

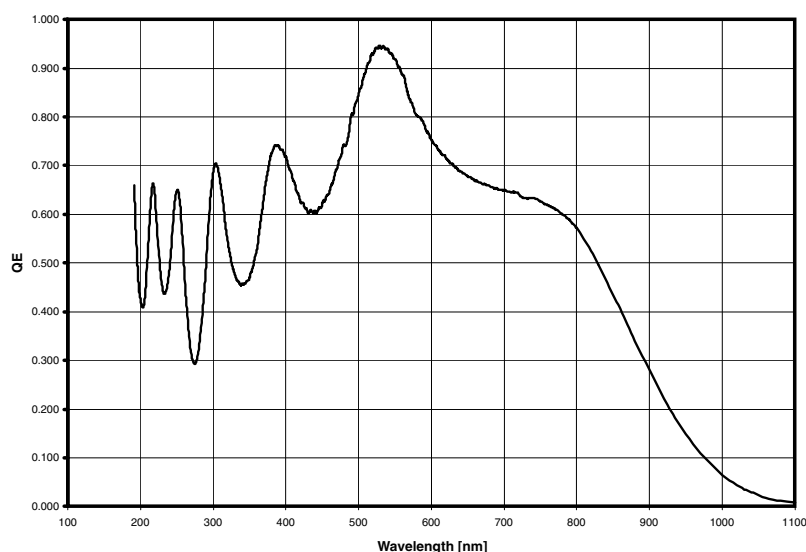
Short Information

OPT 0256C**Monolithic UV To IR Photo Detector Array IC With Integrated ADC And Pure Digital Interface**

- 256 Photodiode channels, designs with 2 up to 1024 photodiode channels can be made available on request
- Chip length 14.8 mm, long arrays ($l > 20$ mm) possible
- Photodiode pitch 50 μm , other pitches on request, lowest possible pitch 25 μm .
- Standard high volume CMOS process for digital and analog circuitry

The main features of the OPT 0256C are

- 16-bit ADC for each photodiode integrated
- Higher resolution by post-decimating output data
- Simultaneous measurement of all photodiode channels
- ADC linearity over wide input current range, $I_{\text{in}} = 50 \text{ fA} \dots 50 \text{ nA}$
- ADC gain for each photodiode channel adjustable
- Excellent UV stability (degradation $< 1.5 \cdot 10^{-9} \text{ m}^2/\text{Ws}$ @ $\lambda = 200 \text{ nm}$)
- Variable integration time from 26 μs to 12.5 s
- Internal and external measurement triggering
- Voltage reference on chip
- Standard SPI interface
- Integrated temperature sensor for relative temperature measurements
- Broad spectral sensitivity, $\lambda = 190 \text{ nm} \dots 950 \text{ nm}$

**Fig. 1:** Photodiode Quantum Efficiency

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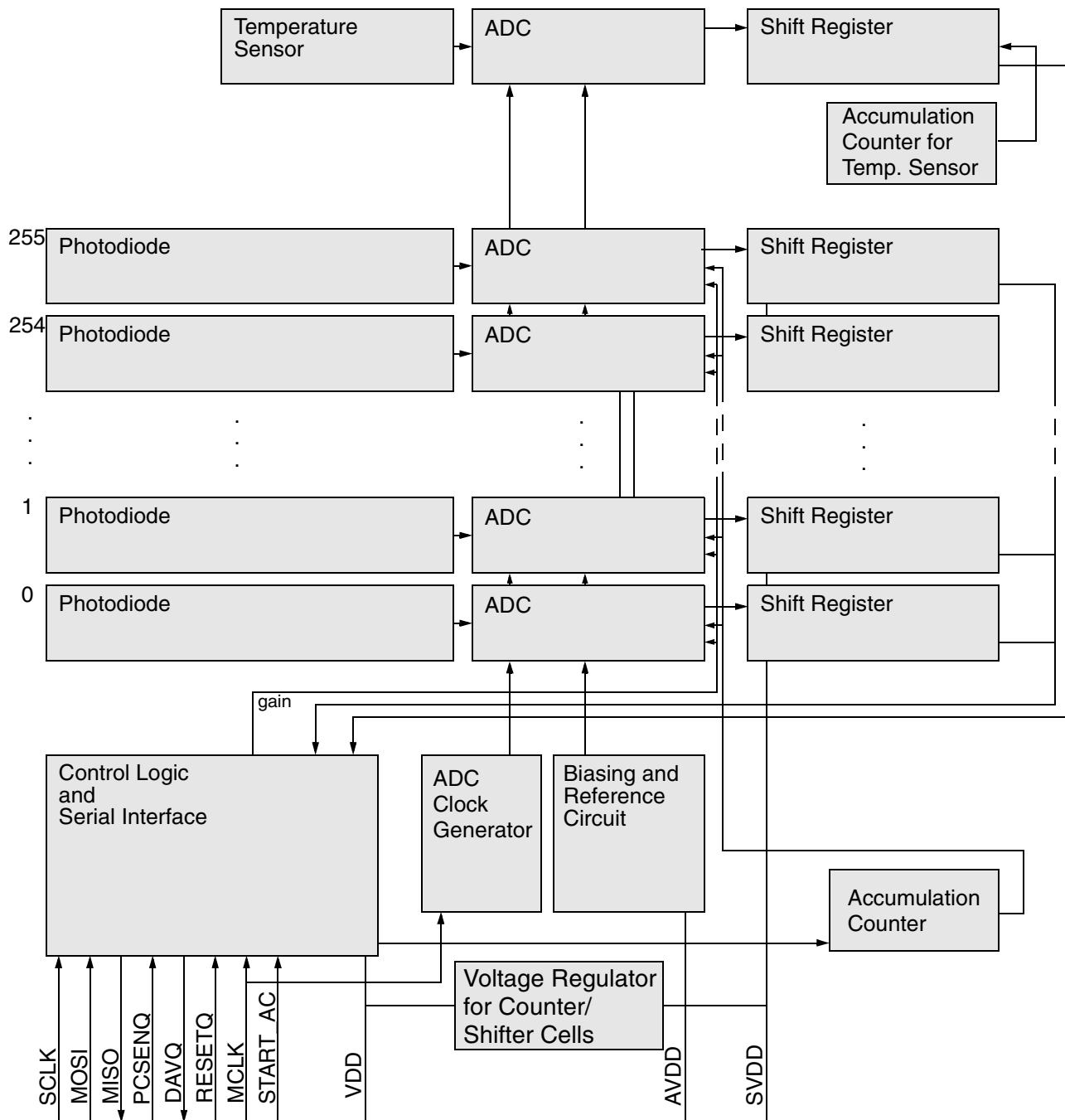


Fig. 2: OPT 0256C PDA block diagram

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