



Pearleye

P-030 LWIR

- Maintenance free sensor
- Detects temperature differences less than 80 mK

Description

LWIR camera, microbolometer sensor, 640 x 480 pixels, NETD < 80 mK

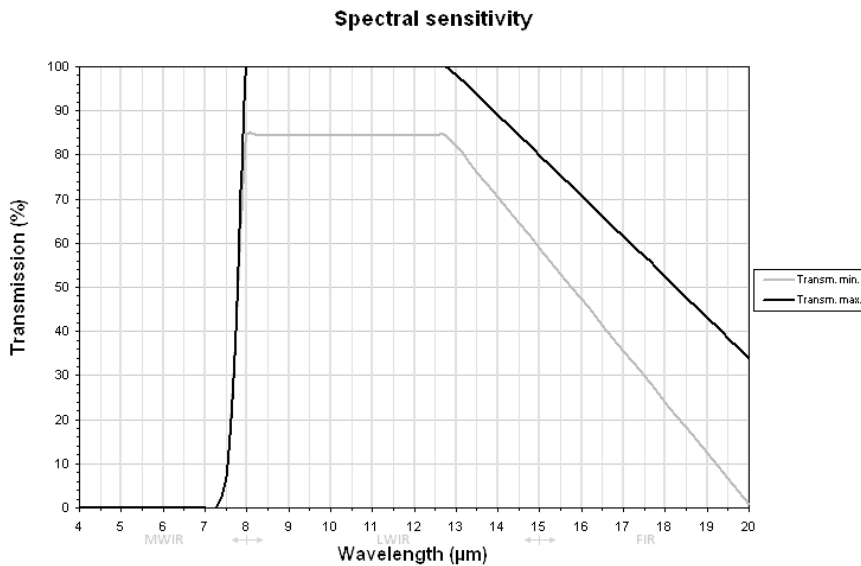
The Pearleye P-030 LWIR camera incorporates an uncooled microbolometer sensor with 640 x 480 pixels resolution. With its maintenance-free sensor, a temperature reference element, and a Peltier temperature stabilization, the camera reliably detects temperature differences. Image correction features ensure an excellent image quality.

Benefits and features:

- Amorphous silicon uncooled microbolometer focal plane array (FPA), 640 x 480 pixels, sensor time constant 7 ms
- 25 μm x 25 μm cell size, effective chip size 16 mm x 12 mm
- Spectral response: 8 to 14 μm (LWIR)
- NETD \leq 80 mK @ 303 K @ f/1.0
- Temperature range: -20 $^{\circ}\text{C}$ to +80 $^{\circ}\text{C}$ @ f/1.0
- Temperature reference element and Peltier temperature stabilizing
- Frame rate 24 fps
- Built-in electromechanical calibration shutter
- Preprocessing functions included
- Including 18 mm lens, f/1.0, Field of View 47.9 $^{\circ}$ x 36.9 $^{\circ}$
- Options
 - Other lenses available on request

Specifications

Pearleye	P-030 LWIR
Interface	IEEE 802.3 1000baseT
Resolution	640 (H) × 480 (V)
Spectral range	LWIR, 8 μm to 14 μm
Sensor	ULIS UL 04 17 1
Sensor type	Microbolometer
Sensor size	No standard size
Pixel size	25 μm × 25 μm
Lens mount (default)	M65 x 0.5
Max. frame rate at full resolution	24 fps
Temperature measurement	-20 °C to +80 °C
Netd	< 80 mK@ 303 K @ f/1.0
ADC	14 bit
Image buffer (RAM)	
	Output
Bit depth	14 bit
Monochrome pixel formats	Mono14
	Operating conditions/dimensions
Operating temperature	0 °C to +35 °C (ambient)
Power requirements (DC)	12 V
Power consumption	18 W @ 12 VDC
Mass	760 g
Body dimensions (L × W × H in mm)	133.7 × 90 × 86 (including lens and connectors)
Regulations	CE: 2014/30/EU (EMC), 2011/65/EU (RoHS)



Features

- Shipped with built-in correction data sets
- Factory adjusted bad pixel correction
- Background (FPN) correction
- Gain/offset correction (NUC / non-uniformity correction) for each pixel
- Drift compensation
- Temperature linearization (LUT)
- Continuous mode (image acquisition with maximum frame rate)

In combination with Allied Vision's AcquireControl software, extensive image analysis functions are available:

- Pseudo color LUT with several color profiles
- Auto contrast
- Auto brightness
- Temperature measurement
- Analyze multiple regions (rectangular, circle) within the image
- Real-time statistics and histogram display
- Background (FPN) correction



Applications

The Pearleye P-030 LWIR is a maintenance-free, robust, compact LWIR camera with excellent image quality and precise temperature measurement. It detects subtle temperature differences with high precision.

- OEM Applications
- Surveillance
- Automation
- Quality control
- Science and research