

Wahl HEAT SPY®

Hand Held Non-Contact
Infrared Thermometers



DHS35XT shown with
LCD display and
telescopic sight

Wahl introduced the **FIRST** portable non-contact infrared thermometer in the world, and continues to provide the wide selection and expert application support you require.

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PW1230

02/11
Rev A

High Performance Infrareds

DHS24 • DHS26 • DHS28 Series

Since Wahl introduced the **FIRST** digital portable infrared thermometer thousands have been in use trouble-free for years.

With NIST traceable accuracy, and FM approval available, **Wahl's DHS24, DHS26, DHS28 Heat Spy® Infrared Thermometers** are the most advanced, easy to use and durable Infrareds in the world. Their precision ground mirrors are protected by rare-earth germanium filters, and tightly focus infrared energy on the patented detector for accuracy as accurate as $\pm 0.3\%$ full scale with $1^\circ\text{F} / ^\circ\text{C}$ resolution.

Factory Mutual Approved models for potentially explosive environments are available. (see page 5).

Rugged, cast and extruded aluminum case, provides shielding against stray EMF from machinery and engines.

Temperature readings are updated 3 times per second on your choice of standard LCD display, or LED for low light levels.

High reliability and higher accuracy than others.



Telescopic Sight

For long distances (20 to 100 feet) or precise aiming on small objects such as bolts, thick cable, tubing, forgings, and castings. The Heat Spy "T" version telescopic sight provides sighting on the centerline of the infrared optics.



Switchable Laser Aiming Sight

Highly visible narrow red light beam pinpoints objects up to 100 feet away. Good choice for locating hot spots and for centering on targets.



Enclosed Optical Sight

For most applications, the standard enclosed optical sight provides target definition at 4 feet and 20 feet with parallax correction.



Features for All Models

- Adjustable Emissivity
- Maxitemp® Peak Temperature Hold
- Self Test
- Auto Calibration
- Output to Recorder
- AC Adapter
- Input Jack for Battery Pack on non-X models
- °F/°C Switchable
- NIST Traceable Accuracy
- Rugged Aluminum Housing
- Sighting and Display Options

Display Options and Modes

Display options for LCD and LED. LCD is best for most uses. Select LED for low light conditions.



Measured temperature is updated 3 times per second on large LCD.



PEAK holds highest measured temperature, and is especially useful in high temperature scans.



TEST mode flashes room temperature to show Heat Spy is working properly.



BATT displays low battery. HLP flashes when instrument is out of specification.



---- indicates measurement is over or under the range of the instrument.

DHS24 • DHS26 • DHS28 Series

DHS24 • DHS26 • DHS28 Series Features

- Superior accuracy and sensitivity between 0° to 1000°F (-20° to 550°C)
- Accuracy of $\pm 0.3\%$ of full scale
- Repeatability of $\pm 1^\circ\text{F}$
- FM approved (Intrinsically Safe) models available
- Enclosed Optical, Closed Laser, or Telescopic Sighting options
- Anti-reflective filter for accurate use in strong sunlight or other light sources
- Applications include all normal materials, including glass surfaces
- Not affected by IR heaters, carbon dioxide or water vapor. Will not measure through glass
- 3 Year Warranty

Please see page 5 for a complete listing of DHS24 specifications.

DHS26 Series Additional Features

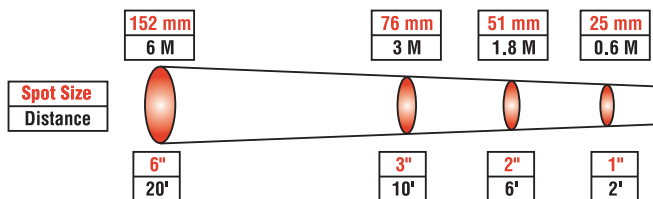
- Wider Temperature Range: 0° to 2000°F (-20° to 1000°C)
- Accuracy of $\pm 0.3\%$ of full scale
- Application for all normal material, including glass surfaces
- Sighting, Display, and FM options available
- 3 Year Warranty

Please see page 5 for a complete listing of DHS26 specifications.

