

Infrared Temperature



Model Number	HHM290	OS530E Series	OS523E/524E	OSXL450	OS425-LS	OS562	OS561	OSM101	OS8886	OS681-CE/OS-FS/OS-PP
Price	£164	£198-£436	£735-£870	£39.50	£104	£84	£58	£77	£100	£33-£114
Page	280	232	238	240	241	omega.co.uk	242	omega.co.uk	omega.co.uk	omega.co.uk
Temperature Range	-20 to 550°C	-30 to 871°C	18 to 2482°C	-20 to 320°C	-60 to 1000°C	-60 to 780°C	-60 to 500°C	-18 to 538°C	-20 to 420°C	-18 to 315°C
Accuracy	2% reading or 1.7°C	±1% of rdg or 3°F	±1% of rdg or 2°F	±2°C (3°F) or 2% rdg	Target temp 33 -100°C ±2% of rdg or 2°C (4°F)	±2% rdg or 2°C (4°F)	±2% rdg or 2°C (4°F)	±3% rdg or 2.2°C	±2% rdg or 2°C	2% full scale
Repeatability	1°C to 1°F	±1% rdg +1 digit	±(1% rdg + 1 digit)	2% rdg or 3°F				±1% rdg	±1°C	3°F/2°C or 2% full scale
Emissivity	0.1 to 1.00	0.1 to 1.0 in 0.01 steps	0.10 to 1.00 in 0.01 increments	0.95	Adj. 0.1 to 1 0.01 step	0.10 to 1.00	0.95	0.1 to 1.00	0.3 to 1.0	0.95
Spectral Response	8 to 14 μ	8 to 14 μ	8 to 14 μ 2 to 2.5 μ	7 to 18 μ	8 to 14 μ	8 to 14 μ	8 to 14 μ	5 to 14 μ	8 to 14 μ	8 to 14 μ
Response Time to 95% Full Scale	1.5 sec	100 msec	100 msec	500 msec	1 sec (90%)	1 sec	1 sec	150 msec	500 ms	0.05 sec
Outputs		1 mV/°, RS232	mV/deg- RS232					K		
Display	LCD	Backlit LCD	Backlit LCD	Backlit LCD	Backlit LCD	Backlit LCD	Backlit LCD		LCD	LCD
Resolution	1°C or 1°F	1°	1°C or 1°F	0.1°C	0.1°C (0.1°F)	0.1°C (0.1°F) -9.9 to 199.9	0.1°C (0.1°F) -9.9 to 199.9		1°C	1°C or 1°F
Power	6 "AA" alkaline batteries	4 "AA" batteries or AC adaptor	4 "AA" batteries or AC adaptor	9 V	2 "AAA" batteries	2 "AAA" batteries	2 "AAA" batteries	1 "AA" battery	One 9 V alkaline battery	One 9 V alkaline battery
Battery Life	100 hrs typical with no laser	240 hrs with lithium battery	60 hrs alkaline, 10 days lithium	12 hrs with laser on		180 hrs without laser	180 hrs without laser	1.6	100 hrs	
Minimum Spot Size vs Distance	13 mm @ 0	8.9 @ 600 mm 25 @ 760 mm	See specifications	1:6	1:50	1:12	1:10		1:8	75 mm @ 25 mm dia
Aiming	Built-in laser circle/dot	Built-In switchable laser circle/dot sight	Switchable laser circle/dot or sighting scope	Laser dot or circle	Laser Circle	Laser Circle	Laser Circle	Laser	Laser sighting	Visual or laser
Alarms		Hi and low alarm standard	Hi and low alarm standard		Display flash/ beep				Audio	
Data Storage		✓	✓						Recall	
Switchable °F/°C	✓	✓	✓	✓	✓	✓	✓		✓	✓
Tripod Mount	✓	✓	✓		✓ Magnetic swivel mount					
Other Features	Multimeter thermometer backlit display	Backlit LCD display audible buzzer RS232 free software	Backlit LCD audible buzzer RS232 free software	Circle/dot laser	AVG, dif mode	K T/C input, 5 maths modes		Handheld		Laser sighting

* Meters shown with these sensors are for reference only and not included with the basic unit.

✓ = has this feature.

