



NEW! Wahl 150 & 170 Imagers



Ultra-High Sensitivity and 2 Meter Drop Test!

IR / Visible Light / Picture-in-Picture / SpyLite™

Touch Screen

Every Pixel Calibrated

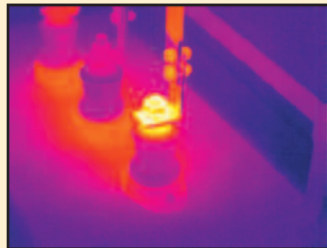
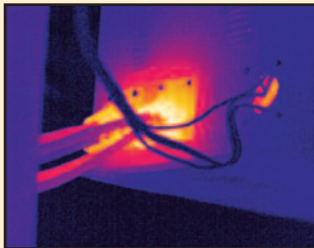
Standard Lens plus 3 Optional Lenses

60Hz* or 9Hz Frame Rate

Model 170: Thermal Sensitivity $\leq 0.04^{\circ}\text{C}$
 Detector Resolution: 384 x 288
 110, 592 Pixels

Model 150: Thermal Sensitivity $\leq 0.05^{\circ}\text{C}$
 Detector Resolution: 160 x 120
 19, 200 Pixels

- “z” models - 60 Hz or “a” models - 9 Hz (Factory Set) (“a” models for use outside USA)
- Large 3.6" LCD Touch Screen Display for easy use of menu functions
- Dual LED “Head Lights” for clear, crisp visible light images even in low light conditions
- Laser Aiming pinpoints Hot Spots
- Picture-in-Picture - all temperatures shown thermally over visible image
- SpyLite™ - only temperatures over or under preset point shown thermally over visible image
- Thermal / Visible / PIP / SpyLite Image Saving
- Thermal / Visible / Video Recording
- 25° x 19° Field of View
- 3.2 Megapixel CMOS Sensor
- 3 Optional Lenses - 0.5X / 2X and 4X FOV
- IP Address for remote viewing and sharing
- Ergonomic design for quick and easy scans
- Advanced Heat Spy Report and Analysis Software included for quick and professional reports with precise image and temperature analysis on any point in an image.
- Bluetooth for Earphone and File Sharing



Find problems quickly, easily, and safely with the Wahl z70

*Export Licensing Fee on 60Hz models may be required for your country, subject to US Government approval. No Export License required on 9Hz models.

Including SPY-CARE™

The FIRST No-Fault warranty plan in the industry is INCLUDED with your purchase!

We will repair or replace your camera for two years, for any reason - even if it's your fault - no questions asked!

Also includes:

FREE Training, FREE Phone Support, FREE Annual lifetime recalibration, inspection, and firmware upgrades. (Excludes Battery and SD Card, see Spy-Care flyer on our website for more details.)

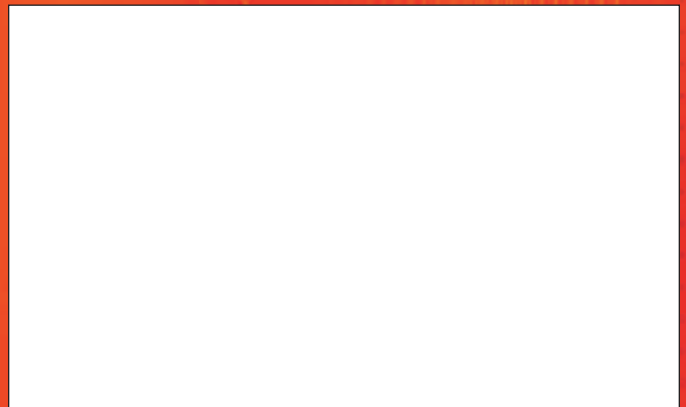
150 • 170 Series Thermal Imagers Specifications