DHS28 Series Additional Features

- Ultra High Range: 32° to 2500°F (0° to 1380°C)
- Specialized tool for measurement of glass gobs, heat treating, annealing, welding, and metal ingot operations, does not measure through glass ports
- Accuracy of $\pm 0.3\%$ of full scale
- Repeatability is 3°F
- 3 Year Warranty
- Telescopic Sight option recommended

Please see page 5 for a complete listing of DHS28 specifications.



DHS24, 26, and 28 Series Heat Spy
Distance to Spot Ratio: 20:1



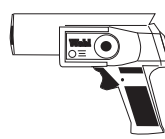
DHS24L



DHS24XT



DHS28XT



DHS29X • DHS35XT Series



DHS29X

DHS35XT Features

- Measures furnace tube temperatures through open ports
- High Temperature Range: 800° to 3200°F (426° to 1760°C)
- Narrow spectral range of 3.5 - 4.1 microns
- Specialized Reflex Sighting to enable readings from very small target areas
- Minimizes errors caused by the reflectance from walls and flames
- Does not measure through glass ports
- Best choice for high temperature general purpose operations
- Offered with telescopic sighting system only
- 3 Year Warranty

Please see page 5 for a complete listing of DHS35XT specifications.

Designed for measurements in the processing of Ferrous and Non Ferrous Metal, the **Wahl DHS29X and DHS35XT Heat Spy®** models are built from the bottom up for precise, accurate measurement of high temperatures under the toughest factory conditions. Rugged, cast and extruded aluminum case, provides shielding against stray EMF from machinery and engines.

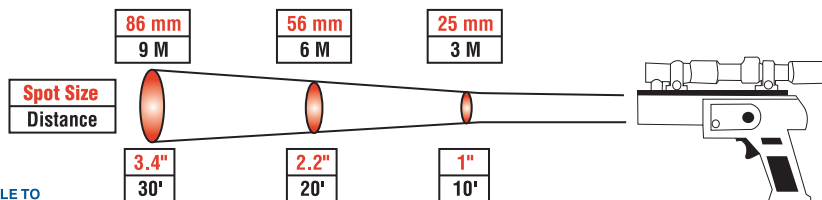
DHS29X Series Features

- Measures through glass ports, flames, and products of combustion
- High Temperature Range: 900° to 3200°F (482° to 1760°C)
- Narrow spectral range of 2.1 - 2.5 microns for general purpose, high temperature measurement through glass
- Small target resolution and long telescopic range
- Aim through ports in furnace walls at refractories, glass gobs, furnace tubes, ceramics, billets, slag, and annealing materials
- Sapphire window protects the silicon optics from heat and contamination
- 3 Year Warranty

Please see page 5 for a complete listing of DHS29X specifications.



DHS35XT



DHS29X, and 35XT Series Heat Spy
Distance to Spot Ratio 100:1



DHS24 • DHS26 • DHS28 DHS29X • DHS35XT Series

High Performance Infrareads

Specifications					
Model Number	DHS24 (LED) DHS24X (LCD)	DHS26 (LED) DHS26X (LCD)	DHS28X (LCD)	DHS29X (LCD) DHS29XT (LCD)	DHS35XT (LCD)
Temperature Range	0° to 1000°F -20° to 550°C	0° to 2000°F -20° to 1000°C	32° to 2500°F 0° to 1380°C	900° to 3200°F 482° to 1760°C	800° to 3200°F 426° to 1760°C
Distance to Spot Ratio	20:1			100:1	
Spectral Range	8 to 14 μm	8 to 14 μm	8 to 14 μm	2.1 to 2.5 μm	3.5 to 4.1 μm
Emissivity	Adjustable 0.2 - 1.0				
Accuracy at 77°F ±5°	± 0.3% FS				± 0.5% FS
Repeatability	± 1°F	± 2°F	± 3°F		
Resolution	1°F / °C				
Response Time to 95% of Reading	1 second				
Operating Temperature	25° to 125°F (-4° to 52°C)				
Temperature Coefficient	± 0.1 deg/deg				
Practical Working Distance	0 to 40 ft.	0 to 40 ft. (T) 150 ft.		0 to 150 ft.	
Sighting System	Enclosed, Laser, or Telescope			Enclosed or Telescope	Telescope Only
Output to Recorder	1mV/deg.				
Power Supply	LCD 1 - 9V Alkaline Battery, LED 2 - 6V Batteries				
Battery Life	40 hours Laser Operation Will Reduce Battery Life			40 hours	
Weight (Lbs.)	2.2 lbs (0.99 kg)	2.2 lbs (0.99 kg), (T) 2.8 lbs (01.27 kg)		2.5 lbs (1.13 kg) (T) 3.0 lbs (1.36 kg)	3.0 lbs (1.36 kg)
Included Accessories	User Manual, LCD, 1-9V Battery, LED, 2-6V Rechargeable Batteries, Carrying Case, Trigger Lock, AC Adapter (Specify 110V or 220V AC)				

