



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

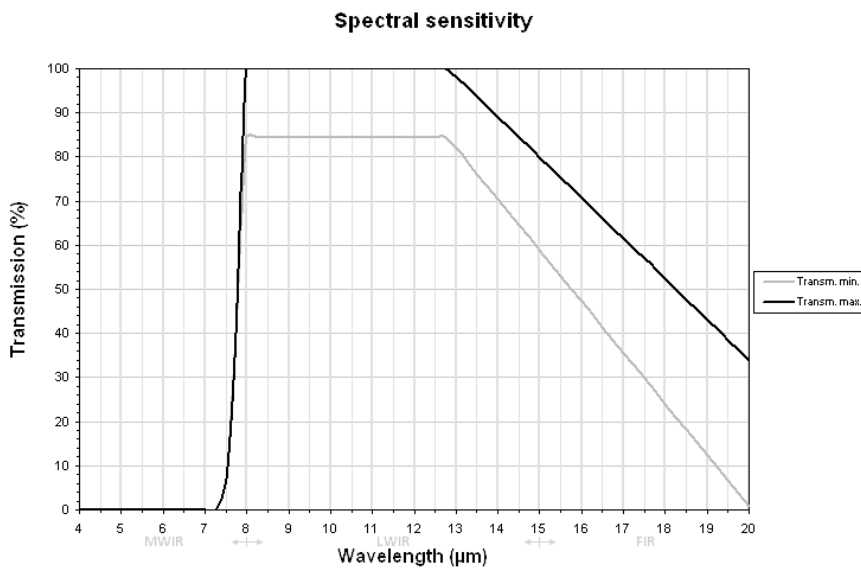
The Pearleye P-030 LWIR camera incorporates an uncooled microbolometer sensor with 640 x 480 pixels resolution. With its maintenance-free sensor, a temperature reference element, and a Peltier temperature stabilization, the camera reliably detects temperature differences. Image correction features ensure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