

P-TYPE™

MODULAR SURVEILLANCE



The P-Type thermal imaging camera is specially designed to help police, security and law enforcement officers detect the heat signatures of people and objects.

The P-Type can be used in conditions of zero visibility including complete darkness and smoke. This is because the energy being sensed is heat rather than light allowing the camera to be used in both day and night operations and for many different applications.

The P-Type is a robust, self-contained, simple-to-operate thermal imaging camera with interchangeable lenses allowing the camera to be used effectively for differing operational distances. It is lightweight and ergonomic, capable of withstanding harsh environments and contains many of the most advanced features available for any thermal imaging camera.

The P-Type is available with a 320 x 240 pixel Amorphous Silicon (ASi) Microbolometer Detector. The camera has been designed using advanced digital imaging technology and techniques for superior performance and application specific functionality.

CAMERA STANDARD FEATURES

The P-Type comes with the most advanced features available in any Thermal Imaging Camera. These include:

Interchangeable Lenses	Up to 5 hours Battery Life
Shuttered OLED Display	Choice of additional colour modes available
Digital Image Capture 1000 images	Customisable Start-up Screen
Digital Video Capture	Time and Date
Image/Video Replay	Digital Zoom
Fast 5 second power-up. Standby mode not required	On Screen Set-up Menu

CAMERA STANDARD ACCESSORIES

The P-Type comes with the following accessories as standard:

Quick Start Guide	Video Output Cable. Removable MicroSD Card
User Manual	Removable MicroSD Card
Rechargeable Battery Pack	USB Cable
Mains Charger	Neck Strap
In-Car Charging Cable	Lens Cloth

CAMERA OPTIONAL ACCESSORIES

Black Hard Case - ARG_P_BHC
Soft Case - ARG_TTP_SC
Additional Li-ion battery - ARG_TTP_BP

CAMERA ORDER CODES

Code	Resolution	Frame rate
PB320	320x240	30Hz
PB329	320x240	9Hz

LENSES

Code (order separately)
ARG_PLENSB
ARG_PLENSC
ARG_PLENSD
ARG_PLENS E
ARG_PLENSF

PERFORMANCE

Lens	Field of View (Horizontal) 320 x 240 sensor	
B	50°	Identification approx 24m Recognition approx 90m Detection approx 230m
C	24°	Identification approx 50m Recognition approx 190m Detection approx 500m
D	13°	Identification approx 90m Recognition approx 350m Detection approx 950m
E	10°	Identification approx 115m Recognition approx 460m Detection approx 1250m
F	7°	Identification approx 165m Recognition approx 650m Detection approx 1750m

Note: Identification as friend or foe at 6.25cm/pixel. Recognition as person / object at 25cm/pixel. Detection of person at 66.7cm/pixel.

OPTICAL DATA

Detector					
Sensor type	Un-cooled Microbolometer				
Sensor material	Amorphous Silicon (ASi)				
Resolution	384 x 288 array (320 x 240) used				
Pixel size	25µm				
Spectral response	8 – 14µm				
MDTD	<100 mK typical (Minimum Discernible Temperature Difference)				
Dynamic range	-40°C to 150° (-40°F to 300°F)				
Refresh rate	60Hz				
Lens					
Lens material	Germanium				
Type	B	C	D	E	F
Focal length	8.6	19	35	46	65
Aperture	f/1.0	f/1.3	f/1.2	f/1.0	f/1.3
Horz. Field of view	50°	24°	13°	10°	7°
Image Presentation					
Type	OLED Microdisplay				
Pixel format	QVGA 320 x 240 x RGB				
Pixel count	320 x 240 x 3 = 230,400 Pixels				
Diopter adjustment	+2 to -4				
Standard Colour Modes	White hot, Black hot plus 10 other selectable modes				
Update rate	PB320 30fps; PB329 9fps				
Image Capture	JPEG or RAW format, 1000 images				
Video Capture	AVI (MJPEG) format, approx 0.2GB/hr PB320 10fps; PB329 9fps				

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ELECTRICAL DATA

Interfaces	
Power	12VDC for use with supplied mains or vehicle adaptor leads
Computer	Mini-USB (USB2) (USB Mass Storage Device)
Video Output	NTSC 525 line 60 Hz, EIA RS-170 PB320 30 fps; PB329 9 fps
Memory Card	Compatible with Class 10 MicroSD
Power	
Power Consumption	3W typical
Start-up time	5 seconds typical
Battery type	Li-ion (DR5)
Battery life	Up to 5 hours
Battery recharge time	4 hours approx in camera 3 hours approx in charger
Charging temp.	0°C to 40°C (32°F to 104°F)
Alternative Battery (option)	Lithium AA FR6 Primary x 4
Lithium AA Battery Life	Up to 5 hours
External power/charging	100 - 240 VAC 50/60Hz or 12VDC (with vehicle adaptor)

MECHANICAL DATA

Camera dims (H x W x D)	224mm x 94mm x 76mm With B or C lens and cover fitted. Excludes removable eyecup and straps
Camera weight	<0.95 kg (<2.1 lb) including battery, B or C lens, straps and cover.

ENVIRONMENTAL DATA

Operating Temperature	-20°C to +60°C (-4°F to 140°F)
Long term storage	-20°C to +60°C (camera) -10°C to +50°C (Li-ion battery)
Sealing	Waterproof (IP65)*
Vibration/Shock	EN 60721-3-2 Class 2M3
EMC Emissions	BS EN & AS/NZ 61000-6-3:2007 EN 50489:2010 FCC CFR 47 PART 15b:2010 ICES-003(2004) (Canada)
EMC Immunity	BS EN 61000-6-2:2005 EN 50498:2010
RoHS	Compliant
Safety	IEC 60950-1 and related national standards

* Connector cover fitted lens fitted and battery cover closed.

WARRANTY

24-month warranty on camera as standard. Warranty can be extended for up to an additional three years at the time of purchase (exclusions apply).