

ThermoVision™ 2000 / 3000

Thermal imaging camera only

Technical specifications

IMAGING PERFORMANCE

Detector type

ThermoVision 2000:
Quantum Well Infrared Photodetector (QWIP): 320 x 240 pixels
ThermoVision 3000:
Quantum Well Infrared Photodetector (QWIP): 640 x 480 pixels

Spectral range

8.0 to 9.2µm

Number of fields of view

3

Field of view (FOV) / Spatial resolution (IFOV)

ThermoVision 2000	28 mm lens	116 mm lens	704 mm lens
FOV	25° (H) x 19° (V)	6° (H) x 4.5° (V)	0.99° (H) x 0.74° (V)
IFOV	1.36 mrad	0.33 mrad	0.054 mrad

ThermoVision 3000	37 mm lens	116 mm lens	704 mm lens
FOV	25° (H) x 19° (V)	7.8° (H) x 5.8° (V)	1.3° (H) x 0.96° (V)
IFOV	0.68 mrad	0.22 mrad	0.036 mrad

Thermal sensitivity

30 mK max

Image frequency

ThermoVision 2000: 50 Hz PAL or 60 Hz NTSC
ThermoVision 3000: 25 Hz PAL or 30 Hz NTSC

Focus

Automatic or Manual

Electronic zoom

2x, 4x

Image processing

Digital Detail Enhancement (DDE): ThermoVision 3000 only

SYSTEM FEATURES

Remote Control

By serial link over TCP/IP

Automatic heater

Yes

Built-in Test (BIT)

Yes

Pelco D compliance

Yes

IMAGE PRESENTATION

Video output

NTSC or PAL composite video,
14-bit digital image data

POWER

Requirements

18-35 V DC

Consumption

35 W typical - 140 W with heaters

ENVIRONMENTAL SPECIFICATIONS

Operating temperature range

-32°C to +55°C

Storage temperature range

-40°C to +70°C

Automatic Window defrost

Yes

Humidity

Mil-Std-810F, 507.4

Rain

Mil-Std-810F, 506.4

Sand/dust

Mil-Std-810F, 510.4

Icing/freezing rain

Mil-Std-810F, 521.2

Shock

Mil-Std-810F, 516.5

Vibration

Mil-Std-810F, 514.5

Solar radiation

Mil-Std-810F, 505.4

PHYSICAL CHARACTERISTICS

Camera Weight

18 kg

Camera Size

587 x 312 x 267 mm

Shipping size / weight

Sensor head: 440 x 630 x 580 mm (h x w x l) 30 kg

INTERFACES

TCP/IP

Command and control: all functions

RS-232

Command and control: all functions

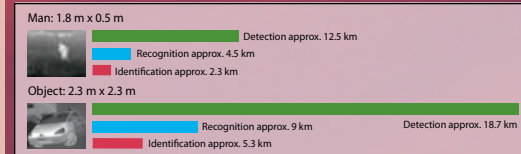
RS-485

Command and control: all functions

TYPICAL CONFIGURATION PACKAGE

Thermal imaging camera, power supply, camera cable (7.5 m), hand control, junction box, operator manual, shipping case

ThermoVision 3000 performance 704 mm lens



Actual range may vary depending on camera set-up, environmental conditions, user experience and type of monitor or display used.

Assumptions:

50 % probability of achieving objective at specified distance given 2°C temperature difference and 0.85 / km atmospheric attenuation factor.



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Thermal:

Detector type

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8.0 to 9.2µm
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Spectral range

Number of fields of view

Field of view (FOV) /

Spatial resolution (IFOV)

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Thermal sensitivity

Image frequency

30 mK max
ThermoVision 2000: 50 Hz PAL or 60 Hz NTSC
ThermoVision 3000: 25 Hz PAL or 30 Hz NTSC
Automatic or Manual
2x, 4x
Digital Detail Enhancement (DDE): ThermoVision 3000 only

Focus

Electronic zoom

Image processing

Daylight CCD

Built-in digital video

Sony FCB-EX-980S Color block camera (NTSC)
Sony FCB-EX-980SP Color block camera (PAL)
Other types available on request
Approx. 680,000 pixels NTSC - approx. 800,000 pixels PAL
Yes
Yes
26x, 42° to 1.6° continuous
12x continuous

Effective pixels

Low light option

Image stabilization

Optical zoom

Electronic zoom

PAN & TILT

Az Range; Az velocity

El Range; El velocity

Accuracy

Resolution

n x 360°; 0.3° - 65°/sec continuous
+/-35°; 0.3° - 30°/sec
1 mrad
0.1 mrad

LASER RANGE FINDER

Type / range

Erbium glass, eye safe / 80 m to 20 km

SYSTEM FEATURES

Geo Positioning

Programmable search

Remote Control

Automatic heater

Built-in Test (BIT)

Pelco D compliance

Internal GPS
Program multiple preset locations
By serial link over TCP/IP
Yes
Yes
Yes

IMAGE PRESENTATION

Video output

NTSC or PAL composite video,
14-bit digital image data

Connector types

VOIP

BNC
MPEG-2 or MPEG-4 video

POWER

Requirements

Consumption

18-35 V DC
55 W typical - 140 W with heaters

ENVIRONMENTAL SPECIFICATIONS

Operating temperature range

Storage temperature range

Automatic Window defrost

Humidity

Rain

Sand/dust

Icing/freezing rain

Shock

Vibration

Solar radiation

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Yes
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Mil-Std-810F, 516.5
Mil-Std-810F, 514.5
Mil-Std-810F, 505.4

PHYSICAL CHARACTERISTICS

Camera Weight

Camera Size

Shipping size / weight

25 kg
503 x 312 x 267 mm
Sensor head: 440 x 630 x 580 mm (h x w x l) 30 kg
Pan/Tilt: 320 x 350 x 300 mm (h x w x l): 14 kg
Accessories: 440 x 630 x 580 mm (h x w x l) 25 - 30 kg
(weight is depending on system cable length)

INTERFACES

TCP/IP

RS-232

RS-485

Command and control: all functions
Command and control: all functions
Command and control: all functions

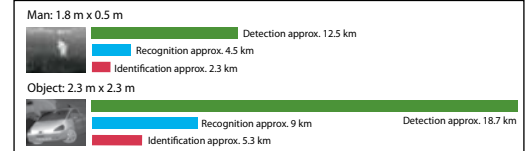
TYPICAL CONFIGURATION PACKAGE

Thermal imaging camera, daylight camera, Pan/Tilt, JPC (Junction and Protocol Converter) system, power supply with cables, system cable, joy stick, junction box, operator manual, shipping cases (3).

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ThermoVision 3000 performance 704 mm lens



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