Technical Specifications

HP P24h G5 FHD Monitor

Front

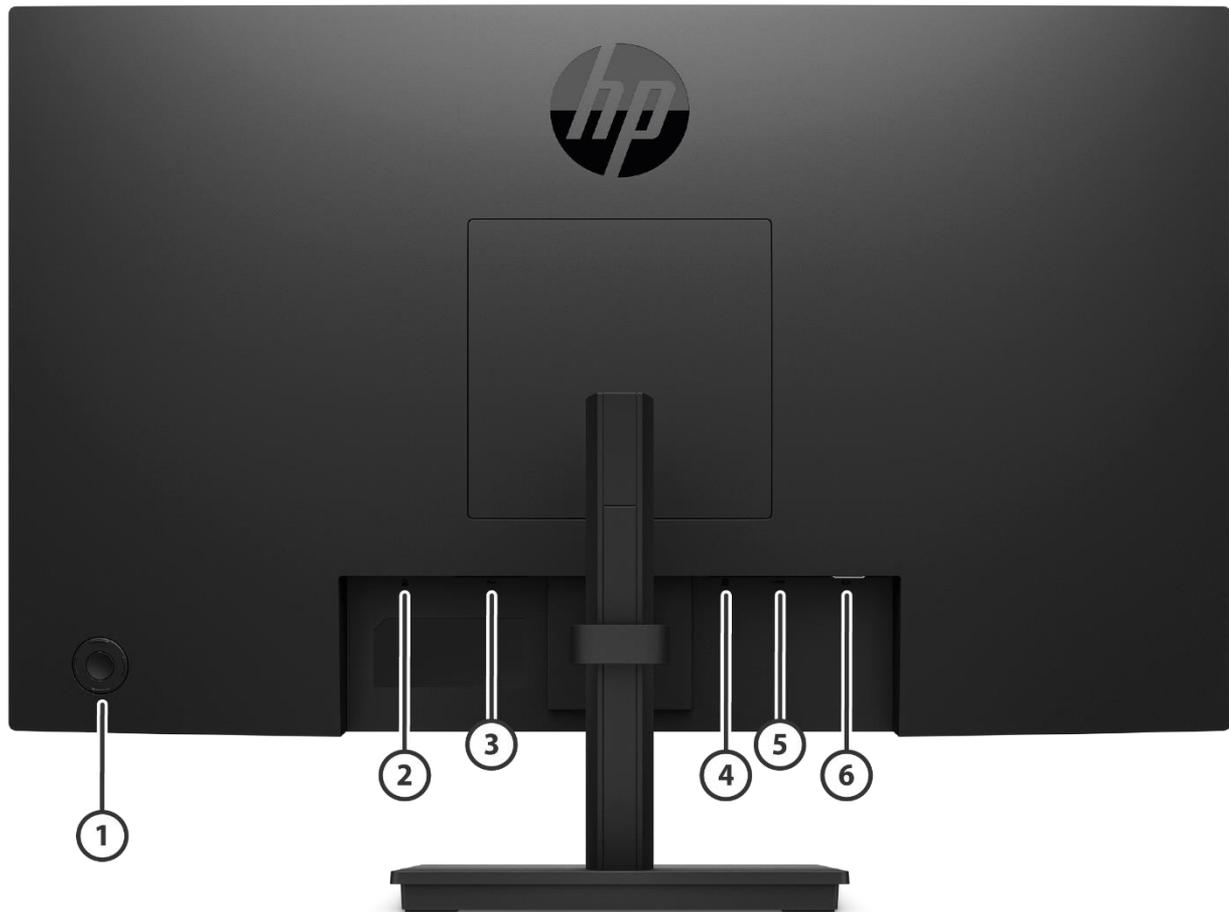|			
1.	Power Button	**2.**	LED Power

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Back

1.	Joypad OSD button	**4.**	DisplayPort™ 1.2
2.	Security Cable Slot	**5.**	HDMI 1.4 Port
3.	Power Connector	**6.**	VGA Port

