



# 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

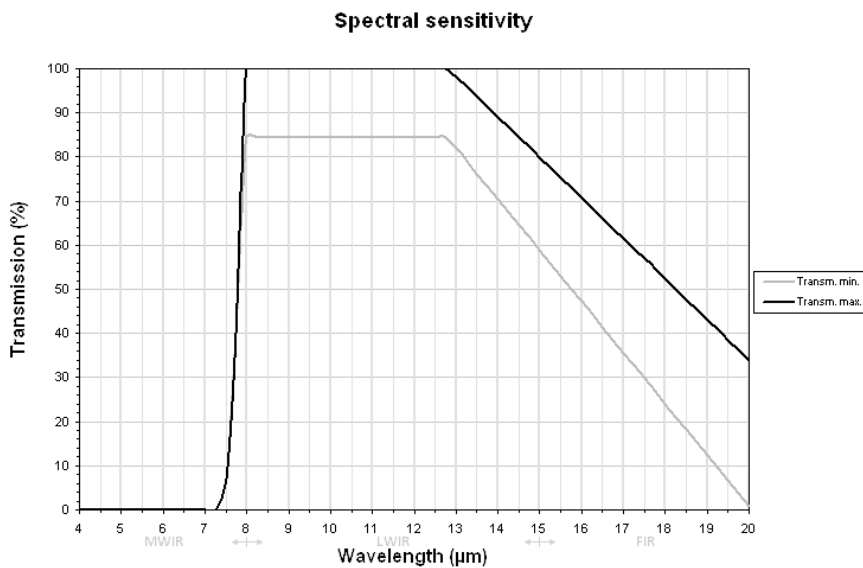
The Pearleye P-030 LWIR camera incorporates an uncooled microbolometer sensor with 640 x 480 pixels resolution. With its maintenance-free sensor, a temperature reference element, and a Peltier temperature stabilization, the camera reliably detects temperature differences. Image correction features ensure 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  $\mu\text{m}$  x 25  $\mu\text{m}$  cell size, effective chip size 16 mm x 12 mm
- Spectral response: 8 to 14  $\mu\text{m}$  (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

| <b>Pearleye</b>                    | <b>P-030 LWIR</b>                               |
|------------------------------------|---|
| 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)                 |   |
|                                    | <b>Output</b>                                   |
| Bit depth                          | 14 bit  |
| Monochrome pixel formats           | Mono14  |
|                                    | <b>Operating conditions/dimensions</b>          |
| 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