Specifications are subject to change without notice

Model No. Suffix Codes and Availability								
Suffix	No Suffix	X	L1	L5	XL1	XL5	T	XT
Heat Spy Series	F&C, LED enclosed optical sight	F&C, LCD enclosed optical sight	F&C, LED laser sight 1mW	F&C, LED laser sight 5mW	F&C, LCD laser sight 1mW	F&C, LCD laser sight 5mW	F&C, LED telescopic sight	F&C, LCD telescopic sight
DHS24	Yes FM	Yes FM	Yes	Yes	Yes	Yes	Yes FM	Yes FM
DHS26	Yes FM	Yes FM	Yes	Yes	Yes	Yes	Yes FM	Yes FM
DHS28	NA	Yes FM	NA	NA	Yes	Yes	NA	Yes FM
DHS29	NA	Yes	NA	NA	NA	NA	NA	Yes
DHS35	NA	NA	NA	NA	NA	NA	NA	Yes

FM - Factory Mutual approved model is available where noted above.

Specifications are subject to change without notice

To specify FM model, modify the model number or suffix by adding "F" for Fahrenheit or "C" for Celsius scale, then add "-FM" to the model number. *EXAMPLE: DHS24XC-FM or DHS26XTF-FM.*

Factory Mutual approved for use in Class I and II, Groups C, D, E, F, and G hazardous locations.

Factory Mutual (FM) approved models do not include the following Heat Spy features or options:

F/C switch (order dedicated Fahrenheit or Celsius model); 1mV/degree output; AC Adapter; laser sighting.



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High Precision Infrared

DHS520B High Precision Infrared with Bluetooth® Communications



The DHS520B features a 2-position trigger which takes and stores temperature readings.

The Wahl DHS520B Series Heat Spy® models are general purpose, high precision, portable infrared thermometers, designed for accurate high temperature measurement in the range of 1022° to 5432°F (550° to 3000°C).

The measured temperature is displayed in four simultaneous modes: continuous, peak, mean, and valley, with user selected mode for the viewfinder display. The bright, back-lit external display panel indicates status and configuration of thermometer.

Accurate sighting is ensured by the clear, wide angle (9°) field of view and small, clearly defined (1/3°) measurement area. Focusing is variable from 1m to infinity, with close focus options available using auxiliary lenses. The reflex optical system gives precise definition of target spot and simultaneous backlit display of user selected values in the viewfinder.

Emissivity compensation is provided via the icon-based menu system. The operating waveband has been carefully chosen to minimize errors due to uncertainty in emissivity and the effects of atmospheric vapor components.

Features

- Advanced spectral filtering enhances performance
- Long term, drift free measurement
- High accuracy and repeatability
- Digital signal processing
- Flexible user configuration
- Robust - Ideal for industrial use

Benefits

- No contamination, interference or damage to process or material
- Accurate, reliable and stable temperature measurement to aid product quality control
- Maximize production rates and efficiency

Target Size	
Distance: ft (m)	Target Size: in (mm)
328 (100)	22.6 (576)
164 (50)	11.2 (287)
65.6 (20)	4.48 (114)
32.8 (10)	2.24 (57)
22.9 (7)	1.53 (39)
16.4 (5)	1.10 (28)
6.5 (2)	0.43 (11)
3.2 (1)	0.18 (4.8)

Target size can be reduced to a minimum of 0.4mm/0.016in with optional close-up lenses.