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Model: 64W34AA

Panel Specifications	Display Size (Diagonal)	23.8 inch	1.3. Monitoriaus istrizaine 23,8 colio
	Panel Technology	IPS	
	Max Refresh Rate	75 Hz	
	Native Resolution	FHD (1920 x 1080)	
	Panel Bit Depth	8 bit (6 bit + FRC)	
	Aspect Ratio	16:9	
	Brightness (Typical)	250nits	
	Contrast Ratio (Static)	1000:1	
	Dynamic Contrast Ratio	8M:1	
	Flicker Free	Yes	
	Pixel Pitch	0.27 mm x 0.27 mm	
	Pixels Per Inch (PPI)	93 PPI	
	Display Colors	Up to 16.7 million colors supported	
	Backlight Lamp Life Minimum (To Half Brightness - In Hours)	30k	
	Backlight Type	Edge-lit	
	Screen Treatment	Anti-glare	
	Hardness	3H	
	Haze	25%	
	Response Time (Typical)	5ms GtG (with overdrive)	
	Horizontal Viewing Angle (Typical Cr>10)	178°	
	Vertical Viewing Angle (Typical Cr>10)	178°	
	Panel Active Area Metric (W x H)	52.70 x 29.65 cm	
	Panel Active Area Imperial (W x H)	20.75x 11.67 in	

NOTE: Performance specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower.

Color	NTSC	72%

Color Management	Color Space/ Subsampling Support	RGB 4:4:4, YCBCR 4:4:4, YCBCR 4:2:2
	RGB Channel Adjust	Yes, Gain
	Default Color Temperature	Standard (6500K)
	Factory Color Calibrated	Yes (Color Temperature)
	Factory Color Presets	Warm - 5000K,
		Neutral - 6500K,
		Cool - 9300K

Monitor Specifications	Bezel Type	3-sided borderless
	Color Of Stand	Black
	Color Of Head	Black
	Tilt	–5 to +23°
	Height Adjust Range	100 mm
	Vesa Mounting	100 mm x 100 mm
	Security Lock	Standard Security Lock Slot
	Detachable Stand	Yes
	Warranty	3/3/0 for LA, NA, EMEA, APJ

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		(3/3/3 in select APJ Countries)
	Low Blue Light	Yes (TÜV certified)
	Speaker Output Power	2 x 2 W
	Management Software	HP Display Center, HP Display Manager*
		*Host PC requires Windows 10. HP Display Center is available on the Microsoft store.
On Screen Display (OSD)	**On Screen Display**	Brightness+, Color, Image, Input, Power, Menu, Management, Information, Exit
	Native Resolution	FHD (1920 x 1080)
		NOTE: DisplayPort 1.2 & HDMI 1.4 required to drive panel at its native resolution.
		The video card of the connected PC must be capable of supporting 1920x1080 at 60 Hz with 8-bit color using one HDMI or VGA.
	Maximum Resolution	1920 x 1080 (FHD)
	Preset Graphic Modes/Supported Resolutions	720 x 400 @ 70Hz
		640 x 480 @ 60Hz
		640 x 480 @ 75Hz (Digital port only)
		800 x 600 @ 60Hz
		800 x 600 @ 75Hz (Digital port only)
		1024 x 768 @ 60Hz
		1024 x 768 @ 75Hz (Digital port only)
		1280 x 720 @ 60 Hz
		1280 x 800 @ 60 Hz
		1280 x 1024 @ 60 Hz
		1280 x 1024 @ 75Hz (Digital port only)
		1440 x 900 @ 60 Hz
		1600 x 900 @ 60 Hz
		1680 x 1050 @ 60 Hz
		1920 x 1080 @ 60 Hz
		1920 x 1080 @ 75 Hz
	Minimum Vertical Scan Rate	48 Hz
	Maximum Vertical Scan Rate	75Hz
	Minimum Horizontal Scan Rate	30 KHz
	Maximum Horizontal Scan Rate	86 KHz
	Maximum Pixel Clock	180.0 MHz
	User Programmable Modes	Yes,10
	User-Assignable Function Buttons	Yes, 4 (7 options)
	Audio	Built-in speakers
	Languages	11 (English, French, German, Italian, Dutch, Spanish, Japanese, Portuguese, Russian, Traditional Chinese, and Simplified Chinese)
Connector Types	**DisplayPort™**	1 DisplayPort™ 1.2
	HDMI	1 HDMI 1.4
	HDCP	Yes, DisplayPort and HDMI
	VGA	1 VGA
Special Features	**SWITCH**	Monitor Power button

