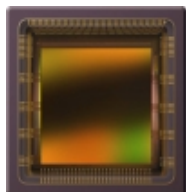


CMV4000  
AREA SCAN SENSORS



The CMV4000 is a high sensitivity, pipelined global shutter CMOS image sensor with 2048 x 2048 pixel resolution capable of HD format. Pipelining allows

exposure during read out. The state-of-the-art pixel architecture offers true correlated double sampling (CDS) reducing the fixed pattern noise and dark noise significantly. The imager integrates 16 LVDS channels each running at 480 Mbps resulting in a 180 fps frame rate at full resolution at 10 bit per pixel. Driving and read-out are programmed over a serial peripheral interface. An internal timing generator produces the signals needed for read-out and exposure control of the image sensor. External exposure triggering remains possible. A 12 bit per pixel mode is available at reduced frame rate.

## SPECIFICATIONS

<b>Part status</b>	Production
<b>Resolution</b>	4MP - 2048(H) x 2048 (V)
<b>Pixel size</b>	5.5 x 5.5
<b>Optical format</b>	1"
<b>Shutter type</b>	Global shutter
<b>Frame rate</b>	180 fps (10 bit) 37 fps (12 bit)
<b>Output interface</b>	16 LVDS outputs @ 480 Mbps
<b>Sensitivity</b>	5,56 V/lux.s
<b>Conversion gain</b>	0,075 LSB/e-
<b>Full well charge</b>	13500 e-
<b>Dark noise</b>	13 e- (RMS)
<b>Dynamic range</b>	60 dB
<b>SNR max</b>	41,3 dB
<b>Parasitic light sensitivity</b>	1/50000
<b>Extended dynamic range</b>	Yes, up to 90 dB
<b>Dark current</b>	125 e-/s (25 degC)
<b>Fixed pattern noise</b>	< 1 LSB (<0,1% of full swing)
<b>Chroma</b>	Mono and RGB
<b>Supply voltage</b>	1,8V / 3,3V
<b>Power</b>	600 mW
<b>Operating temperature range</b>	-30 to +70 degC
<b>RoHS compliance</b>	Yes
<b>Package</b>	Ceramic 95 pins uPGA/LGA or 92-pins LCC
<b>Socket</b>	Andon Electronics ( <a href="http://www.andonelectronics.com">http://www.andonelectronics.com</a> ) 679-92A-SM-G10-L14-1 (LCC) 10-12-06-095-400T4-R27-S14 (PGA, thru-hole) 10-12-06-095-414T4-R27-S14 (PGA, surface mount)

## ORDERING INFO - CMV4000

Part Number	Version	Chroma	Microlens	Package	Glass
CMV4000-3E5M1PP	version 3	mono	Yes	ceramic 95pins $\mu$ PGA	plain
CMV4000-3E5C1PP	version 3	RGB Bayer	Yes	ceramic 95pins $\mu$ PGA	plain
CMV4000-3E12M1PP	version 3	mono - NIR enhanced (12 $\mu$ m epi)	Yes	ceramic 95pins $\mu$ PGA	plain
CMV4000-3E5M1LP	version 3	mono	Yes	ceramic 95pins LGA	plain
CMV4000-3E5C1LP	version 3	color	Yes	ceramic 95pins LGA	plain
CMV4000-3E12M1LP	version 3	mono - NIR enhanced (12 $\mu$ m epi)	Yes	ceramic 95pins LGA	plain
CMV4000-3E5M1CA	version 3	mono	Yes	ceramic 92pins LCC	double side AR-coated
CMV4000-3E5C1CA	version 3	color	Yes	ceramic 92pins LCC	double side AR-coated
CMV4000-3E12M1CA	version 3	mono - NIR enhanced (12 $\mu$ m epi)	Yes	ceramic 92pins LCC	double side AR-coated
CMV4000-3E5M1PN	version 3	mono	Yes	ceramic 95pins $\mu$ PGA	removable