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, $I_{in}$ = 50 fA ... 50 nA
– ADC gain for each photodiode channel adjustable
– Excellent UV stability (degradation < $1.5*10^{-9}m^2/Ws$ @ $\lambda$ = 200 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 nm ... 950 nm

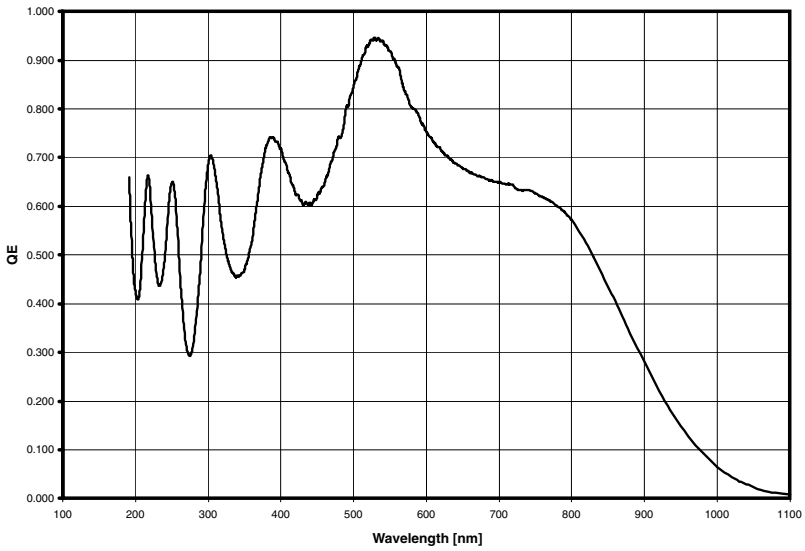


**Fig. 1:** Photodiode Quantum Efficiency

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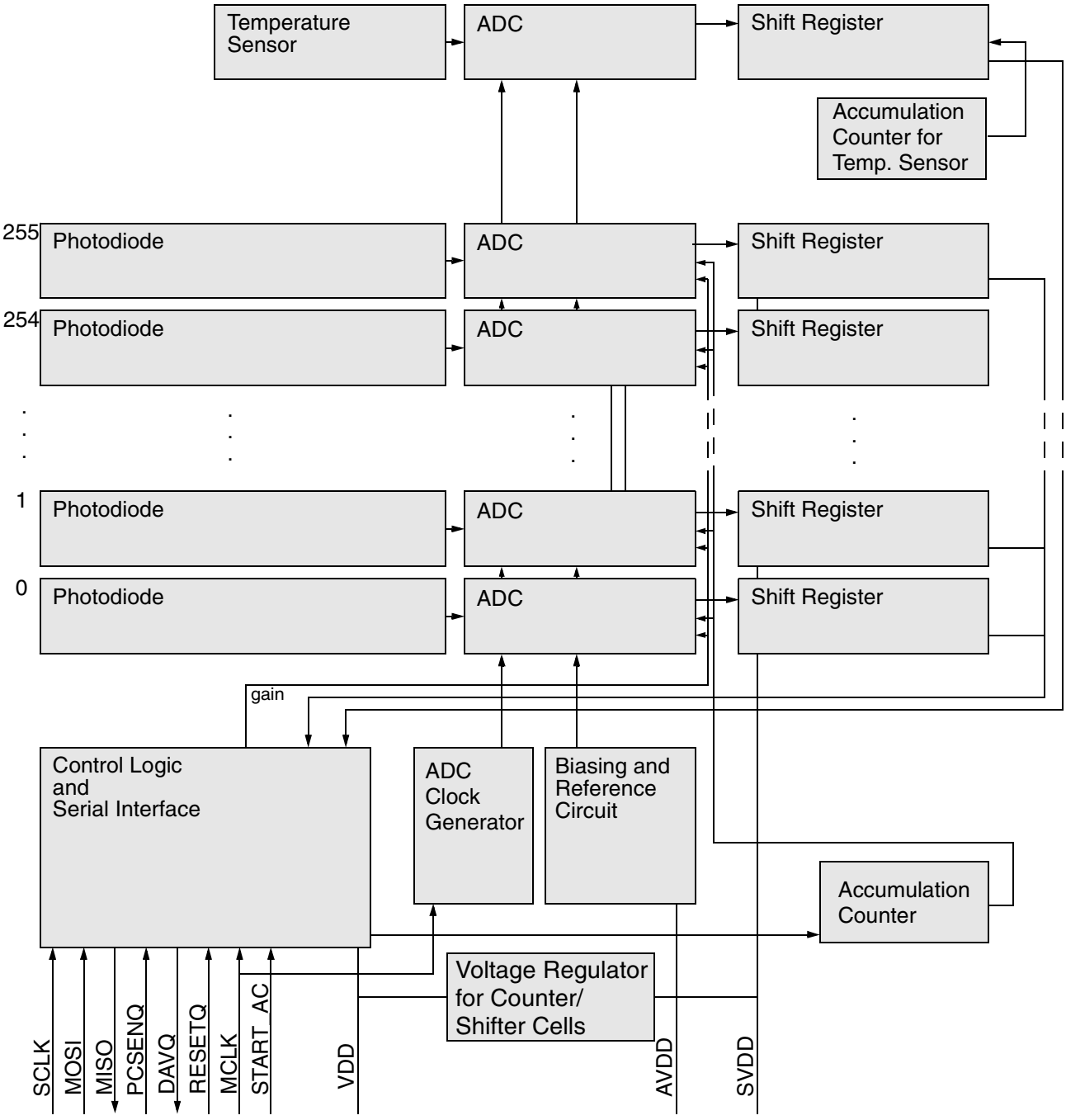


**Fig. 2:** OPT 0256C PDA block diagram

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Edition Dec. 19, 2001 · Order No. 6251-581-1SI