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		Next Active Input / Up button
		Brightness / Down button
		Information / Left button
		Color / Right button
		Menu / Enter button
	User Presets	11 (VGA)/ 16 (HDMI and DP)
Power & Operating Specs	**Power Supply**	Internal
	Power Source	100 – 240 VAC 50/60 Hz
	Power Consumption- Max	28W
	Energy Saving/Stand By Mode	0.5W
	Power Consumption - Typical	18W
Energy Star Data	**Operational Mode at 100 VAC**	14W
	Operational Mode at 115 VAC	14W
	Operational Mode at 230 VAC	14W
EU Energy Efficiency Class (ErP LOT-5)	**On-mode Power Consumption for Standard Dynamic Range (SDR)**	15W
	ErP LOT5 Energy Efficiency Class for Standard Dynamic Range (SDR)	A↑G E
Operating Conditions	**Operating Temperature - Celsius**	5° – 35°C
	Operating Temperature - Fahrenheit	41° – 95°F
	Non-Operating Temperature - Celsius	–40° – 65°C
	Non-Operating Temperature - Fahrenheit	-40° – 149°F
	Operating Humidity	20 – 80% Relative Humidity (non-condensing)
	Non-Operating Humidity	5 – 95%
	Operating Altitude	0 – 5,000 m (16,400 ft.)
	Non-operating Altitude	0 – 12,192 m (40,000 ft.)
Certifications and Compliances	**Mercury-free LED display backlighting**	Yes, Mercury-free LED backlighting
	Low Halogen	Yes*
		*External power supplies, WWAN modules, power cords, cables and peripherals excluded.
	Agency Approvals and Certifications	WW application CE/CB/EUP Lot 6 and Lot 26/Erp/RoHS/TUV-Bauart/cTUVus/FCC/ ICES/ CEC/Energy Star/TCO/TCO Edge /China CCC/CEL/CECP/SEPA/Korea KC/Korea KCC/Korea e-Standby/VCCI/PSE/RCM/Australia MEPS/India BIS/Taiwan BSMI/Mexico NOM/Mexico energy/South Africa NRCS LoA and energy/Argentina S-Mark/Singapore PSB/Cambodia ISC/EAC/EAEU RoHS/UAE/UAE RoHS/ ISO 9241-307/Low blue light/ Flicker Free/Vietnam MEPS/Ukraine Energy/ Ukraine CoC
	Microsoft WHQL Certification	Win 11, Win 10, Win 8, Win 7
	ENERGY STAR® Certified	Yes

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	EPEAT® Registered **Regions need to verify by country**	EPEAT® registered* *Based on US EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. Status varies by country. Visit http://www.epeat.net for more information.	
	China Energy Label	CEL Grade 1	
	TCO Certified Edge	Yes	
	TCO Certified	Yes	
	SmartWay Transport Partnership - NA only	Yes (NA sku)	
Contains Recycled Plastics	**Contains Recycled Plastics**	85% ITE-derived closed loop plastic* *Recycled plastic content percentage is based on the definition set in the IEEE 1680.1-2018 standard.	
	Recyclable Packaging (Box, packing materials)	Molded Paper Pulp Cushion inside box is 100% sustainably sourced and recyclable* *100% outer box packaging and corrugated cushions made from sustainably sourced certified and recycled fibers.	

