SwissSPAD Factsheet

SwissSPAD is an imager based on CMOS SPADs implemented in a standard high-voltage CMOS process. (AMS 0.35um)

The array resolution is 512 x 128 pixels with a pitch of 24 um (24 um square pixels). The chip size is approximately 13.5 x 3.5 mm² and there is one alignment cross (150 um wide M4) on each short side for microlens construction.

Chip size:	13.5 x 3.5 mm2
Technology:	AMS HV 0.35um 4M
Resolution:	512 x 128
Pixel pitch:	24 um
Sensitive area diameter:	~6 um (green area)
Fill factor:	~5%
Dead time:	100 ns
DCR @ room temp.	206 Hz
Target wavelength:	400-850 nm
Light incidence:	Close to normal (TBC)

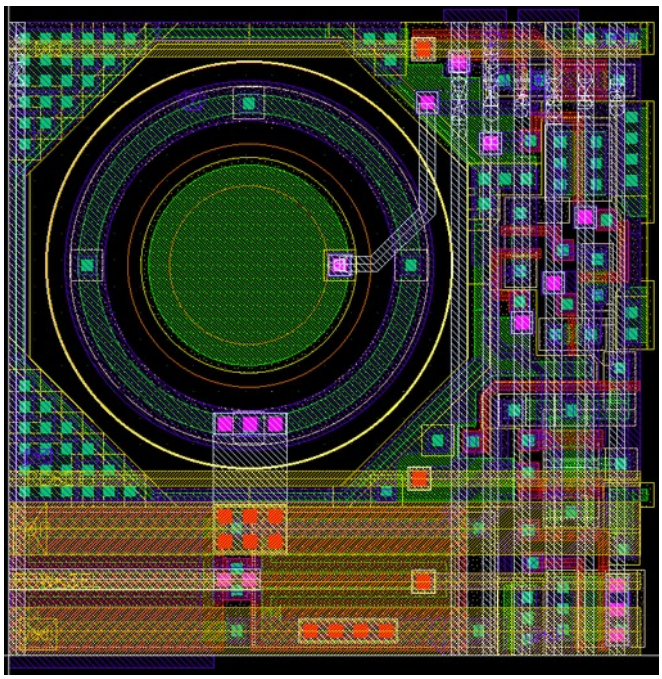

Figure 1: Layout of one pixel

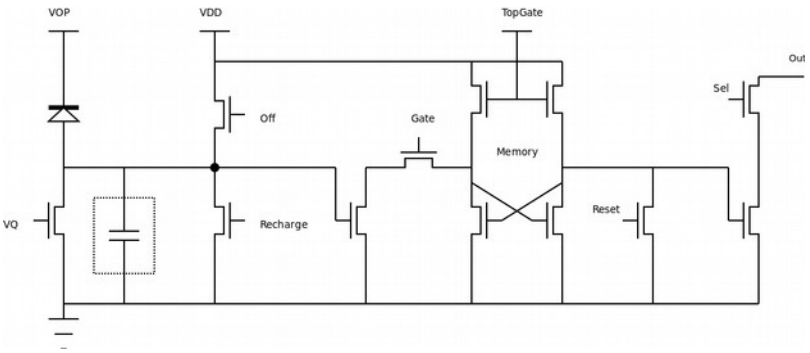

Figure 3: Pixel schematic

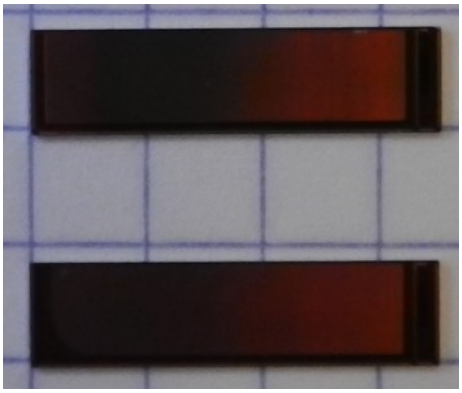

Figure 2: Two SwissSPAD dies

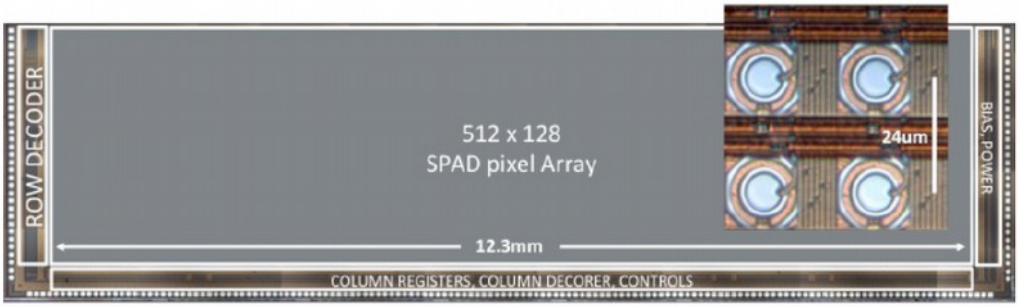

Figure 4: SwissSPAD chip micrograph (400-600 um array to pad separation)

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