Specifications	
Model Number	DHS520B - DHS520GB*
Temperature Range	1022° to 5432°F (550° to 3000°C)
Distance to Spot Ratio	20:1, 4:1 with closeup lens
Spectral Response	1 µm with advance spectral filtering
Emissivity	0.10 to 1.20 in 0.01 step graduations
Accuracy	< 0.25% (K) of reading
Repeatability	< 0.1% (K) of reading
Response Time	30 ms (98% response)
Operating Temp Range	32° to 122°F (0° to 50°C)
Measuring Mode	CONT, AVG, MAX & MIN
Optical System	9° Field of View with 1/3° (180:1 to 98% measurement energy) area. Eyepiece adjustable: -3.75 to +2.5 diopters
Focusing Range	39.3" / 1m to infinity 17.7 to 24.5" / 450 to 620mm with optional 8.5" / 215mm fixed focus close-up lens
Display Update Time	0.5 seconds
Sealing	IP54 / NEMA 3
Output	Bluetooth Communications
Power Supply	1 9V Battery
Dimensions	8.25 x 2.75 x 5.5 inches (210 x 70 x 140mm)
Weight	Approximately 6.87 ounces (195 grams) 0.83kg/1.8lb
Included Accessories	Lens Cap, Dark Glass Eye Protection Filter (G model includes 2 filters), Wrist Strap, 9V Battery and User Manual
Optional Accessories	User Manual, 9V Battery, Waterproof Carrying Case, Close-up Lenses, Datalogger Software

* Model DHS520GB includes 2 dark glass eye protection filters for use in the Glass industry.

Specifications subject to change without notice

Note: The DHS520 replaces discontinued model DHS54.

Applications

- Heat Treatment
- Semi-Conductors
- Any Industrial use
- Refractories
- Steel
- Glass



NEW! HSA300 Long Range Infrared

The **NEW! Wahl HSA300** is a Long Range Infrared Thermometer designed for use in the Electrical Power Generation and Transmission Industry, as well as other applications that require measuring objects from a long distance.

Easily scan for hot spots with 300:1 distance to target optics. The HSA300 provides a 2-inch measurement spot at 50 feet. Its telescopic sight allows precise positioning of the measurement spot for up to 300 feet away, while maintaining a safe and convenient distance from the target.

Peak temperature is displayed on the large main display easing the ability to capture the hot spot. The current temperature is displayed on the smaller secondary display.

Specifications	
Model Number	HSA300
Description	Long Range
Range	(-20° to +280°C)
Distance to Spot Ratio	300:1
Spectral Range	8 μm to 14 μm
Emissivity	0.50 to 1.00
Accuracy <100°C	±5°C
>100°C	±5% of Reading
Resolution	1°C
Housing	Impact Resistant Plastic
Power Supply	2 - 9V Batteries
Dimensions	10 x 9 x 2.25 inches (254mm x 228mm x57mm)
Weight (with Battery)	2.1lbs, (0.95 kg)
Included Accessories	User Manual, 2 9V Batteries, Carrying Case

Specifications subject to change without notice

Applications

- Chemical Processing
- Preventive Maintenance
- Power Generation
- Power Transmission
- Refinery and Steel Industry
- Stacks, Kilns, and Reactors

Palmer Wahl Warranty: Manufacturer warrants all products listed in this catalog to be free from defects in material or workmanship under normal use and service. The Manufacturer agrees to repair or replace any product which upon examination is revealed to have been defective due to faulty workmanship or material if returned to our factory, transportation charges prepaid, within the product specific warranty period stated in the catalog by the manufacturer. This warranty is in lieu of all other warranties, expressed or implied and of all obligations or liabilities on its part for damages including but not limited to consequential damages, following the use or misuse of instruments sold by the Manufacturer. No agent is authorized to assume for Manufacturer any liability except as set forth above.