		Metric	Imperial
Unit Product/Package Specifications	**Product Dimensions** (Unpacked with stand) (W x D x H)	53.89 x 19.64 x 46.92 cm	21.22 x 7.73 x 18.47 in
	Product Dimensions (Packed) (W x D x H)	59.5x12.4x 39.1 cm	23.43 x 4.88 x 15.39 in
	Display Head Dimensions (Unpacked without stand) (W x D x H)	53.89 x 5.15 x 32.36 cm	21.22 x 2.03 x 12.74 in
	Base Area Footprint (w x d mm)	178 x 185 mm	7.01 x 7.28 in
	Bezel Measurements (Unpacked with stand) (W x D x H)	Bottom: 20.2 mm	Bottom: 0.8 in
	Product Weight (Unpacked with stand)	4.60 kg	10.14 lb
	Product Weight (Packed)	6.74 kg	14.86 lb
	Product Weight (Head Only)	3.38 kg	7.45 lb
Pallet Information	**Pallet Dimensions** (L x W x H mm)	Slip Sheet: 1200 x1000 x 2364 mm (40 ft HQ) Pallet: 1200 x 1000 x 2492 mm (40 ft HQ) Slip Sheet: 1200 x1000 x 1967 mm (20 & 40 ft) Pallet:	Slip Sheet: 47.24 x 39.37 x 93.07 inch (40 ft HQ) Pallet: 47.24 x 39.37 x 97.9 inch (40 ft HQ) Slip Sheet: 47.03 x 39.37 x 77.3 inch (20 & 40 ft) Pallet:

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		1200 x 1000 x 2092 mm (20 & 40 ft)	47.24 x 39.37 x 82.22 inch (20 & 40 ft)
	Pallet Total Weight	Slip Sheet: 650 kg (40 ft HQ) Pallet: 670kg (40 ft HQ) Slip Sheet: 545kg (20 & 40 ft) Pallet: 565kg (20 & 40 ft)	Slip Sheet: 1433.01 lb (40 ft HQ) Pallet: 1477.1 lb (40 ft HQ) Slip Sheet: 1201.52 lb (20 & 40 ft) Pallet: 1245.62 lb (20 & 40 ft)
	Pallet Layers	6 per layer and 6 per layer (slip sheet & pallet) for HC 5 per layer and 5 per layer (slip sheet & pallet) for SC	
	Pallet Product per Layer	16 layers per pallet	
	Total Products per Pallet	96 sets and 80 sets (slip sheet & pallet)	
	Container Load, 20-Foot	800 sets and 800 sets (slip sheet and pallet)	
	Container Load, 40-Foot	1680 sets and1680sets (slip sheet and pallet)	
	Container Load, 40-Foot HighQ	2016 sets and 2016 sets (slip sheet and pallet)	

What's in the box?	AC power cord (1.83m) 6 ft VGA cable (1.8m) 5.9 ft (Japan Only) DP cable (1.8m) 5.9 ft (Japan and EMEA AF SKUs only) HDMI cable (1.8m) 5.9 ft Quick Setup Poster Doc kit Warranty card

User Guide and Warranty Languages	**User Guide Languages**	Arabic, Bahasa Indonesia, Bulgarian, Chinese-S, Chinese-T, Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Greek, Hebrew, Hungarian, Italian, Japanese, Kazakh, Korean, Latvian, Lithuanian, Norwegian, Polish, Portuguese (Brazilian), Portuguese (Iberian), Romanian, Russian, Serbian, Slovak, Slovenian, Spanish, Swedish, Thai, Turkey, Ukrainian
	Warranty Languages	English US (EN), English AP (EN-AP), English LA (EN-LA), English UK (EN-GB), Arabic (AR) -17x, Bahasa Indonesia (ID), Bosnian (BS), Bulgarian (BG), Chinese-S (CN), Chinese-T (TW), Croatian (HR), Czech (CS), Danish (DA), Dutch (NL), Estonian (ET), Finnish (FI), French Canadian (FC), French European (FR), German (DE), Greek (EL), Hebrew (HE), Hungarian (HU), Italian (IT), Japanese (JA), Kazakh (KK), Korean (KO), Latvian (LV), Lithuanian (LT), Norwegian (NO), Polish (PL), Portuguese, Brazilian (BR), Portuguese, Iberian (PT), Romanian (RO), Russian (RU), Serbian (SR), Slovak (SK), Slovenian (SL), Spanish, Castilian (ES-ES), Spanish, Latin America (ES-MX), Swedish (SV), Thai (TH), Turkish (TR), Ukrainian (UK), Vietnamese (VI)