Model Number	a150	z150	a170	z170
Frame Rate	9Hz	60Hz*	9Hz	60Hz*
Image Performance				
Detector Type	Uncooled Microbolometer Focal Plane Array (FPA)			
Detector Resolution	160 x 120		384 x 288	
Number of Pixels	19,200		110,592	
Field of View (FOV)	25° x 19°			
Spatial Resolution (IFOV)	2.73 mrad		1.37 mrad**	
Thermal Sensitivity	≤ 0.05 @ 30°C		≤ 0.04 @ 30°C	
Focus Range	0.5 m to ∞ and beyond			
Focus Type	Manual			
IR Digital Zoom	X 2 or X 4			
Spectral Range	8 - 14µm			
Visible Light Camera	3.2 Megapixel CMOS Sensor, Dual LED Head Lights			
Wide Angle Lens Option	0.5X magnification allows for a 50° x 38° FOV ¹			
Telephoto Lens Option	2X magnification allows for a 12.5° x 9.5° FOV ¹			
	4X magnification allows for a 6.25° x 4.75° FOV ¹			
Image Display				
Thermal/Visible Light Image	Fast switch between Thermal, Visible Light, or Picture-in-Picture ² or SpyLite ³			
LCD Display	High Resolution 3.6" Color LCD Touch Screen, 640 x 480			
Image Control	11 Display Color Palettes: Ironbow; Negative Grayscale; Positive Grayscale; Amber; Hot Metal; Cool Metal; Rainbow Green-Red; Rainbow Blue-Red; Rainbow Black-White; High Contrast Blue-Yellow; and High Contrast Violet-White			
	Image Adjustment: Auto Ranging / Manual Level and Span / Adjustable Display Brightness and Contrast Control			
Measurement Analysis				
Measurement Range	-4° to 662°F (-20° to 350°C) User Selectable Temperature Extension to 1202°F (650°C)			
Measurement Accuracy	Greater of ±2% of reading or ±2°C. Instrument is not calibrated below -10°C.			
Measurement Correction	Auto / Manual			
Measurement Mode	Spots, Areas, Lines, Isotherms, Delta T, Alarms (Multiple Audible and Visible)			
# of Measurement Spots	Up to 5 Moveable Spots, including Hot and Cold Seeking			
# of Measurement Areas	Up to 5 Movable and Sizeable Areas (Max, Min and Avg Temperatures)			
# of Measurement Lines	Up to 2 Moveable Lines, 1 Vertical, 1 Horizontal; Image Temperature Profile Lines			
Emissivity Correction	Adjustable from 0.01 to 1.00 with Built-in Emissivity Table			
Reflected Temperature Compensation	Auto with manual reflected Temperature Adjustment			
Atmospheric Transmission Correction	Automatic Correction according to user input Object Distance, Humidity, and Temperature			
Alarm	High and Low Temperature Audible and Visible Alarm; Isotherm Visible Alarm			
Temperature Scale	User Selectable: °C, °F, and K			
User Settings	Date/Time, Temperature Unit, Brightness/Contrast, LCD Brightness and 8 Languages: English; Spanish; German; Portuguese; Korean; Russian; Simplified Chinese; Traditional Chinese			

Model Number	a150	z150	a170	z170
Frame Rate	9Hz	60Hz*	9Hz	60Hz*
Image Storage				
Removable Storage	8GB Micro SD, max 32GB			
Storage Mode	Manual Single Image Save or Programmable Auto Save to Micro SD Card, Single Thermal Image and Visible Image Save (with link option), Thermal, Visible, Picture-in-Picture ² and SpyLite ³ Video Save			
File Format (Thermal)	JPEG / H.264 (Both with Radiometric information)			
File Format / (Visible Light)	JPEG, MPEG-4			
Voice Annotation	Maximum 60 seconds per image			
Text Annotation	Yes			
Laser				
Laser Pointer	Class 2, < 1mW / 635nm, Red			
Record				
Report Analysis Software	Yes			
Video Output	User Selectable PAL and NTSC			
Freeze Frame/Save Image	Freeze Frame and Save Image, Thermal and/or Visible to SD Card			
Interface				
Micro SD Card Slot	Yes			
Mini-USB	Yes			
Netware	Yes, with IP Address for real time image and data transfer			
Power	DC 12V			
Video	Yes			
Bluetooth	Bluetooth (Earphone/RS232)			
Environment				
Ambient Operating Temp	5° to 122°F (-15° to 50°C)			
Storage Temperature	-13° to 140°F (-25° to 60°C)			
Humidity	≤ 90% non-condensing			
IP Rating	IP54			
Drop Resistance	2 meters			
Power				
Power / Operating Time	1 Rechargeable Lithium Ion Battery, 2 Batteries provided for approx 3 hours continuous operation per battery			
Power Save Mode	Selectable Time Interval Auto Sleep to save battery, Auto Shut Off			
Charging System	Auxillary Charging Kit with: 12V DC Car Charger, AC/DC Power Supply/Charger with International Plugs			
General Info				
Housing	Impact Resistant Molded Plastic with Hand Strap (fits either side). Tripod Mounting with 1/4"-20 Thread			
Dimensions	Width: 4.13 in. (105mm) x Length: 9.64 in. (245mm) x Height: 9 in. (230mm)			
Weight (w/o battery)	2.16 lbs (0.98 Kg)			
Software Compatibility	Microsoft Windows 2000, Windows XP, Windows Vista, and Windows 7			
Included Accessories	Spy-Care, Carrying Case; Hand Strap; Lens Cap; 2 Rechargeable Lithium Ion Batteries; External AC Battery Charger; Video Out Cable; Ethernet Cable; Heat Spy Report & Analysis Software; Micro SD Card and Reader; User Manual.			
Optional Accessories	NIST Traceable Certificate of Conformance; Extended Warranty; Auxillary Charging Kit with: 12V DC Car Charger, AC/DC Power Supply/Charger with International Plugs			
Safety Certificates				
Shock Test/Vibration Test	25G, IEC68-2-29 / 2G, IEC68-2-6			
Immunity Tests/Emission Limits	Yes / Yes			

Specifications subject to change without notice

Heat Spy Thermal Imagers are available from:



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** 384 x 288 is not directly convertible to 640 x 480 imager display. Image is displayed as a 320 x 240 image. Full 384 x 288 resolution image, (1.09 mrad), downloads to computer.



¹ Factory Upgrade

² Picture-in-Picture - all temperatures shown thermally over visible image

³ SpyLite - only temperatures over or under preset point shown thermally over visible image