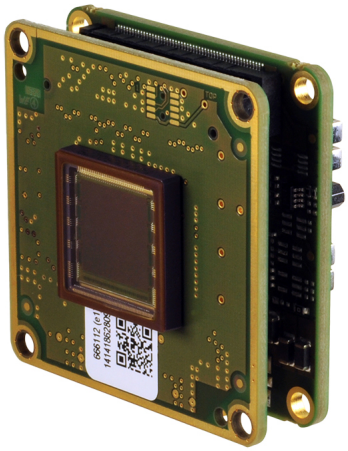
OEM-D2048-160-LC

For customers that prefer to design their own camera solution but do not want to spend time on the sensor integration we offer a range of OEM camera modules

Features

- CMOSIS CMV4000 CMOS image sensor
- 2048 x 2048 pixel resolution
- Good NIR spectral response
- Suitable for standard and low light applications
- Up to 37fps @ full resolution
- Global shutter
- Available in monochrome, NIR and color
- Extended sensor and camera features
- Up to 10bit greyscale resolution
- Camera and board level solution available
- Perfect fit for embedded solutions
- Parallel interface



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Quantum Efficiency Image Sensor

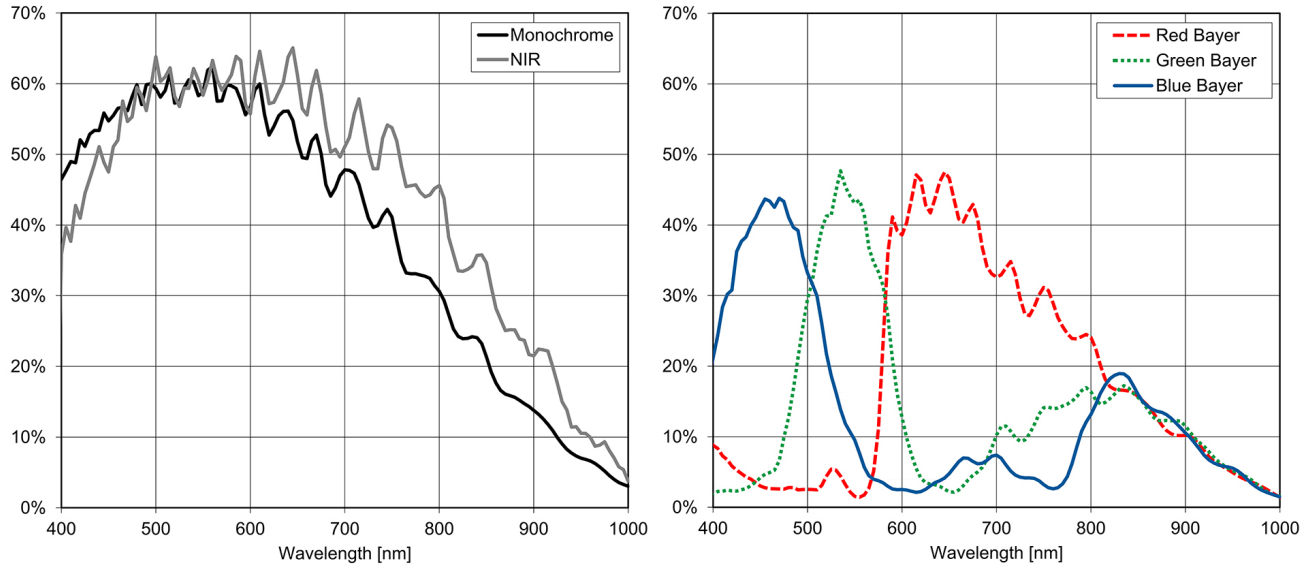

Image Sensor Specifications

Manufacturer / Type	CMOSIS, CMV4000
Technology	CMOS
Optical format	1"
Optical diagonal	15.92mm
Resolution	2048 x 2048
Pixel size	5.5µm x 5.5µm
Active optical area	11.26mm x 11.26mm
Dark current	125e-/s
Read out noise	13e-
Full well capacity / SNR	11ke- / 105:1
Spectral range	Monochrome: 350 to 950nm (to 10% of peak responsivity) NIR: 350 to 1000nm (to 10% of peak responsivity) Color: 380 to 670nm (to 10% of peak responsivity)
Responsivity	Monochrome: 1100 x 10^3 DN / (J/m²) @ 520nm / 8bit NIR: 900 x 10^3 DN / (J/m²) @ 850nm / 8bit Color: 857 x 10^3 DN / (J/m²) @ 540nm / 8bit
Quantum Efficiency	Monochrome: < 60% NIR: < 60% Color: < 45%
Optical fill factor	42% without micro lenses
Dynamic range	60dB
Characteristic curve	Linear, Piecewise linear
Shutter mode	Global shutter