Selection Guide

See OMEGA's Complete Range of Blackbody Calibration Sources (Pages 260 to 265) Used to Test and Calibrate Your Non-Contact Infrared Pyrometers and Transmitters



Model BB701 Hot/Cold
-18 to 149°C, 60 mm Target Plate 0.95 Emissivity



Model BB702
35 to 215°C, 60 mm Target Plate 0.95 Emissivity



Model BB703
35 to 400°C, 29 mm Target Plate 0.95 Emissivity



Model BB704
100 to 398°C, 100 mm Target Plate 0.95 Emissivity



Model BB705
100 to 1046°C, 44 mm Cavity Cone, 0.99 Emissivity

Model Number	OS200	OS685	OS546	OS643 Series	OS540	OS423-LS	OS91/OS93 OS951 Series	OS610 and OS620/OS500
Price	£179	£100	£70	£57	£57	£124	£220-£515	£291-£436
Page	omega.co.uk	omega.co.uk	omega.co.uk	omega.co.uk	omega.co.uk	243	omega.co.uk	omega.co.uk
Temperature Range	-20 to 250°C	-20 to 500°C	-30 to 550°C	-20 to 400°C	-20 to 420°C	-60 to 800°C	-46 to 228°C	-55 to 315°C (see ranges)
Accuracy	±1% rdg ±1°C	±1% rdg or 1°C	±2% rdg or 3°C	3% or ±3°C 3% or -5.5°F	3%	±2% rdg or 2°C	1.0% reading +1 digit	±1% rdg + 1 digit OS614; 0.5°C +1 digit
Repeatability	±0.5°C ±1 digit	±0.5% rdg or 0.5°C		1°	1% rdg		OS91: ±0.1°C or F OS92: ±1°F	±0.5 rdg + 1 digit
Emissivity	0.95 fixed OS204, OS205, 0.1 to 1.0	0.95 or adjustable	0.1 to 1.00 or 0.95	0.1 to 1.0 or 0.95	0.95	0.10 to 1.00	Automatic 0.1 to 1.0	0.2 to 1.0
Spectral Response	6 to 14 μ	8 to 14 μ		8 to 14 μ	6 to 14 μ	8 to 14 μ	2 to 20 μ	8 to 14 μ
Response Time	1 sec	500 ms	0.25 sec	1 sec	500 ms	90% 1 sec	50 to 100 msec	1 sec
Outputs				1mV/°C°F				1 mV/°
Display	LCD	LCD	3½ digit LCD	LCD	LCD	Backlit LCD	OS91: LED current, max, min OS92: LED	LCD
Resolution	1°	0.1 up to 200	0.5°C	1°C or 1°F			0.1°C, 1°F	1°, 0.1, OS613
Power	9 V battery	2 "AAA" batteries	3 "AAA" batteries	"AAA" alkaline battery	9 V battery	2 "AAA" batteries	9 V battery	9 V battery or 110 Vac adaptor
Battery Life	500 hrs		90 hrs, typ laser off	200 hrs typical	9 hrs	140 hrs, no laser or backlit	Approx 5000 readings	200 hrs
Min. Spot Size vs. Distance	1:1 or 1:8	1:10	15 mm, 1:10	3:Ratio	14 mm 1:8; 1:10; 1:12	1:30	6 mm when touching	6 mm @ 18 mm
Aiming	Visual	Visual or laser	Circle/Dot laser	Laser or visual	Laser	Laser circle	Visual	Visual
Alarms			Set, Hi, Lo, Beep			✓		
Data Storage			Max, Min				Last reading	
Switchable °F/°C	✓		✓		✓	✓	OS91 only	
Mounting								Tripod Mount
Other Features	Backlit LCD display		Pocket hook and magnet hanger	Auto power down	Series with different features	4 maths modes, white LCD light	Scan/lock, auto, emissivity comp; audible assist	Stand mount general purpose, low temp model, high accuracy

