

**X** Non-contact thermometry best done with thermal imagers

**impac**<sup>®</sup>



# IVN 320-P

## High-Performance, portable thermal imager

Portable thermal imager for non-contact temperature measurement between -20 and 900°C

- ◆ Fully radiometric capabilities with 320 × 240 pixels array image
- ◆ Image format compatible with MidasSpec analysis and report generation software
- ◆ Touch screen menu control on TFT-LCD display
- ◆ Display images in real-time
- ◆ Operates like a point-and-shoot digital camera
- ◆ Operates with 6 AA rechargeable batteries
- ◆ Weight less than 1.3 kg with batteries
- ◆ Stores 124 images in on-board RAM
- ◆ Transfers images to a remote device using USB 2.0



The **IVN 320-P** thermal imaging camera is an extremely light-weight, high-performance handheld IR camera offering capabilities normally found in models costing much more. It measures the infrared radiation emitted by the target surface and converts this radiation into a two-dimensional image relating to the temperature distribution at the target surface. This temperature distribution can then be viewed in full color

or grey-scale through the TFT-LCD display or viewfinder which is located on the back of the camera.

This radiometric camera is ergonomically designed for comfortable one-handed point-and-shoot operation using a single button located on the top of the camera. The on-board software provides an intuitive menu system which can be accessed through the touch screen TFT-LCD display.

Completely self-contained in a splash-proof plastic case, it is battery operated, uses advanced uncooled UFPA microbolometer technology, and stores images and data to an internal flash memory card. Images and image data can then be transferred to an external device using USB 2.0.

## Technical data

Temperature ranges:	<b>Type A:</b> range 1: -20 ... 120°C, range 2: 0 ... 500°C (range switchable) <b>Type B:</b> range 1: -20 ... 120°C, range 2: 100 ... 900°C (range switchable)
Measurement uncertainty <sup>1)</sup> :	2°C (measured temperature < 100°C) or 2% of reading
Optics:	Standard focusable optics for measuring distances > 50 cm; Close-up telephoto lens for measuring distances > 2 m; Close-up wide angle lens for measuring distances > 20 cm Fixed macro optics for a measuring distance of 6 cm
Instantaneous FOV / spatial resolution:	1.6 mrad (standard optics)
Image update rate:	30 frames per second
Sensitivity / NETD:	< 0,1°C at 30°C (range 1)
Detector:	320 x 240 UFPA radiometric uncooled microbolometer
Spectral range:	8 ... 14 µm
Emissivity control:	0.2 ... 1.0 in steps of 0,01
Alarm function:	upper or lower
File format:	16 Bit
Display color:	color, greyscale (positive or negative), treshold display (2 tresholds are adjustable)
Manual functions:	focusing
Display type:	3.9" Touch-Screen-TFT-LCD display and view finder
Image processing functioni:	point temperature and emissivity correction
Data display:	point temperature, temp. range, emissivity, time, date, color bar
Digital output / communication:	USB 2.0
Image storage media:	24 MB on board flash memory (124 images)
Operating temperature:	-10 ... 50°C
Storage temperature:	-20 ... 70°C
Power supply:	230 V AC / 12 V DC (external)
Power requirements:	6AA batteries (battery holder included)
Dimensions:	170 mm (W) x 100 mm (H) x 95 mm (D)
Weight:	1.3 kg

<sup>1</sup> Specifications for blackbody reference, ambient temperature 25°C

### Optics

	Standard optics	Telephoto-close-up lens (x 2)	Wide angle-close-up lens (x 0,5)	Macro-close-up lens
Field of view (H) x (V):	29° x 22°	15° x 11°	55° x 42°	
Measuring distance M:	> 500 mm	> 2000 mm	> 200 mm	60 mm
Min. detectable dimension:	2.4 mm x 2.4 mm	4.9 mm x 4.9 mm	1.9 mm x 1.9 mm	0.1 mm x 0.1 mm
Field of view at min. distance M:	260 mm x 190 mm	527 mm x 385 mm	208 mm x 154 mm	34 mm x 26 mm

### Reference numbers:

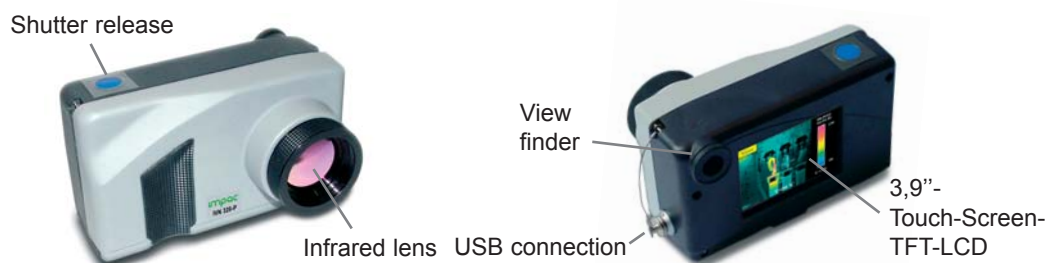
3 830 100	IVN 320-P, type A
3 830 200	IVN 320-P, type B,



## Overview

### Standard accessories

- 6 AA rechargeable batteries with 2 holders
- AC charger for batteries
- AC adapter
- USB interface cable
- Carrying case
- Analyzing software (Win XP)
- Shoulder strap



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Specifications are subject to change without notice