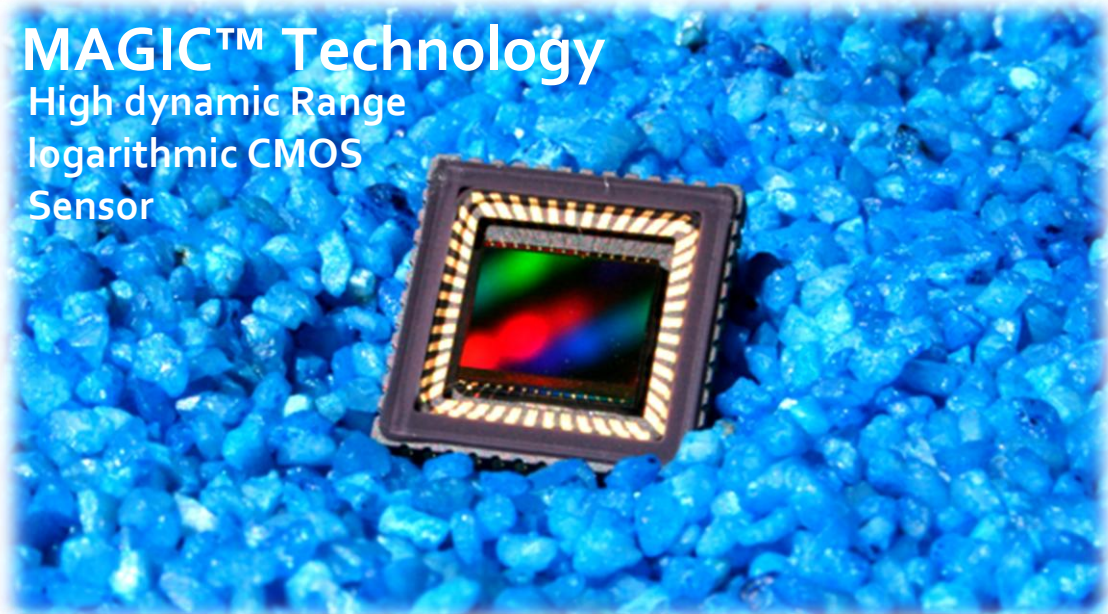


MAGIC™ Technology

High dynamic Range
logarithmic CMOS
Sensor



Wide VGA, Wide Dynamic Range Imaging CMOS 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.
- **Highest** dynamic range in the market thanks to its patented Solar Cell pixel structure
- **Wide-VGA** resolution (768*576), 5.6 μm Square pixels, 5.4mm diagonal
- **Internal FPN compensation** results in no noticeable FPN even at low intensity
- **50 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
- CCTV/IP surveillance cameras
- Intelligent Transportation Systems
- Biometric and medical imaging

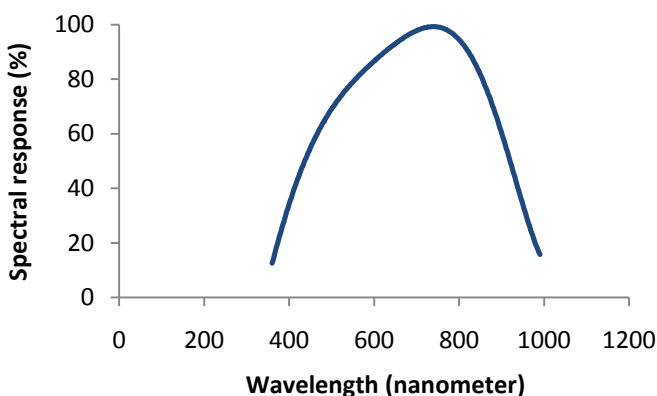
NSC0902C is a Wide-VGA (768x576 active pixels) **high dynamic range** CMOS image sensor which benefits from NIT patented Solar Cell pixel structure. **NSC0902C** offers a true logarithmic response versus optical illumination without saturation with more than 120 dB true dynamic range.

The logarithmic response is intrinsic to the sensor thanks to the Solar Cell pixel structure, therefore there is no need to program any register or change setup according to illumination conditions. Moreover **NSC0902C** delivers a **stable contrast indexed image** that is independent of the ambient illumination. **NSC0902C** operates in rolling shutter mode.

Technical Specifications

- | | |
|---|---|
| <ul style="list-style-type: none"> • Pixel Size: 5.6µm x 5.6µm • Diagonal: 5.4mm • Array Format (active): 768H x 576V, 5.4mm diagonal • Imaging Area: 4.3mm x 3.2mm • Color Filter Array: RGB Bayer • Optical Window: Optional anti-reflective glass • Optical Format: 1/4–inch lens • Frame Rate: >50 fps @ 768H x 576V • Dynamic Range: >120dB Logarithmic response • Data Rate: 50 MHz max pixel scanning rate • Signal Output: Buffered analog differential CCIR/EIA output • Minimum illumination level: 10 mLux faceplate @ 25fps | <ul style="list-style-type: none"> • Readout Mode: Rolling shutter • Clocks: CMOS • Digital Controls: 8 bits CMOS • Windowing: Full frame 768*576 • Spectral Range: 450nm-1 050nm • Quantum Efficiency: >35% @ 850nm • Supply Voltage: 2.8-3.3V • Power Consumption: <120mW Full frame @ 50fps • Operating Temp. Range: -40°C + 90°C-no flicker or hot pixels through the full temperature range • Package: CLCC-48 |
|---|---|

Typical spectral response curve



NSC0902C Package

