

# Pearleye

## P-030 LWIR

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

For the detection of temperature differences

Pearleye P-030 LWIR with ULIS UL 04 17 1 runs 24.0 frames per second at 0.3 MP resolution.

The Pearleye camera family incorporates uncooled microbolometer sensors. With their maintenance-free sensors, a temperature reference element, and Peltier temperature stabilizing, the cameras reliably detect temperature differences < 80 mK. Image correction features ensure an excellent image quality.

- Amorphous silicon uncooled microbolometer focal plane array (FPA)
- Spectral response: 8 - 14  $\mu$  m (LWIR)
- NETD  $\leq$  80 mK @ 303 K @ f/1.0
- Built-in electromechanical calibration shutter
- Temperature reference element and Peltier temperature stabilization
- Preprocessing functions included

## Specifications

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

## Output

Bit depth	14-bit
Monochrome pixel formats	Mono14

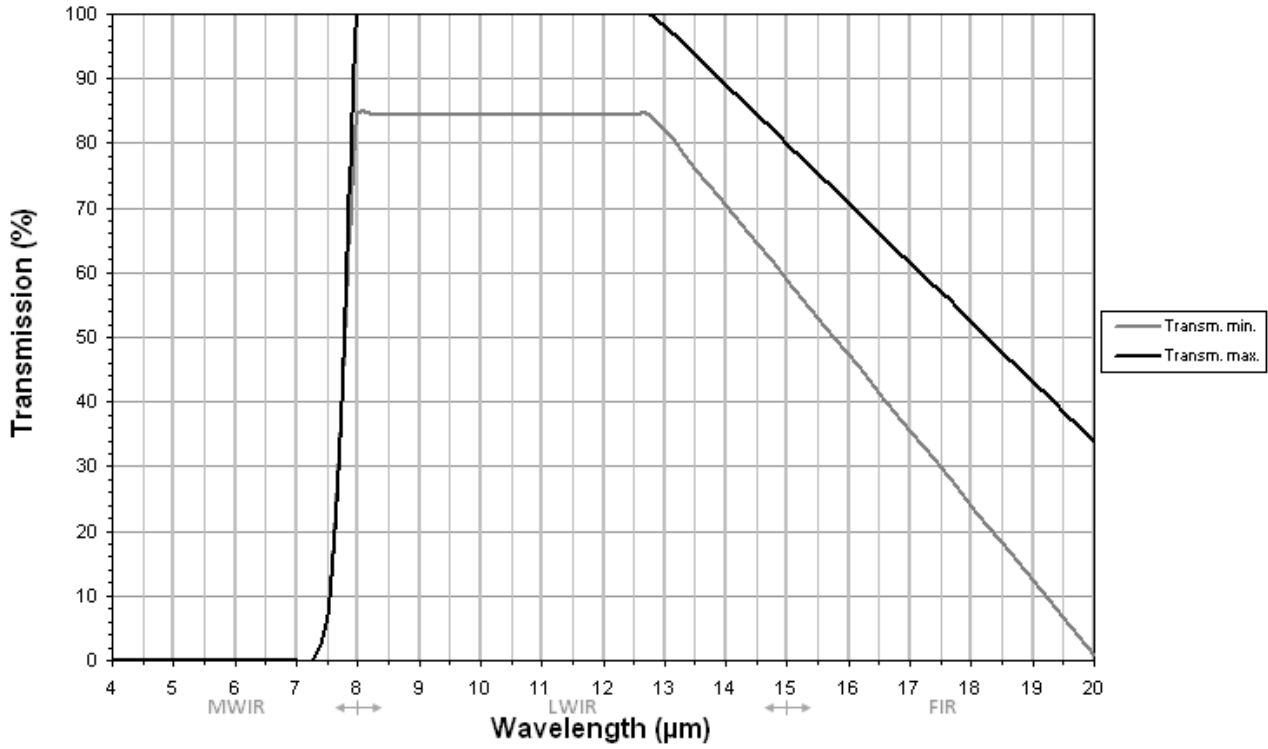
## General purpose inputs/outputs (GPIOs)

## 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)

Quantum efficiency

**Spectral sensitivity**



## 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