

Owl 640 Mini VIS-SWIR

VGA resolution, low power, VIS-SWIR camera
640 x 512 • 15 μ m x 15 μ m pixel pitch • VIS-SWIR Technology •



Key Features and Benefits

TEC-less Visible SWIR technology

- **TEC-less Visible SWIR**
Enables ultra low power
- **15 μ m x 15 μ m pixel pitch**
Enables highest resolution VIS-SWIR image
- **Ultra high intrascene dynamic range**
Enables simultaneous capture of bright & dark portions of a scene
- **Ultra compact, Rugged, No fan**
Specially designed for integration into small OEM platforms

Resolution	640 x 512
Ultra Low Power	<2.5W
Optical Interface	C-mount
Wavelength Range	VIS-SWIR

Specification for Owl 640 Mini VIS-SWIR

Sensor Type	InGaAs PIN-Photodiode
Active Pixel	640 x 512
Pixel Pitch	15µm x 15µm
Active Area	9.6mm x 7.68mm
Spectral response ¹	0.4µm to 1.7µm
Readout Noise (RMS) LG = Low Gain HG = High Gain	LG: <190 electrons (174 electrons typical) HG: <50 electrons (38 electrons typical)
Quantum Efficiency	>80% @ 1.55µm
Full Well Capacity	LG: 650ke- HG: 9ke-
Pixel Operability	>99.5%
Output Format	14 bit Camera Link (base configuration)
Exposure time	10µs to 26.8s
Shutter mode	Global shutter
Frame Rate	Up to 120Hz
Dynamic Range (Typical)	LG: 72dB, HG: 49dB
Optical Interface	C mount
Trigger interface	Trigger IN and OUT - TTL compatible
Power supply	12V DC ±0.5V
TE Cooling	None
Image Correction	2 point NUC (offset & gain) + pixel correction
Functions controlled by serial communication	Exposure, intelligent AGC, Non-Uniformity Correction, Gamma, Pk/Av, ROI
Camera Power Consumption ²	< 2.5W
Operating Case Temperature ³	-20°C to +55°C
Storage Temperature	-30°C to +60°C
Dimensions	60.21mm x 42.00mm x 42.00mm
Weight	170g
Raptor Photonics Limited reserves the right to change this document at any time without notice and disclaims liability for editorial, pictorial or typographical errors.	

Ordering Information

Camera

Owl 640 Mini VIS-SWIR Digital	OW1.7-VS-CL-LP-640
Power Supply Cable	RPL-HR4-K

Optional Accessories

Mini PC with Xcap STD and frame grabber	RPL-PC-EL1
EPIX® E8 base CL card	RPL-EPIX-E8
EPIX® XCAP STD software	RPL-XCAP-STD
Camera Link Cable, 2m	RPL-MCL-CBL-2M
Optical Lenses ⁴	RPL-xx-xxxx

Note 1: Optional filters available: Low, High or bandpass
Note 2: Measured @ 30°C

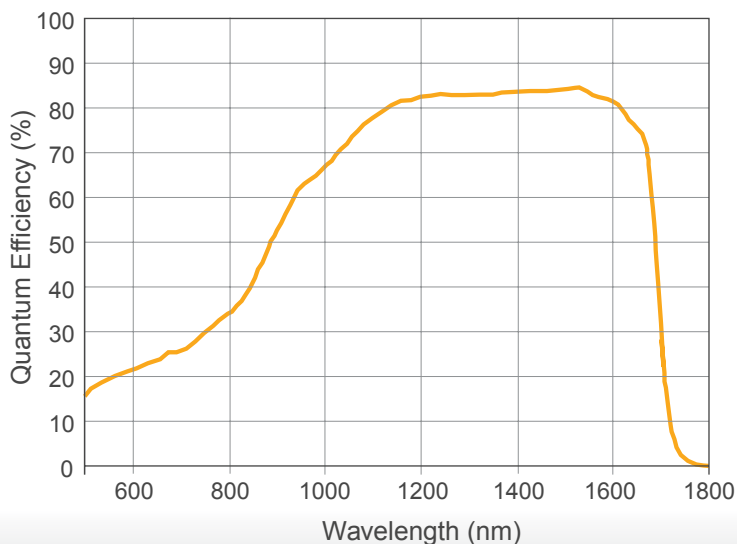
Note 3: Extended Operating Temperature range on request

Note 4: Please consult us to check our range of lenses

Demo is available on request.
Pricing AOR subject to volumes.

Detailed technical drawings
can be downloaded at
www.raptorphotonics.com

Quantum Efficiency



Applications

- 860, 1064 & 1550nm laser line detection
- Hand Held Goggles
- Vision enhancement
- Machine vision
- Beam profiling

Document #: USOWL1.7-VS-CL-LP-640 / AE 1118R1



Willowbank Business Park
Larne, Co Antrim
BT40 2SF,
Northern Ireland

Raptor Photonics Ltd. (UK)
T: +44(0)2828 270 141
E: sales@raptorphotonics.com
www.raptorphotonics.com

Raptor Photonics Inc. (USA)
T: +1 (877) 230-4836
E: sales@raptorphotonics.com
www.raptorphotonics.com