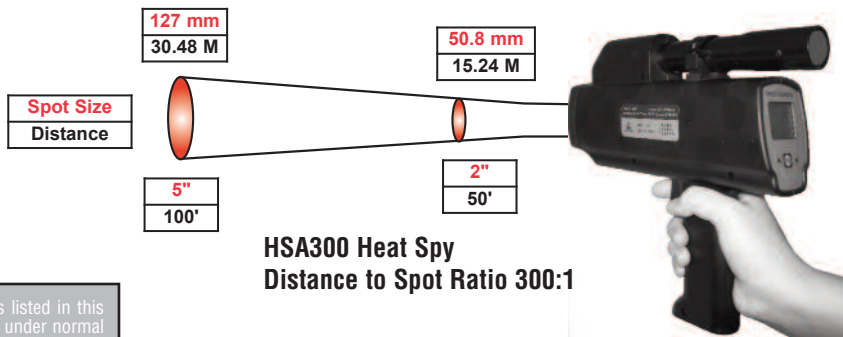


HSA300 Long Range Infrared Thermometer

The HSA300 offers a large, easy to read digital display.

FEATURES

- Easy Scanning for Hot Spots
- 300 to 1 - Distance to Target Size Ratio
- Measures from 300 feet away



Note: The HSA300 replaces discontinued model HSA201.



Wahl is pleased to introduce six models to our famous line of Heat Spy® Infrared Thermometers, the **DHS85XL**, **DHS115XL**, **DHS115XEL**, **DHS135XEL**, **DHS215XEL** and the **NEW! DHS235XEL** (see pg 9). These incredibly accurate and robust instruments will help you diagnose any problem, and prevent costly equipment downtime. The variety of features enable you to select the most appropriate Heat Spy® for your application.



DHS85XL

DHS85XL Model Features

- The most economical and highest performing Heat Spy in its class
- Used for Close Range: 8:1 (D:S Ratio)
- Maximum temperature: 619°F (326°C)
- Ultra low power consumption in shut-down mode

Note: The DHS85XL replaces discontinued model DHS100X.

DHS115XL Model Features

- Used for Short Range: 12:1 (D:S Ratio)
- Temperature Range to 999°F (535°C)
- Easy Aiming
- Quick Response
- Easy location of hot spots
- Ultra low power consumption in shut-down mode

DHS115XEL Model Extended Features

Same great features as the 115XL, *Plus:*

- Includes Hi, Low Alarms
- MAX/MIN/AVG/ Δ T calculations
- Adjustable Emissivity for better accuracy
- 10 points of memory to record temperature
- Electronic trigger lock which allows readings to be taken continuously



DHS115XEL
and DHS115XL

Note: The DHS115XL and DHS115XEL replace discontinued models DHS100XL and DHS100XEL.

APPLICATIONS

- Quality/Non-Destructive Testing
- Electrical Troubleshooting
- Manufacturing Process Control
- Diesel/Fleet Maintenance
- Plant/Facilities Maintenance
- HVAC/Refrigeration
- Automotive Repair and Diagnostics



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DHS135XEL • DHS215XEL and **NEW! DHS235XEL**



Easy to read digital display on models DHS135 and DHS215 and DHS235.



DHS215XEL shown with optional TC869 - 45° Spring Articulated Surface Probe, rugged Delrin® handle, ANSI mini-connector and 5-foot flexible compensated cable. For more information on optional probes visit www.palmerwahl.com.

Model Features

DHS135XEL

- High Temperature 1832°F (1000°C)
- Long Range: 30:1 (D:S Ratio)

DHS215XEL

- High Temperature 1832°F (1000°C)
- Extra Long Range: 50:1 (D:S Ratio)

NEW! DHS235XEL

- Extra High Temperature 2732°F (1500°C)
- Extra Long Range: 50:1 (D:S Ratio)

All Models offer:

- 10 point memory log that can save current temperature
- MAX/MIN/AVG/ΔT
- Electronic Trigger Lock allows continuous readings
- Ultra low power consumption in shut-down mode

DHS215XEL Model Additional Features

- Type K Thermocouple ANSI mini-connector input for probe to determine emissivity
- Heat Spy® Data Logging Software

DHS215XEL Heat Spy® Data Logging Software



DHS215XEL interfaced with a laptop computer via USB cable and Heat Spy® Data Logging software for online data acquisition. Shown with optional tripod.