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INFRARED



Model Number	OS-651	OS-650	OS3750 Series	OS-XL	OS36	OS36-01	OS36-2/5/10	OS36SM	OS37-CF OS38	OS37 10/20/100	OS88000	OS88000-K-1200
Price	£535	£1070	£955	£2645	£151	£100	£207	£66	£379	£321	£174	£133
Page	omega.co.uk	omega.co.uk	omega.co.uk	omega.co.uk	omega.co.uk	omega.co.uk	omega.co.uk	omega.co.uk	omega.co.uk	omega.co.uk	omega.co.uk	omega.co.uk
Temperature Range	-29 to 1093°C 0-1999 BTU/	-29-1093°C 600 to 3000°C scan mode: 0 to 199.9 BTU diff mode	300 to 1000°C 600 to 2000°C -50 to 1000°C	0 to 200°C	25 to 250°C	-45 to 290°C	-45 to 1370°C	-18 to 260°C	-18 to 2500°C	-45 to 2200°C	0 to 250°C	-73 to 650°C
Accuracy	±1% rdg +1 digit	±1% rdg +1 digit	6°C (11°F)	2°C	±2% range	±2% range	±2% range	±2% range	±2% range	±2% range	±2% range	±2% rdg or 1°C (±2°F)
Repeatability	±0.5% rdg +1 digit	±0.5% rdg +1 digit	±1°C		±1% rdg	±1% rdg	±1% rdg	±1%	±1% rdg	±1% rdg	±1% rdg	±1% rdg
Emissivity	0.1 to 0.99 in 0.01 steps	0.1 to 0.99 in 0.01 steps	0.1 to 1.000	0.1 to 1.00	0.9	0.9	0.9	0.9	Adjustable	Adjustable	Auto comp. from 0.8 to 1.0	Auto comp. from 0.8 to 1.0
Spectral Response	8 to 14 μ	8 to 14 μ	1.55, 0.9, 2 colour	8 to 16 μ	6 to 14 microns	6 to 14 microns	6 to 14 microns	6.5 to 14 μ	2 to 20 microns	2 to 20 microns	6 to 14 μ	6.5 to 14 μ
Response Time	1 sec	1 sec scan mode, 3 sec diff mode	250 msec	visual	80 msec	80 msec	80 msec	150 msec	80 msec	80 msec	80 msec	80 msec
Outputs	0.1 mV/°	0.1 mV/°	RS232	video	J, K, T, E T/C's	J, K, T, E T/C's	J, K, T, E T/C's	K	J, K, T, E T/C's	J, K, R, S T/C's	J, K, T, E, T/C's	K, T/C
Display	LCD	LCD	LCD graphic	TFT colour	*						*	*
Resolution	1°	1°, 1 BTU scan mode, 0.1 BTU differential mode	1°	0.1/1°								
Power	9 V battery	9 V battery	2 "AA" batteries	6 "AA" batteries	Self-powered	Self-powered	Self-powered	Self-powered	Self-powered	Self-powered	Self-powered	Self-powered
Battery Life	200 hours	200 hrs temp, 150 hrs heat flow	50 hrs									
Min. Spot Size vs. Distance	25 @ 760 mm	25 @ 760 mm temp, 50 @ 900 mm	20 mm 4 m	image	60°	60°	1:2 to 1:10	2:1	See individual models	0.6° to 6°	60° FOV	60° FOV
Aiming	V groove or laser	V groove	Through lens	image	Visual	Visual	Visual	Visual	Visual	Visual	Visual	Visual
Alarms												
Data Storage			500 points	16 MB								
Switchable °F/°C	↙	↙	↙								↙	
Mounting			Tripod Mount		Mounting bracket or mounting ring	Mounting bracket	Mounting bracket	Mounting bracket or mounting ring	Mounting bracket	Mounting bracket		
Other Features	Laser sighting high accuracy	Heat flow, applications manual	Optional software for PC	64 element array sensor	Self-powered emissivity correction 0.8-1.0	ABS plastic housing low cost self-powered	Self-powered various fields of view; built-in, air purge collar	Self-powered	Built-in air purge	Built-in air purge collar self-powered	Self-powered unique handheld surface probe	Hermetically sealed optics

