

# SATURN SW

1000 x 256 - 30  $\mu\text{m}$  pitch - MCT



→ The High resolution detector for SWIR hyperspectral imaging and spectroscopy.



Saturn SW is a very high-performance and high-resolution IDCA which enables you imaging from 0.8 to 2.5  $\mu\text{m}$ .

This IDCA is well-adapted to low flux in this wavelength range and the line by line gain selection function makes it perfectly suitable for hyperspectral imaging.

This high-performance IDCA takes full advantage of Sofradir's state of the art technologies.

## ARRAY FEATURES

Format	1000 x 256
Pixel pitch	30 $\mu\text{m}$ x 30 $\mu\text{m}$
Detector spectral response	0.8 $\mu\text{m}$ – 2.5 $\mu\text{m}$
FPA Operating temperature	Up to 200 K

## ROIC (READ-OUT INTEGRATED CIRCUIT)

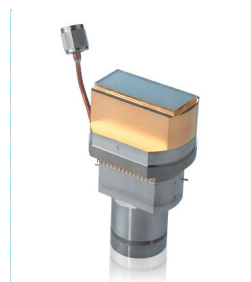
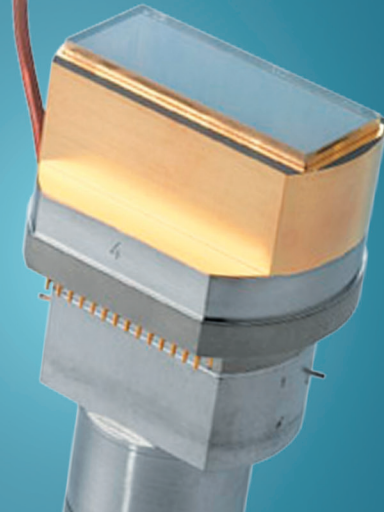
ROIC architecture	Snapshot operation, Integrate-While-Read mode
ROIC functionalities	Programmable integration time, programmable gain, anti-blooming system
Windowing modes	Selectable lines to be read (user configurable)
Gain selection	Selectable by lines (user configurable)
Charge handling capacity	0.5 $10^6$ e- (Gain 1) / 2.5 $10^6$ e- (Gain 2) for 100% well fill
Electrical dynamic range	> 3 V
Readout noise	< 150 e- (for 0.5 $10^6$ e- Gain 1); < 350 e- (for 2.5 $10^6$ e- Gain 2)
Signal outputs	4 or 8
Pixel output rate	Up to 8 MHz per output
Frame rate	Up to 240 Hz full frame rate

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## TYPICAL (\*) PERFORMANCES

NETD	> 800 (for $2.5 \cdot 10^6$ e- Gain 2, 50% well fill, 50 Hz)
Array operability	99.5%
Non uniformity	< 7%
Linearity	> 99.5%
Quantum efficiency	> 60% without antireflective coating

	LS 10-11i
FOV	TBD in function of user need
Regulated input power	< 10 Wdc (**)
Cooldown input power	< 50 Wdc (**)
Cooldown time	< 8 min
Weight	< 2.2 kg
Operating temperatures	- 40° C to 71° C

(\*) Optional extended waveband : 40% @ 0.5  $\mu\text{m}$ , 75% @ 0.8  $\mu\text{m}$ , >80% from 0.9  $\mu\text{m}$  to 1.6  $\mu\text{m}$

(\*\*) Wdc = at cooler C&CE DC input

## OPTIONS

Proximity driving electronics (including ADC)

Technical training and support

## APPLICATIONS



Technical characteristics described in this data sheet are for information only.  
They are not contractual and may change without prior notice.

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