The DHS215XEL can be interfaced with a computer via the supplied USB cable and Heat Spy® Data Logging software. The software provides a convenient way to log temperature readings at user selectable time sampling intervals of 1 second to 999 hours in

High Performance Infrared Thermometer				
Item	Date	Time	Temperature	Unit
1	5/4	17:39:59	75.9	Fahrenheit
2	5/4	17:40:29	94.3	Fahrenheit
3	5/4	17:40:59	94.3	Fahrenheit
4	5/4	17:41:29	102.2	Fahrenheit
5	5/4	17:41:59	90.7	Fahrenheit

1-second increments. Temperature data is generated with a date and 24-hour format time stamp in a text file that can be used by programs such as Excel, Access, and Word for further analysis, graphing and report writing.



DHS85XL • DHS115XL • DHS115XEL DHS135XEL • DHS215XEL • DHS235XEL

Specifications						
Model Number	DHS85XL	DHS115XL	DHS115XEL	DHS135XEL	DHS215XEL	NEW! DHS235XEL
Description	Close Range	Mid Temperature Short Range	Mid Temperature Short Range Extended Features	High Temperature Long Range Extended Features	High Temperature Extra Long Range Extended Features USB, Type K Probe	Extra High Temperature Extra Long Range Extended Features
Temperature Range	-4° to 619°F -20° to 326°C	-25° to 999°F -32° to 535°C	-25° to 999°F -32° to 535°C	-58° to 1832°F -50° to 1000°C	-58° to 1832°F -50° to 1000°C	-58° to 2732°F -50° to 1500°C
Distance to Spot Ratio	8:1	12:1		30:1	50:1	
Spectral Range	5 to 14µm	5 to 14µm	5 to 14µm	8 to 14µm	8 to 14µm	8 to 14µm
Emissivity	Fixed at 0.95	Adjustable 0.10 to 1.00		Adjustable 0.10 to 1.00	Adjustable 0.10 to 1.00	Adjustable 0.10 to 1.00
Accuracy	±2% of reading or 2°C whichever is greater	±5°F (±3°C) from -25° to -4°F (-32° to -20°C) ±3°F (±2°C) from -4° to 212°F (-20° to 100°C) ±2% from 212° to 999°F (100° to 535°C)		±5°F (±3°C) from -58° to -4°F (-50° to -20°C) ±3°F (±2°C) from -4° to 212°F (-20° to 100°C) ±2% above 212°F (100°C)		
Repeatability	±2°F (±1°C)	±2°F (±1°C)	±2°F (±1°C)	±2°F (±1°C)	±2°F (±1°C)	±2°F (±1°C)
Resolution	0.1°F (0.1°C)	0.1°F (0.1°C)	0.1°F (0.1°C)	0.1°F (0.1°C)	0.1°F (0.1°C)	0.1°F (0.1°C)
Response Time	500 ms.	500 ms.	500 ms.	500 ms.	500 ms.	500 ms.
Operating Temperature	32° to 122°F (0 to 50°C) 10 - 90% RH	32° to 122°F (0 to 50°C) 10 - 90% RH	32° to 122°F (0 to 50°C) 10 - 90% RH	32° to 122°F (0 to 50°C) 10 - 90% RH	32° to 122°F (0 to 50°C) 10 - 90% RH	32° to 122°F (0 to 50°C) 10 - 90% RH
Storage Temperature	14° to 140°F (-10° to 60°C)	14° to 140°F (-10° to 60°C)	14° to 140°F (-10° to 60°C)	14° to 140°F (-10° to 60°C)	14° to 140°F (-10° to 60°C)	14° to 140°F (-10° to 60°C)
LCD Backlight	Yes	Yes	Yes	Yes	Yes	Yes
Dual Display	NA			Yes	Yes	Yes
°F & °C Selectable	Yes	Yes	Yes	Yes	Yes	Yes
Laser Sight Switchable	User Selectable, Class II Laser, less than 1mW					
Auto Power Off	Automatically after approx. 6 seconds	Automatically after approx. 6 seconds	Automatically after approx. 6 seconds	Automatically after approx. 6 seconds	Automatically after approx. 30 seconds	Automatically after approx. 6 seconds
Max/Min/Avg/ΔT	No	No	Yes	Yes	Yes	Yes
Auto Measuring	No	No	Yes	Yes	Yes	Yes
Audible Alarm	No	Yes	Yes	Yes	Yes	Yes
10 Point Memory	No	No	Yes	Yes	Yes	Yes
Electronic Trigger Lock	No	Yes	Yes	Yes	Yes	Yes
Tripod Mount	Yes	No	No	Yes	Yes	Yes
USB Data Output	No	No	No	No	Yes	No
Type K Thermocouple	No	No	No	No	Yes	No
Operating Software	NA				Software Cd Included	NA
Power Supply	9V Battery	9V Battery	9V Battery	9V Battery	9V Battery	9V Battery
Battery Life with Laser Off	16 hrs for continuous operation	15 hrs for continuous operation		15 hrs for continuous operation		
Dimensions	5.9 x 5.2 x 1.8" (150 x 133 x 45mm)	6.8 x 3.6 x 1.8" (173 x 93 x 45mm)		7.9 x 5.0 x 1.9" (200 x 127 x 47mm)		6.7 x 5.2 x 1.8" (200 x 132 x 45mm)
Weight with Battery	4.7 oz (135g)	7.8 oz (220g)		12.7 oz (360g)		11.6 oz (330g)
Included Accessories	User Manual, 9V Battery	User Manual, 9V Battery, Soft Pouch		User Manual, 9V Battery, Carrying Case, and Wrist Strap	User Manual, 9V Battery, Carrying Case, Wrist Strap & Software	User Manual, 9V Battery, Carrying Case, and Wrist Strap
Optional Accessories	Soft Pouch	No		No	USB Cable, Type K Probe*	No