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Model No.	OS136 OS137	OS101E OS102E	OS550, OS550-BB	OS65	OS66	OS-SYST	OS1551-A OS1552-A	OS1600, OS1700, OS1800	OS1592	OS43	iR2 Series
Price	£117-£231	£164	£332-£505	£265-£369	£665	£1465	£462	£525	£1555	£865	£2000 base
Page No.	244	248	250	omega.co.uk	omega.co.uk	omega.co.uk	omega.co.uk	omega.co.uk	omega.co.uk	omega.co.uk	254
Temperature Range	-18 to 202°C	-18 to 538°C	-18 to 1370°C	-57 to 500°C	800 to 1500°C	-18 to 1370°C	0 to 1370°C	-45 to 2500°C	260 to 2482°C	-40 to 1200°C	300 to 3000°C
Accuracy	±3% rdg or 4.4°C	±2% rdg or ±4°F	±1% reading or ±3°F	±1% rdg or ±2°F (1°C)	±1% rdg or 3°F	±1% of reading	±1% rdg	±0.75% FS	±1% reading or 3°F	±1% full scale or 1°F or °C	±0.2% of full scale
Repeatability	±1% rdg	±1% rdg	±1% reading or ±1 digit	±0.5% rdg ±1 digit	±0.5% rdg ±1 digit		±2°F (1°C)	±0.5% rdg	±0.75% of reading	1°C (±2% °F)	±0.2% of full scale
Emissivity	0.95 in 0.01 steps	0.1 to 1.0 in 0.01 steps	0.10 to 0.99	0.1 to 0.99 in 0.01 steps	0.1 to 0.99 in 0.01 steps	0.1 to 0.99 in	0.05 to 1.0	0.1 to 0.99 in 0.01 steps	0.1 to 1.0 Analog dial only	0.1 to 0.98 in single:	2-colour: N/A 0.1 to 1.0
Spectral Response	5 to 14 µ	5 to 14 µ	8 to 14 µ	8 to 14 microns	0.85 to 0.95 microns	8 to 14 microns	8 to 14 microns	0.8 to 14 microns	0.8 to 1.8 µ	8 to 14 microns	0.85 to 1.15 µ
Response Time	150 msec	150 msec	250 msec	300 msec	300 msec	250 msec	50 msec	0.2 to 5.0 sec adjustable	25 msec	250 msec	10 msec (0 to 63%/final value)
Outputs	K, 10 mV/Deg 0 to 5 V, 0/10 V 4 to 20 mA	mV, µ mA, V	1 mV/° 0 to 5 Vdc 4 to 20 mA	J, K, 1 mV/° 4-20, 0-20 mA 0 to 5 Vdc	R, S, B, 1 mV/°, 4 to 20 mA 0 to 5 Vdc, RS232	RS232, data storage	4 to 20 mA	4 to 20 mA	1 mV/° 4 to 20 mA 0 to 5 Vdc	J, K, T/C 4 to 20 mA 0 to 5V, 1mV/°	2 control, alarm, DC pulse, current, voltage
Display			LCD	LCD			LCD	✓ (OS1800)	LCD		
Resolution		1°	1°		1%	1°		1°	1°	1°	1°
Power	12 to 24 Vdc	12 to 24 Vdc	7 to 24 Vdc	9 to 30 Vdc	9 to 30 Vdc	120 to 240 Vac 50/60 Hz	18 to 40 Vdc	10 to 40 Vdc	18 to 36 Vdc	5 to 26 Vdc	80 to 250 Vac
Min Spot Size vs Distance	1:6	1:6	3.8 @150 mm	6 mm @ 19 mm	6 @ 200 mm	3.8 @150 mm	17.5 @ 508 mm	13 @ 178 mm	0.05 @ 150 mm	0.75 @ 20 mm	25:1 Adj. focus from 0.2 to 4.2 m
Aiming	Visual	Laser accessory	Laser accessory	Visual	Visual with optional laser	Laser accessory	Visual laser accessory	Visual		Visual	Built-in laser sighting
Alarms		✓	Visual/audible			✓					✓
Switchable °C/°F		✓	✓		✓	✓			✓	✓	✓
Mounting	Mounting bracket	Mounting bracket	Mounting bracket Din Rail optional	Mounting bracket	Mounting bracket	Mounting bracket	Mounting bracket	Mounting bracket	Mounting bracket		Mounting bracket panel mount
Other Features	IP65	IP65 OS102E includes display	RS232 output IP65	RS232, viewing window accessory	Air/water cooling IP65, 12 low cost	Built-in datalogger control option	Optional water cooled shell, 4-wire design	Peak hold Air purge collar Water cooling Adjustable response time	IP65 fiber optic backlit LCD	Wide ambient range without cooling	Fast response controller outputs, signal processing 2-colour

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