

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, 25mm & 40mm 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

MODEL SPECIFICATION

SIZE	Gain	Minimum Gating Time	Photo-cathode	Phosphor	"Max. Frequency (Hz)"	"Typical Resolution (lp/mm)"	"Typical Resolution (µm)"
SIL3 18	NG (7,000)	50	S20UV	P46	1M	50lp/mm	10
		20	S25				
		10					
	HG (70,000)	50	s20UV	P46	1M	35lp/mm	14.3
		20	S25				
20							
SIL3 25	NG (10,000)	50	S20UV	FS	100K	40lp/mm	12.5
		20	S25	P46	1M	32lp/mm	15.6
	HG (100,000)	50	S20UV	FS	100K	28lp/mm	17.8
		20	S25	P46	1M	22lp/mm	23
	EG (500,000)	50	S20UV	FS	100K	26lp/mm	19.2
		20	S25	P46	1M	20lp/mm	25
SIL3 40	NG (10,000)	50	S20UV	FS	100K	28lp/mm	17.8
			S25	P46	1M	22lp/mm	23
	HG (100,000)	50	S20UV	FS	100K	20lp/mm	25
			S25	P46	1M	16lp/mm	31.25
	EG (500,000)	50	S20UV	FS	100K	19lp/mm	26.3
			S25	P46	1M	15lp/mm	33

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
Tripod Mount	3/8-16UNC Female
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 (BNC)	2 Independent Inputs Electrical signal Maximum Input level 50V Threshold variable from ± 25V Positive or Negative polarity, Make/Break 50Ω or 1KΩ termination
Aux Outputs (BNC)	Pulse width and position user programmable (min. 5ns) TTL into 50Ω
Control Interface	Remote control via Standard 100Mbps Ethernet
Inhibit Input (BNC)	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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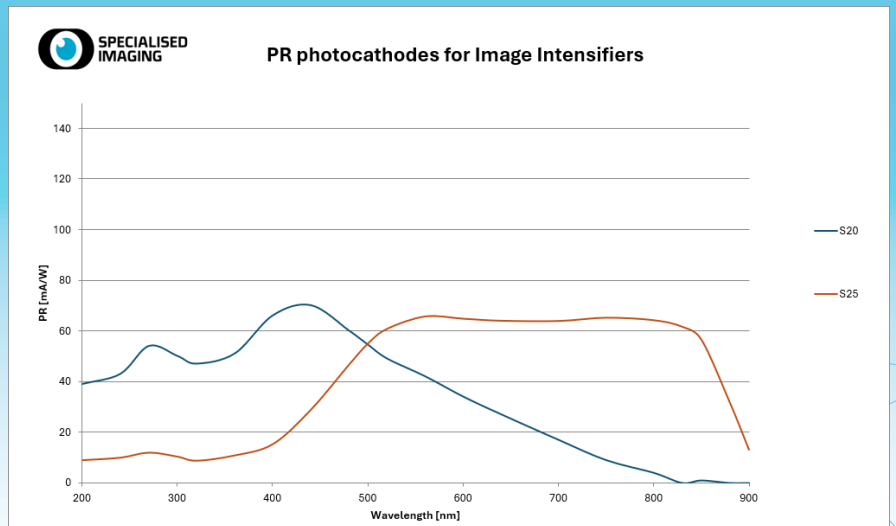
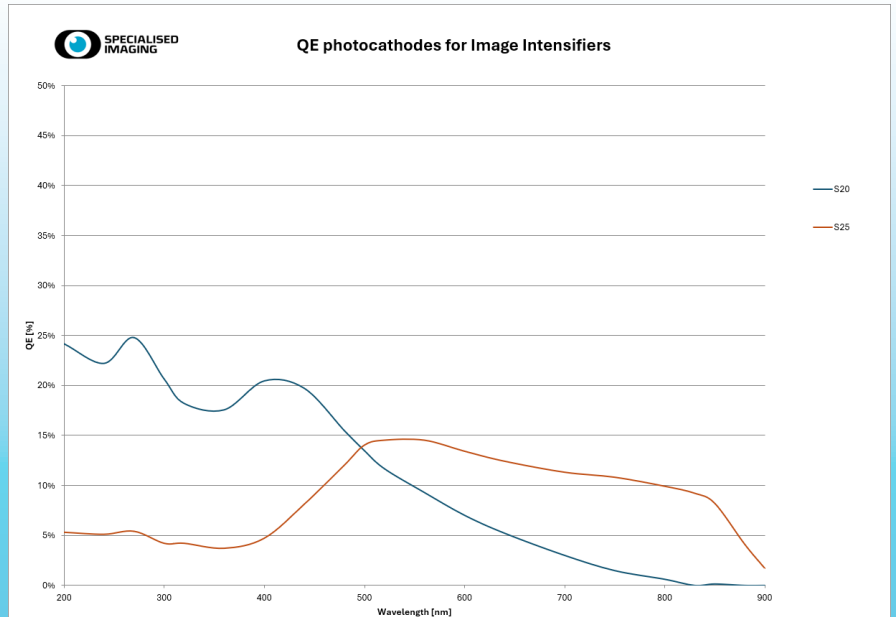
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FM87429

Photocathode Spectral sensitivities:

The Fused Silica input window used in the SIL3 allows transmission down to 180nm. This feature improves the spectral response normally limited by the transmission of other input window materials, such as borosilicate or Fibre optic glass which have an inherent cut off frequency around 300 - 350nm.



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