* Wire Bead thermocouple - 1 meter in length, ** For more information on optional probes visit www.palmerwahl.com.

Specifications are subject to change without notice

NEW! DHS125XEL Hybrid Infrared

The **NEW!** DHS125XEL Hybrid Infrared from Wahl is an intelligent contact and non-contact infrared thermometer which goes beyond the conventional temperature measurement capabilities of other infrared thermometers.

Specifications	
Model Number	DHS125XEL
Temperature Range	-25° to +1400°F (-32° to +760°C)
Distance to Spot Ratio	12:1
Emissivity	Adjustable 0.1 to 1.0
Accuracy	±5°F (±3°C) From -25° to -4°F (-32° to -20°C)
Ambient Operating Temperature of 77°F (25°C)	±3°F (±2°C) From -4° to 212°F (-20° to 100°C) ±2% Above 212°F (100°C)
Repeatability	±1°C (±2°F)
Resolution	0.1°C (0.1°F)
Response Time	500 ms
Operating Temperature	0° to 50°C (32° to 122°F), 10 to 95% RH
Auto Power Off	Automatically after approx. 6 seconds
Thermopile	5 to 14 µm
eSmart	Yes
Thermocouple Connection (K)	Yes
Thermocouple Range	-200° to 1380°C
Thermocouple Accuracy	±1.5% +1 degree
°F/°C Switchable	Yes
LCD Backlight	Yes
Color Identification Signal	Yes
Laser Sight Switchable	Yes
Audio Alarm	Yes
Dual Display	Yes
Trigger Lock Function	Yes
Max/Min/Avg/ΔT	Yes
Auto-Measuring	Yes
10 Point Memory	Yes
Tripod Mount	Yes
Power Supply	9V, 006P, IECF22, NEDA1604
Dimensions	7.09 x 5.12 x 1.57 inches (180mm x 130mm x 40mm)
Weight	Approximately 6.87 ounces (195 grams)
Included Accessories	User Manual, 9V Battery and Carrying Case
Optional Accessories	see Wahl Heat Prober® Thermocouple probes for surface measuring

Specifications subject to change without notice

Applications

- Electrical Troubleshooting
- Automotive Maintenance
- HVAC Energy Audits
- Food Safety and Processing
- Test Terminals on Circuits
- Maintenance & Inspections



• **eSmart Technology:** Using an external Type K Thermocouple as a reference, the built-in software determines the emissivity of the target object, and automatically sets the emissivity of the instrument.

• **Color Identification Signal Technology:** Display backlight changes to red when alarm set-points are exceeded.

• **Ultra low power consumption.**

• **Extended time measuring reliability.**

• **Electronic Trigger Lock Function.**

• **Tripod Mount:** For hands free monitoring.



