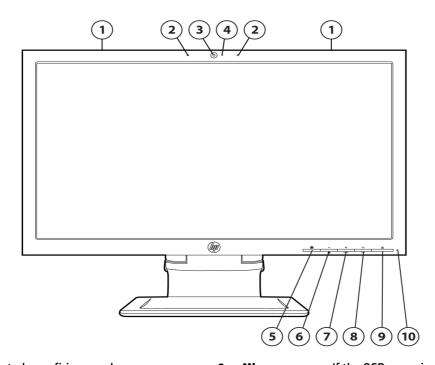# QuickSpecs

Overview

1.	**Speakers**	Integrated rear-firing speakers (Located on back of the monitor).	6.	**Minus**	If the OSD menu is on, press to navigate backward through the OSD menu and decrease adjustment levels.
2.	**Dual Microphone Array**	Built-in microphones.	7.	**Plus/source**	If the OSD menu is on, press to navigate forward through the OSD menu and increase adjustment levels. If the OSD menu is inactive, press to activate the source button that chooses the video signal input (VGA, DVI, or DisplayPort).
3.	**Webcam**	Built-in 720p HD Webcam.	8.	**OK/auto**	If the OSD menu is on, press to select the highlighted menu item. If the OSD menu is inactive, press to activate the auto adjustment feature to optimize the screen image.
4.	**Webcam LED**	LED lights up when webcam is in use.	9.	**Power**	Turns the monitor on or off.
5.	**Menu**	Opens, selects or exits the OSD menu.	10.	**Power LED**	Blue = Fully powered. Amber = Sleep mode. Flashing Amber = Sleep Timer mode.

Model

LW490AA

Technical Specifications

Panel	**Type**	TN (Twisted Nematic) LED Backlit LCD
	Viewable Image Area (diagonal)	**54,61 cm** (21.5 in.) widescreen; diagonally measured
	Screen Opening (W x H)	**47,66 x 26,81 cm**, (18.76 x 10.56 in.)
	Aspect Ratio	16:9
	Viewing Angle (typical)	Up to 170° horizontal/160° vertical (10:1 minimum contrast ratio)
	Brightness (typical)*	250 nits (cd/m^2)
	Contrast Ratio (typical)*	1000:1
	Dynamic Contrast Ratio (typical)*	1,000,000:1
	Response Time (typical)*	5 ms (on/off)
	Pixel Pitch	0.248 mm
	Backlight Lamp Life (to half brightness)	30,000 hours
	Color Gamut (typical)	68%
	Color Support**	Can display up to 16.7 million colors

*All performance specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower.
** With the use of FRC technology.

On Screen Display (OSD) **Controls**	**Buttons or Switches**	"Menu", "-", "+", "OK", "Power"
	Languages	English, French, German Italian, Dutch, Spanish Japanese, Portuguese, Traditional Chinese, Simplified Chinese
	User Controls	Brightness, contrast, positioning, color temperature (Warm, Standard, Cool, custom), clock, clock phase, sharpness, monitor management, volume, video source control, factory reset
Signal Interface/ Performance	**Horizontal Frequency**	24 to 94 kHz
	Vertical Frequency	50 to 76 Hz
	Native Resolution	1920 x 1080 @ 60 Hz
	Preset VESA Graphic Modes (non-interlaced)	1920 x 1080 @ 60 Hz
		1680 x 1050 @ 60 Hz
		1440 x 900 @ 60 Hz
		1280 x 1024 @ 60 Hz
		1280 x 720 @ 60 Hz
		1024 x 768 @ 60 Hz
		800 x 600 @ 60 Hz
		720 x 400 @ 70 Hz
		640 x 480 @ 60 Hz
	Text Mode	720 x 400 @ 70 Hz
	Maximum Pixel Clock Speed	200 MHz (VGA); 165MHZ (DVI and DisplayPort)

