

HD Ready, 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

HD Ready resolution , 1280*720 effective pixels, 5.6 μm square pixels, 8.2mm diagonal

Internal FPN compensation results in no noticeable FPN even at low intensity

60 MHz max pixel clock, can operate with any pixel clock resulting in a fully programmable frame rate

Ultra Low power consumption : less than 260 mW full frame

Applications

CCTV/IP surveillance cameras

Intelligent Transportation Systems

Industrial Machine Vision

Solar panel inspection

Automotive vision

Biometric and medical imaging

Distributor:

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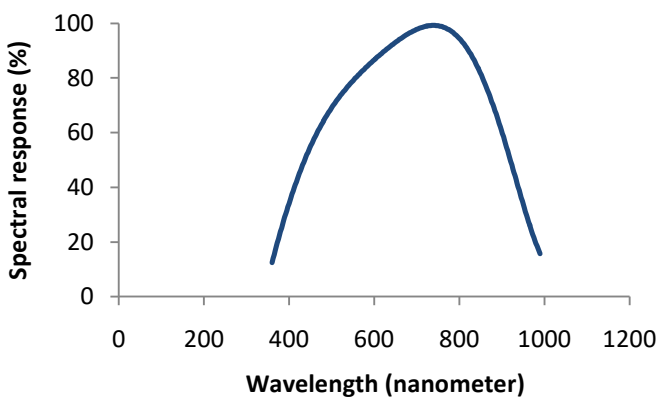
NSC1005 is a HD Ready (1280x720 active pixels) **high dynamic range** CMOS image sensor which benefits from NIT patented Solar Cell pixel structure. **NSC1005** offers a true logarithmic response versus optical illumination without saturation with more than 120 dB true dynamic range.

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 **NSC1005** delivers a **stable contrast indexed image** that is independent of the ambient illumination. **NSC1005** operates in rolling shutter mode.

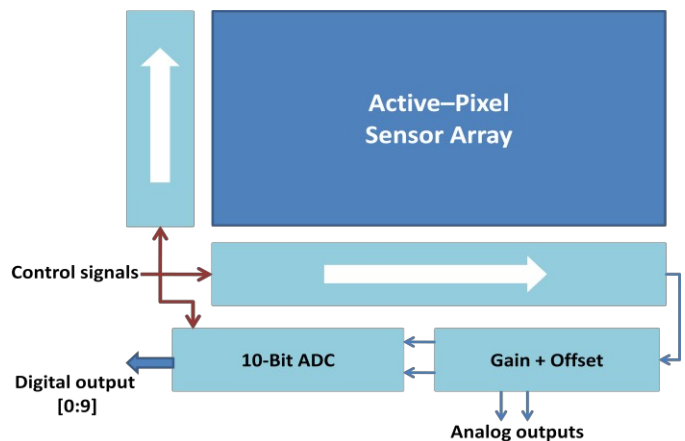
Technical Specifications

Pixel Size:	5.6µm x 5.6µm	Readout Mode:	Rolling shutter
Diagonal:	8.2 mm	Exposure window:	programmable,1-719 lines
Array Format (active):	1280H x 720V	ADC:	10-bit
Imaging Area:	7.1mm x 4mm	Gain:	Max 16dB, Step size 4dB
Color Filter Array:	Monochrome/ RGB Bayer	Responsivity (green):	2.16V/lux-sec @ 550nm
Optical Window:	Optional anti-reflective glass	Spectral Range:	450nm-1 050nm
Optical Format:	1/2–inch lens	Supply Voltage:	3.3V
Frame Rate:	>50 fps @ 1280H x 720V	Power Consumption:	<260mW Full frame @ 50fps
Dynamic Range:	>120dB Logarithmic response	Operating Temp. Range:	-40°C + 90°C-no flicker or hot pixels through the full temperature range
Data Rate:	60 MHz max pixel scanning rate	Package:	CLCC-48
Signal Output:	Parallel digital 10 bit /Buffered analog differential		
Minimum detectable level:	6 mLux faceplate @ 25fps		

Typical spectral response curve



Block Diagram



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