



WiDy SenS 640



HIGH SENSITIVITY & HDR CAMERA

- The best trade-off on market – Unique dual-response InGaAs sensor (Lin & Log)
- VGA resolution – 640x512px @15µm pixel pitch
- Various interfaces: USB 3.0, CameraLink, GigE, Analog or SDI interface (GUI & SDK compatibility)
- TEC1
- Bad Pixels Replacement and smart Non-Uniformity Correction (NUC)
- Gated mode option (Fastest gating capability)
- Available in Compact & Embedded

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DESCRIPTION

Technical specification

Sensor	NSC1601T-SI
Material	InGaAs
Resolution	640x512
Pixel pitch	15µm
Spectral response	0.9 to 1.7µm
Dual response	<ul style="list-style-type: none"> • Linear (CTIA) Low & High Gain • Logarithmic
Modes	IWR/ITR, CDS, ROI
QE	>70%
Output	USB3.0, CameraLink, GigE, Analog, SDI
Frame rate	Up to 230fps full frame
Partial Reading Mode	Down to 16x16
Exposure time	10µs to 1s
Gating mode	100ns to 9µs
Operating mode	TEC on/off
Trigger	IN/OUT (LVTTL), Selectable delay
Power Range	5V to 12V (Nominal 12 V)
Dimension	46x46x57mm
Mount	C-Mount native
Weight	< 215g
ADC	14 bits
Operating Temp	-40°C to +65°C

Operating modes

	CTIA High Gain		CTIA Low Gain		LOG
	Standard	Gated	Standard	Gated	
Sensor noise	50e-	125e-	270e-	290e-	340e-
Well capacity	>17Ke-	>17Ke-	>380Ke-	>230Ke-	≈500Me-
Dynamic Range	49dB	44dB	63dB	58dB	120dB

Consumption

	TEC off		TEC on	
	Standard	Gated	Standard	Gated
Consumption	<2.6W	<4W	<6.6W	<8W

Software

Interface	GUI	SDK
USB 3.0 & GigE	NITVision	Yes
CameraLink (Compact)	WiDyCAM	No
CameraLink (Embedded) & Analog	NITLink	No

Applications

With its unique performances and features, High sensitivity, and High Dynamic Range, the WiDy SenS camera is the perfect ally for multiple applications. Its 640 x 512 pixels resolution offers a comfortable Field of view for inspection of semiconductor or solar cell panels. The pure linear mode offers the ability to be used as a beam diagnostic tool when its High Dynamic Range can be used for monitoring additive manufacturing processes.

The Gated option, the best-gated performance on the market, will give you extended possibilities for Defense & Security applications.

Not enough? Check our detailed application below or tell us more about your application.

- [Semiconductor inspection](#)
- [Security - Surveillance](#)
- [Welding & Additive Manufacturing](#)
- [Laser applications](#)