TELEDYNE e2v
Everywhereyoulook™
Part of the Teledyne Imaging Group

SAPPHIRE WVGA CMOS SENSOR FAMILY
EV76C541
B&W and color

The New Standard in Entry Level Platforms

KEY BENEFITS

- 0.36 million pixels (480 (V) x 752 (H)), 4.5µm square pixels with micro-lens
- High speed: >125fps at full resolution, low-light CMOS sensor
- Efficient global shutter for sharp image of fast moving objects
- Rolling shutter allowing global reset for best SNR
- Multiple regions of interest
- Linear dynamic range 66dB @ 25°C
- Low power consumption
- Output format 10 bits parallel plus synchronization
- Accumulation mode
- Operating temperature (-30° to +65°C)
- Package: CLCC 8.5mm x 8.5mm and WLCSP 4.8mm x 4.7mm
- SPI control

APPLICATIONS

- Barcode reading/scanners
- Industrial machine vision
- Smart cameras
- CCTV/IP surveillance cameras
- Biometric and medical imaging
- 3D virtual reality goggles

ORDER CODES

- EV76C541ABT-EQT
  for monochrome product
- EV76C541ACT-EQT
  for Bayer (color) product
- For other CFA options
  please contact **Teledyne e2v**

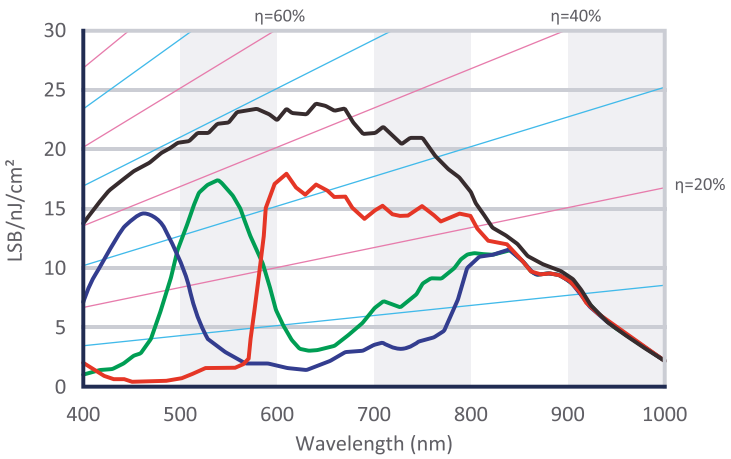
The EV76C541 is a wide-VGA format CMOS image sensor designed with **Teledyne e2v's** proprietary Eye-On-Si CMOS imaging technology. It is ideal for applications where superior performance is required, and a viable replacement for traditional industrial CCD sensors. The innovative pixel design offers excellent performance in low-light conditions with an electronic global shutter, and offers a high-readout speed at minimum 125fps in full resolution. Its very low power consumption makes it well suited for use in battery-powered applications such as hand-held barcode scanners. Novel industrial machine vision application features such as multi ROI and 3D range gating are also embedded on-chip.

SENSOR CHARACTERISTICS	
Resolution – pixels	480 (V) x 752 (H)
Image size – inches	1/4
Pixel size – µm	4.5 x 4.5
Max frame rate – fps	>125 @ full format
Pixel rate – Mpixels/s	>45

PIXEL PERFORMANCE	
Bit depth – bits	10
Dynamic range – dB	66 (linear) / >100 (HDR)
SNRmax – dB	41
Responsivity – LSB10/(nJ/cm^2)	24

MECHANICAL & ELECTRICAL INTERFACE	
Power supplies – V	3.3 & 1.8
Power consumption Functional – mW Standby – µW	 tbc tbc

SPECTRAL RESPONSE AND QUANTUM EFFICIENCY



SENSOR OVERVIEW