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Camera Specifications

Interface	LVCMOS
Frame rate	37fps
Pixel clock	80MHz
Camera taps	2
Greyscale resolution	8Bit / 10Bit
Fixed pattern noise (FPN)	< 1DN RMS @ 8Bit
Exposure time range	28µs - 419ms
Analog gain	yes
Digital gain	0.1 to 15.99 (FineGain)
Trigger Modes	Free running (non triggered), external Trigger, SWTrigger
Features	Configurable region of interest (ROI), Up to 8 regions of interest (MROI), Decimation in y-direction, 2 look-up tables (12-to-8Bit) on user-defined image region (Region-LUT), Constant frame rate independent of exposure time, Crosshairs overlay on the image, Temperature monitoring of camera, Camera informations readable over SDK, Ultra low trigger delay and low trigger jitter, Extended trigger input and strobe output functionality, Status line in picture
Operation temperature / moisture	0°C ... + 50°C / 20% ... 80%
Storage temperature / moisture	-25°C ... 60°C / 20% ... 95%
Power supply	details in the manual
Power consumption	< 4.2W
Lens mount	n/a
I/O Inputs	details in the manual
I/O Outputs	details in the manual
Dimensions	44 x 44 x 19mm³
Mass	40g
Connector I/O (Power)	n/a
Connector Interface	DF17 series (mating plug DF17(4.0)-80DS-0.5V)
Conformity	CE / RoHS / WEEE
IP Code	IP20

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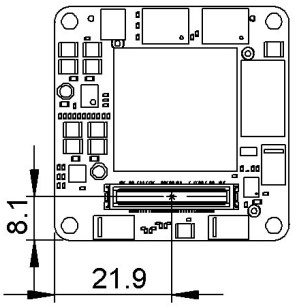
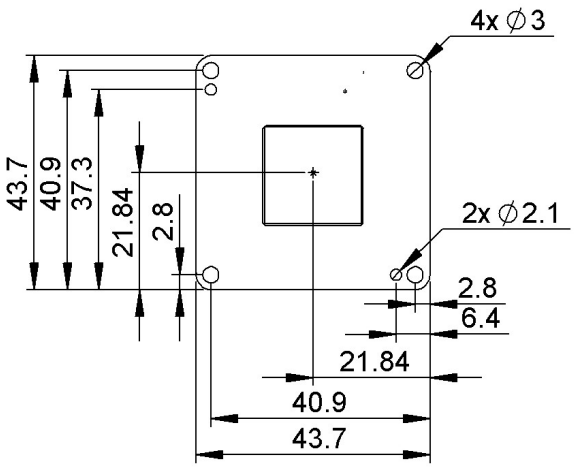
Connectors

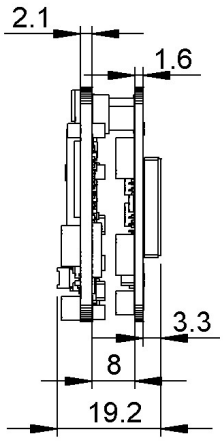
Hirose DF17 series, 80 contacts

Header (Photonfocus side) \ Receptable (Customer side)		DF17(?.?)-80DS-0.5V	
		3 mm	4 mm
DF17(2.0)-80DP-0.5V	2 mm	mating height 5 mm (not recommended)	mating height 6 mm

Dimensions







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Explanation

DN DigitalNumber (equals to LSB)

e^- Electrons

Order Information

OEM-D2048-160-LC-10	BW model
OEM-D2048I-160-LC-10	NIR model
OEM-D2048C-160-LC-10	Color model

Compatibility

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