of 10ns.

All Intensifier tube options use fused silica input windows as standard. The two possible output window diameters, Phosphor decay times and Wavelength responses options (inc. UV) allows the SIL3 to be configured as a unique enhancement to any camera.

Intuitive custom control software allows gain, gate/exposure and delay adjustment via Ethernet.

### FEATURES

- 18mm and 25mm Intensifier tube options
- Fully adjustable gating times down to 10ns
- Gain adjustment up to 500,000X
- Nikon lens mount fitting
- Optical camera coupling
- Ethernet communications
- UV wavelength conversion option

BASE UNIT	AVAILABLE OPTION	PHOTO-CATHODE	RESPONSE (>10% QE)	MINIMUM GATING TIME	SYSTEM GAIN	MAX FREQUENCY	LIMITING RESOLUTION	
			nm	ns	X	kHz	Stated lp/mm	Equivalent $\mu$ m
<b>SIL3 18NG-50</b>		<b>S25</b>	<b>450 - 875</b>	<b>50</b>	<b>10,000</b>	<b>100</b>	<b>40</b>	<b>12.5</b>
	Short Gating	-	-	10	-	-	-	-
	UV Sensitive	S20	200 - 550	-	-	-	-	-
	High Gain 40K	-	-	-	40,000	100	30	16.7
	FAST	-	-	-	4,000	1,000	40	12.5
	FAST + High Gain 40K	-	-	-	40,000	1,000	30	16.7
<b>SIL3 25NG-50</b>		<b>S25</b>	<b>450 - 875</b>	<b>50</b>	<b>4,000</b>	<b>100</b>	<b>40</b>	<b>12.5</b>
	Short Gating	-	-	20	-	-	-	-
	UV Sensitive	S20	200 - 550	-	-	-	-	-
	High Gain 100K	-	-	-	100,000	100	36	13.9
	High Gain 500K	-	-	-	500,000	100	36	13.9
	FAST	-	-	-	10,000	1,000	36	13.9
	FAST + High Gain 100K	-	-	-	100,000	1,000	32	15.6
	FAST + High Gain 500K	-	-	-	500,000	1,000	32	15.6

### OPTICAL

Front Lens mount	F-mount
Optical Coupling	F-mount

### MECHANICAL

Dimension mm (w/d/h)	17.8cm x 18.5cm x 19.7cm (7.0" x 7.3" x 7.8") without lenses
Mount	3/8-16UNC Female (standard tripod)
Weight	4.8Kg (10.6lbs) without lenses
Lens/Camera Support	Option available

### ENVIRONMENTAL

Storage temperature	-10°C to +50°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 UKCA/EU harmonised standards

### TIMING PARAMETERS

System Clock	200MHz, quartz crystal controlled.
Inherent Delay (5ns jitter)	60ns
Exposure Time	50ns—DC in 5ns steps independently variable
Inter Exposure Time	50ns—25ms in 5ns steps independently variable
Number of exposures	Up to 64 in pulsed mode. Unlimited in REP (synchronous) mode

### INPUT / OUTPUT SIGNALS

Triggers	Electrical signal (BNC connector) Maximum Input level 50V Threshold variable from $\pm$ 25V Positive or Negative polarity, Make/Break 50 $\Omega$ or 1K $\Omega$ termination
Aux Outputs	Pulse width and position user programmable (min. 5ns) TTL into 50 $\Omega$
Control Interface	Remote control via Standard 100Mbps Ethernet
Inhibit Input	5V TTL (user input brightness protection)
Software	Custom software compatible with Microsoft Windows Operating Systems for control
Electrical input	Mains 100-240V AC 50-60Hz

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