DHS125XEL shown with optional Wahl Heat Prober® TC869 45° Spring Articulated Surface Probe.

For more information on optional probes visit www.palmerwahl.com.



Pocket Infrared

DHS110XL • DHS110XEL

Compact and economical the **Wahl DHS110 Pocket Heat Spy®** is perfect for quick, routine maintenance and inspection applications. Rugged, light-weight construction allows quick use and easy carrying. Operation is a snap with the large, easy to read LCD digits, switch on back light for low light conditions, and low battery indicator. The bright laser aiming beam allows for precision targeting.



DHS110XEL Advanced Features

- Menu Selection of Maximum, Minimum, Average Temperatures, and Maximum Differential
- Adjustable Emissivity of 0.10 to 1.00
- °F or °C Menu Selectable
- Audible and Visual Alarm at HI/LO Setpoint
- Menu Selectable Display of Battery Voltage or % of Battery Life
- Memory Storage of Last Temperature Measured

Applications

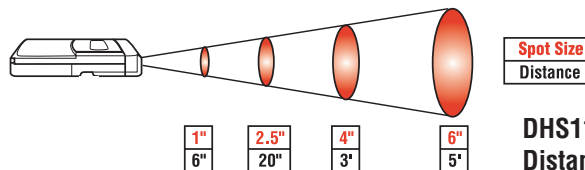
- Asphalt, Rubber
- Assembly Areas
- Chemical Processes
- Ceramic, Glass
- Circuit Boards, Chips
- Closed Robotic
- Dies, Shells
- Electrical Busses
- Food Processing
- Furnaces
- Heat Treating
- High Voltage Targets
- HVAC System Testing
- Motor Bearings
- Moving Machinery
- Painted Surface
- Paper, Plastic
- Process Assembly Lines
- Rotating Machinery
- Stacks, Steam Traps
- Storage
- Wave Soldering
- Wheel Bearings
- Welding
- Wood
- Transportation



Specifications		
Model Number	DHS110XL	DHS110XEL
Description	Standard Model	Extended Features
Temperature Range	0° to 850°F (-18° to 450°C) Displays HI when target temp > 851°F (455°C) nominal Displays LO when target temp < -20°F (-28°C) nominal	
Distance to Spot Ratio	10:1	
Spectral Range	7-18µm	
Emissivity	Pre-set 0.95	Adjustable 0.10 to 1.00. Automatically switches to AVERAGE mode for emissivity < 0.3
Accuracy*	Greater of ± 2% of reading or ± 3°F (± 2°C)	
Repeatability*	Greater of ± 1% of reading or ± 2°F (± 1°C)	
Resolution	1°F or °C in all modes	
Response Time	500ms	
Operating Temperature	32° to 120°F (0° to 50°C) 10% to 90%, RH	
Storage Temperature	-13 to 158°F (-25 to 70°C) without battery	
Laser Sighting	Bright laser sight Class II (1mW), 0.5" left of target center	
Display Hold	Last reading and operating mode displayed for 6 seconds nominal upon ON button release	
LCD Backlight	User selectable	
Temperature Update Rate	5 readings per second	
Calculating Mode	NA	MAX, MIN, AVG, MAX ΔT
Recall Last Reading	NA	Yes
Audible/Visual Alarm**	NA	Yes
°F & °C Selectable	°F or °C (switchable), 3 digit LCD	°F or °C (menu selectable), 3 digit LCD
Power Supply	9V Alkaline (included) or NiCad battery	
Battery Life (with alkaline)	150 hours with backlight off. Laser and backlight operation will reduce battery life	
Battery Life indicator	Display icon flashes when low	Display icon flashes when low, menu recalls % life remaining/actual voltage
Dimensions • Weight	6 x 2 x 1 inches (152 x 51 x 25 mm) / 7 oz (198g)	
Included Accessories	User Manual, 9V Battery, Carrying Case, and Wrist Strap	
Options	NIST Certification	

25 mm 15 cm	63 mm 51 cm	102 mm 0.9 M	152 mm 1.5 M
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Specifications subject to change without notice
* at 23°C ± 5°C, e = 0.95
** High or Low



DHS110 Series Heat Spy
Distance to Spot Ratio 10:1

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