Technical Specifications

	User Programmable Modes	Yes (10)	
	Anti-Glare	Yes	
	Default Color Temperature	Warm (6500K)	
Video/Other Inputs	**Plug and Play**	Yes	
	Input Connectors	(1) VGA (analog); (1) DVI-D w/ HDCP; (1) DisplayPort w/ HDCP	
	Input Impedance	75 Ohms (VGA), 100 Ohms (DVI-D and DisplayPort), 90 Ohms (USB)	
	Sync Input	TTL separate synch	
	Video Cable	(1) 15-pin D-sub (VGA), (1) DVI-D to DVI-D, and (1) USB cable	
	Video Cable Lengths	**1,8 m** (5.9 ft.)	
	Audio	(2) 1W/channel built-in speakers (rear firing); Audio jacks: (1) Audio-in/microphone; (1) Audio-out (headphone/line-out); (1) audio cable included	
	Audio Cable Length	**1,8 m** (5.9 ft.)	
	Webcam	Built-in 720p HD Webcam w/ dual mic and LED	
	USB	(2) USB ports, (1) USB cable included	
	USB Cable Length	**1,8 m** (5.9 ft.)	
Power	**Input Power**	100 - 240 VAC, 50 or 60 Hz	
	Typical Power Consumption	35 W	
	Maximum	42 W	
	Power Saving	< 0.5 W standby; <0.5 W off	
	Power Cable Length	**1,9 m** (6.2 ft.)	
Mechanical	**Dimensions** (W x D x H)	Unpacked w/stand	**51,80 x 22,73 x 33,33 to 43,87cm**, (20.39 x 8.95 x 13.2 to 17.27 in.)
		Unpacked w/o stand (head only)	**51,8 x 4,75 x 31,5 cm**, (20.39 x 1.87 x 12.40 in.)
		Packaged	**58,1 x 46,8 x 15,4 cm**, (22.87 x 18.43 x 6.06 in.)
		Base area (footprint)	**22,71 x 24,84 cm**, (8.9 x 9.8 in.)
	Weight	Head Only	**3,8 kg** (8.4 lb.)
		Unpacked	**6,1 kg** (13.4 lb.)
		Packaged	**8,3 kg** (18.4 lb.)
	Tilt Range	–5° to +30°	
	Swivel Range	Yes (+/- 360°)	
	Height Adjustable	Yes - **0 to 13,0 cm** (0 to 5.1 in.)	
	Pivot Rotation	Yes	
	Base	Detachable, ships attached	
Environmental	**Temperature - Operating**	**5° to 35° C** (41° to 95° F)	

Technical Specifications

Temperature - Non-operating	**-20° to 60° C** (-4° to 140° F)
Humidity - Operating	20% to 80% non-condensing
Humidity - Non-operating	5% to 95%, 38.7° C max wet-bulb
Altitude - Operating	**+0 to 5,000 m** (16,404 ft)
Altitude - Non-operating	**0 to 12,192 m** (0 to 40,000 ft)
White LED Backlights	Yes
CCFL Panel	No
Arsenic-Free Glass[4]	Yes
BFR/PVC Free	Yes (everything except external cables)
Mercury Free	Yes

Environmental Data

Eco-Label Certifications & declarations

This product has received or is in the process of being certified to the following approvals and may be labeled with one or more of these marks:

- US ENERGY STAR®
- IT ECO declaration
- EPEAT® Gold3 where HP registers commercial desktop products. See http://www.epeat.net for registration status in your country.

Energy Consumption (in accordance with US ENERGY STAR® test method)

	115VAC, 60Hz	230VAC, 50Hz	100VAC, 60Hz
Normal Operation	20.5 W	20.8 W	20.6 W
Sleep	0.3 W	0.4 W	0.3 W
Off	0.3 W	0.3 W	0.3 W

Heat Dissipation*	115VAC, 60Hz	230VAC, 50Hz	100VAC, 60Hz
Normal Operation	70 BTU/hr	71 BTU/hr	70 BTU/hr
Sleep	1 BTU/hr	1 BTU/hr	1 BTU/hr
Off	1 BTU/hr	1 BTU/hr	1 BTU/hr

* Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.

