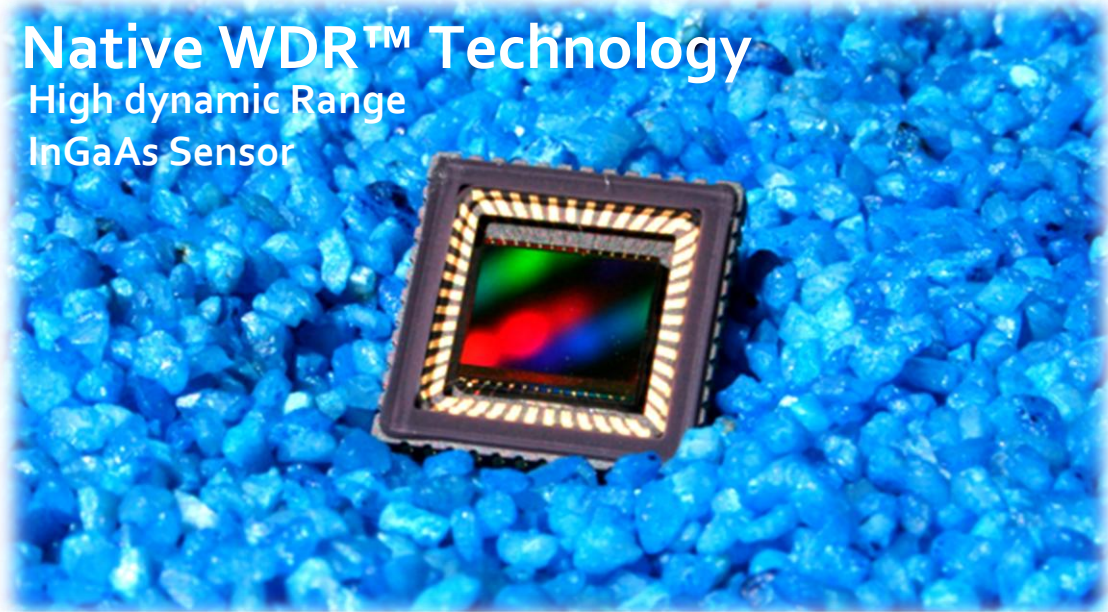


Native WDR™ Technology

High dynamic Range
InGaAs Sensor



NUC Less, TEC Less - InGaAs Imaging Sensor
CLCC package

Ease your design with Native WDR™



Key Features

- **Native WDR™:** Intrinsic wide dynamic range – no knee points to setup – no multiple exposures – 120 dB in a single shot.
- **High QE InGaAs :** >75% from 900nm to 1700nm.
- **320x256 pixels – pitch 25µm** in a simple TEC Less CLCC package.
- **Fast frame rate :** up to 150Hz full frame
- **Internal FPN compensation** results in no noticeable FPN even at low flux intensity
- **25 MHz max pixel clock,** can operate with any pixel clock resulting in a fully programmable frame rate
- **Ultra Low power consumption :** less than 120 mW full frame

Applications

- Industrial Machine Vision
- Solar panel inspection
- Automotive vision
- Thermography
- Waste sorting
- Biometric and medical imaging
- Laser imaging
- Spectroscopy

NSCo803-SI is a 320x256 pixels **high dynamic range InGaAs image sensor** which benefits from NIT patented Native WDR™ architecture. NSCo803-SI offers a true logarithmic response versus optical illumination without saturation with more than 120 dB true dynamic range, within the **Short Wave InfraRed (SWIR) band (900nm-1700nm)**.

NSCo803-SI operates without thermo-electric cooler and can sustain ambient temperature of **more than 85°C** without image degradation.

NSCo803-SI design integrates an **“on-chip”** non uniformity correction function, so that the raw image from the sensor can be used without implementation of an external digital NUC.

Technical Specifications

- | | |
|---|--|
| <ul style="list-style-type: none"> • Pixel Size: 25µm x 25µm • Array Format (active): 320H x 256V pixels, 8.2mm diagonal • Optical Window: Anti-reflective glass • Frame Rate: Max 150 fps Full Frame • Dynamic Range: >120dB Logarithmic response • Data Rate: 25 MHz max pixel scanning rate • Signal Output: Buffered analog output • NEI: 0.3nW/cm² faceplate @ 25fps @ 25°C @ 1550nm | <ul style="list-style-type: none"> • Readout Mode: Rolling shutter • Clocks: CMOS • Digital Controls: 8 bits CMOS • Spectral Range: 900nm-1 700nm • Quantum Efficiency: >75% @ 1500nm • Supply Voltage: 2.8-3.3V • Power Consumption: <120mW Full frame @ 50fps • Operating Temp. Range: -40°C + 85°C-no flicker or hot pixels through the full temperature range • Package: CLCC-48 |
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