A World Class Supplier of CMOS Sensors™

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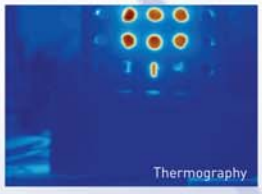
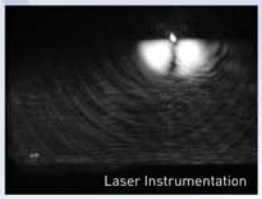
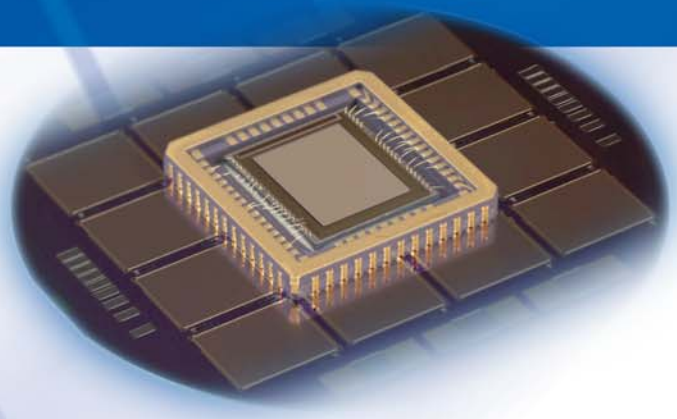
Wide Dynamic Range Sensors: From Visible to SWIR Imaging

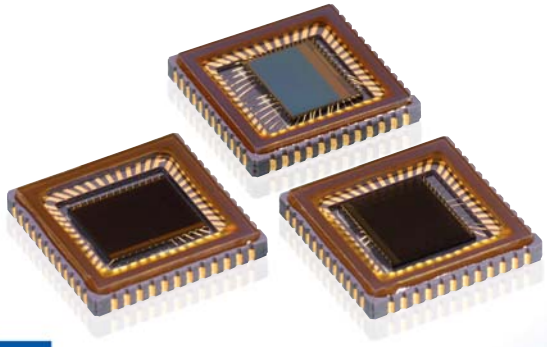
Ease your design with Native WDR™







Native Wide Dynamic Range Technology



Our Native Wide Dynamic Range™ sensors are based on a new generation of patented CMOS imaging technology, capable of generating a highly stable image even under very wide intra scene dynamic range (>140dB) in a single frame time. The Native WDR is available on Silicon based devices (Visible CMOS sensors) and now on InGaAs 2D detectors (Short Wave Infrared sensors)

The concept of Native WDR™ imaging technology is based upon an extremely innovative pixel architecture where each individual pixel operates as a single solar cell. Such a mode of operation provides an intrinsic logarithmic response, without noticeable fixed pattern noise where the signal response is invariant to change of scene illumination. The Read-out (ROIC) architecture enables a high uniformity even for Short Wave Infrared detectors (InGaAs sensors).

In addition, Native WDR™ imaging sensors deliver sharp and clear images even at high operating temperature (greater than 90°C) without the creation of pixel artifacts.

Native WDR™

Key Features

- High dynamic range (>140dB) without compromising low light level performances
- No image lag, no smearing, no blooming
- Suppression of spatial-temporal light accommodation thanks to Log response
- Fully encapsulated imaging module, ideal for System-on-Chip integration
- Extreme simplicity of integration: Power in – Image out
- Free of hot or flickering pixels even at high temperature
- Versatility : can be applied to all Photodiodes (Silicon,InGaAs, InSb, etc.)

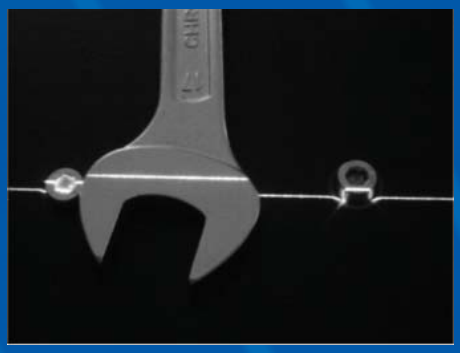
User Benefits

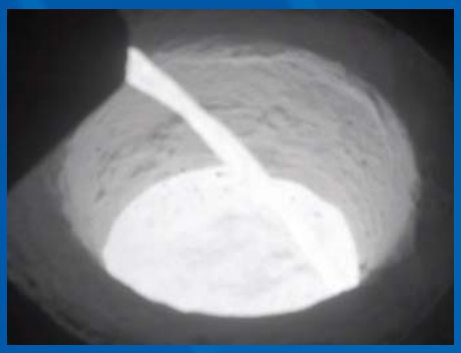
- No exposure time to setup
- No companion chip or DSP required to produce a wide dynamic range image
- No illumination saturation
- Operates without special setup in any light conditions
- No need for Lookup table correction
- Low power consumption
- Enables high operating temperature applications

WDR InGaAs Sensors Arrays

NIT Sensors	Resolution	Optical Format	Pixel Size (µm²)	Chroma	Read Mode	Output
NSC0803-SI	320x256	2/3"	25x25	SWIR	Rolling	Analog
NSC1101-SI	640x480	1"	15x15	SWIR	Rolling	Analog
NSC1201-SI*	640x480	1"	15x15	SWIR	Snapshot	Analog

*coming soon





WDR CMOS Sensors Arrays

NIT Sensors	Resolution	Optical Format	Pixel Size (µm²)	Chroma	Read Mode	Output
NSC1302(C)	640x480	1/3"	6.8x6.8	B&W/Color	Snapshot	10 bit
NSC0902(C)	768x576	1/3"	5.6x5.6	B&W/Color	Rolling	Analog
NSC0806	768x576	1/2"	10x10	B&W	Rolling	Analog
NSC1104	768x576	1"	15x15	B&W	Rolling	Analog
NSC1005(C)	1280x720	1/1.8"	5.6x5.6	B&W/Color	Rolling	Analog
NSC1003(C)	1280x1024	2/3"	6.8x6.8	B&W/Color	Snapshot	Analog
NSC1105	1280x1024	1"	10.6x10.6	B&W	Rolling	Analog