Additional Information

- This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2002/95/EC.
- This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive - 2002/96/EC.
- This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986).
- This product is in compliance with the IEEE 1680 (EPEAT) standard at the Gold level, see www.epeat.net[3]
- Plastics parts weighing over 25 grams used in the product are marked per ISO 11469 and ISO1043.
- This product contains 14.6% post-consumer recycled plastic (by wt.)
- This product is 97.8% recycle-able when properly disposed of at end of

Technical Specifications

life.

Packaging Materials	**External:**	Corrugated carton	1263.6 g
	Internal:	Polyethylene low density	30 g
		Polypropylene foam	270 g

RoHS Compliance

Hewlett-Packard is committed to compliance with all applicable environmental laws and regulations, including the European Union Restriction of Hazardous Substances (RoHS) Directive. HP's goal is to exceed compliance obligations by meeting the requirements of the RoHS Directive on a worldwide basis. By July 1, 2006, RoHS substances will be virtually eliminated (virtually = to levels below legal limits) for all HP electronic products subject to the RoHS Directive, except where it is widely recognized that there is no technically feasible alternative (as indicated by an exemption under the EU RoHS Directive).

Material Usage

This product does not contain any of the following substances in excess of regulatory limits (refer to the HP General Specification for the Environment at: http://www.hp.com/hpinfo/globalcitizenship/environment/supplychain/ gen_specifications.html):

- Asbestos
- Certain Azo Colorants
- Certain Brominated Flame Retardants - may not be used as flame retardants in plastics
- Cadmium
- Chlorinated Hydrocarbons
- Chlorinated Paraffins
- Formaldehyde
- Halogenated Diphenyl Methanes
- Lead carbonates and sulfates
- Lead and Lead compounds
- Mercuric Oxide Batteries
- Nickel - finishes must not be used on the external surface designed to be frequently handled or carried by the user.
- Ozone Depleting Substances
- Polybrominated Biphenyls (PBBs)
- Polybrominated Biphenyl Ethers (PBBEs)
- Polybrominated Biphenyl Oxides (PBBOs)
- Polychlorinated Biphenyl (PCB)
- Polychlorinated Terphenyls (PCT)
- Polyvinyl Chloride (PVC) - except for wires and cables, and certain retail packaging has been voluntarily removed from most applications.
- Radioactive Substances
- Tributyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TBTO)

Packaging

HP follows these guidelines to decrease the environmental impact of product packaging:

- Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials.
- Eliminate the use of ozone-depleting substances (ODS) in packaging materials.
- Design packaging materials for ease of disassembly.
- Maximize the use of post-consumer recycled content materials in

Technical Specifications

packaging materials.
- Use readily recyclable packaging materials such as paper and corrugated materials.
- Reduce size and weight of packages to improve transportation fuel efficiency.
- Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.

End-of-life Management and Recycling	Hewlett-Packard offers end-of-life HP product return and recycling programs in many geographic areas. To recycle your product, please go to: http://www.hp.com/go/reuse-recycle or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner. The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: http://www.hp.com/go/recyclers. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.
Hewlett-Packard Corporate Environmental Information	For more information about HP's commitment to the environment: Global Citizenship Report http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html Eco-label certifications http://www.hp.com/hpinfo/globalcitizenship/environment/productdesign/ecolabels.html ISO 14001 certificates: http://www.hp.com/hpinfo/globalcitizenship/environment/operations/envmanagement.html

Options (sold separately)	**HP LCD Monitor Quick Release-** **Part number EM870AA**[1]	An easy-to-use, VESA-compliant, LCD monitor mounting solution that allows you to quickly and securely attach an LCD monitor to a variety of stands, brackets, arms or wall mounts. For more information, refer to this product's QuickSpecs document.
	HP USB Graphics Adapter- **Part number NL571AA**	Enables connection of up to six simultaneous displays to help you boost productivity and multi-task across several open applications. Use one Adapter to bridge between a notebook or desktop PC and second monitor or use multiple Adapters to connect several displays to each other.
	HP Business PC Security Lock Kit- **Part number PV606AA**	Attaches to the rear of the PC with a six-foot steel cable that can be used to secure a PC or peripherals such as mice, keyboards, monitors or USB security devices to protect them against unauthorized removal by physically connecting the system to an anchor point.
	HP Integrated Work Center Stand- **Part number LH526AA**	Allows mounting of a 17 - 24 inch diagonal HP LCD monitor and an HP Compaq 8000 series Ultra-slim Desktop PC as well as select HP Thin Clients on a single stand for the convenience of an "all-in-one" form factor. For more information, refer to this product's QuickSpecs document.
	HP Single Monitor Arm- **Part number BT861AA**	The flexible design of the HP Single Monitor Arm provides a seemingly endless range of display adjustments with an amazing 13 inches of lift, 50 degrees of tilt, and 360 degrees of pan and rotation - all at your fingertips -- helping you stay comfortable and productive throughout the day.

Technical Specifications

	HP Adjustable Dual Display Stand- Part Number AW664AA	Premium space-saving dual screen solution provides access to more monitor real estate and makes it possible to manage multiple applications simultaneously. Weight adjustable for dual monitors from 17-24". Rotate displays into portrait/landscape positions.
Other	**Accessories Included**	Webcam security cover, VGA, DVI-D, USB, Audio, and AC Power cables
	Software	Yes, CyberLink YouCam, HP Display Assistant and HP MyRoom software included
	User Guide Languages	English, German, French, Italian, Turkish, Greek, Arabic, Hungarian, Czech, Russian, Polish, Japanese, Dutch, Danish, Finnish, Spanish, Portuguese, Norwegian, Swedish, T. Chinese, Slovenian, Bahasa Indonesia
	Warranty Languages	English, German, French, Italian, Turkish, Greek, Arabic, Hungarian, Czech, Russian, Polish, Japanese, Dutch, Danish, Finnish, Spanish, Portuguese, Norwegian, Swedish, T. Chinese, S. Chinese, Korean, Slovenian, Bahasa.
	Color	Black
	VESA External Mounting	Yes (one set of standard 4-hole pattern, 100 mm).
	Security Lock-Ready	Yes
Certification and Compliance		Energy Star® 5.0, TCO 5, EPEAT® Gold[3], VCCI, KC, KCC, BSMI, TUV, CECP, FCC, CE, BSMI, ISC, C-Tick, GOST, E-Standby, RoHS, WEEE, ETL, CCC, NOM, CEL Grade 1 (APJ only).
Compatibility		Compatible with platforms using the VESA standard video modes. Recommended for use with HP products.
Service and Warranty		Protected by HP, including a 3 years parts, 3 years labor, and 3 years onsite service (3/3/3) standard limited warranty. Certain restrictions and exclusions apply.[2]

[1] The HP Quick Release has been designed to support a maximum of up to 24 lbs (10.9 kg) for all devices mounted. Because mounting surfaces vary widely and the final mounting method and configuration may vary, mounting fasteners are not supplied (other than the VESA-compliant screws). HP recommends that you consult with a qualified engineering, architectural or construction professional to determine the appropriate type and quantity of mounting fasteners required for your application and to ensure that your mounting solution is properly installed to support applied loads.

[2] HP Care Pack Services extend service contracts beyond the standard warranties. Service levels and response times for HP Care Packs may vary depending on your geographic location. Service starts from date of hardware purchase. To choose the right level of service for your HP product, use the HP Care Pack Services Lookup Tool at: http://www.hp.com/go/lookuptool. Additional HP Care Pack Services information by product is available at: http://www.hp.com/hps/carepack.

[3] EPEAT® Gold where HP registers commercial display products. See www.epeat.net for registration status in your country.

[4] Arsenic and its compounds were not detected using US EPA Test Methods 3052 & 3052/6010b by ICP or ICP-AES.

All specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.