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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: • IT ECO declaration • US ENERGY STAR® • US Federal Energy Management Program (FEMP) • EPEAT[a] Gold registered in the United States. See http://www.epeat.net for registration status in your country. • TCO Certified • China Energy Conservation Program (CECP) • China State Environmental Protection Administration (SEPA) • Taiwan Green Mark • Korea Eco-label • Japan PC Green label*
Sustainable Impact Specifications	• 85% ITE – derived closed loop plastic • Low halogen • Outside Box and corrugated cushions are 100% sustainably sourced and recyclable • Molded Paper Pulp Cushion inside box is 100% sustainably sourced and recyclable • Recycled Plastic cushions
System Configuration	The configuration used for the Energy Consumption and Declared Noise Emissions data for the Notebook model is based on a "Typically Configured Notebook".

Energy Consumption (in accordance with US ENERGY STAR® test method)	115VAC, 60Hz	230VAC, 50Hz	100VAC, 50Hz
Normal Operation (Short idle)	13.25 W	13.22 W	13.31 W
Normal Operation (Long idle)	13.25 W	13.22 W	13.31 W
Sleep	0.17 W	0.2 W	0.18 W
Off	0.13 W	0.16 W	0.13 W
	NOTE: Energy efficiency data listed is for an ENERGY STAR® compliant product if offered within the model family. HP computers marked with the ENERGY STAR® Logo are compliant with the applicable U.S. Environmental Protection Agency (EPA) ENERGY STAR® specifications for computers. If a model family does not offer ENERGY STAR® compliant configurations, then energy efficiency data listed is for a typically configured PC featuring a hard disk drive, a high efficiency power supply, and a Microsoft Windows® operating system.		

Heat Dissipation*	115VAC, 60Hz	230VAC, 50Hz	100VAC, 50Hz
Normal Operation (Short idle)	45.3 BTU/hr	45.2 BTU/hr	45.5 BTU/hr
Normal Operation (Long idle)	45.3 BTU/hr	45.2 BTU/hr	45.5 BTU/hr
Sleep	0.6 BTU/hr	0.7 BTU/hr	0.6 BTU/hr
Off	0.4 BTU/hr	0.5 BTU/hr	0.4 BTU/hr
	***NOTE:** Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.*		

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Longevity and Upgrading	This product can be upgraded, possibly extending its useful life by several years. Upgradeable features and/or components contained in the
	Spare parts are available throughout the warranty period and or for up to "5" years after the end of production.
Additional Information	- This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2011/65/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 - Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043. - This product is 96.6% recycle-able when properly disposed of at end of life.

Packaging Materials	External:	PAPER/Corrugated	563 g
		PAPER/Molded Pulp	976 g
	Internal:	PLASTIC/EPE (Expanded Polyethylene)	28 g
		PLASTIC/Polyethylene low density	2 g
	The plastic packaging material contains at least 0.0% recycled content.		
	The corrugated paper packaging materials contains at least 90% recycled content.		

RoHS Compliance	HP Inc. complies fully with materials regulations. We were among the first companies to extend the restrictions in the European Union (EU) Restriction of Hazardous Substances (RoHS) Directive to our products worldwide through the HP GSE. HP has contributed to the development of related legislation in Europe, as well as China, India, and Vietnam.
	We believe the RoHS directive and similar laws play an important role in promoting industry-wide elimination of substances of concern. We have supported the inclusion of additional substances—including PVC, BFRs, and certain phthalates—in future RoHS legislation that pertains to electrical and electronics products.
	We met our voluntary objective to achieve worldwide compliance with the new EU RoHS requirements for virtually all relevant products by July 2013, and we will continue to extend the scope of the commitment to include further restricted substances as regulations continue to evolve.
	To obtain a copy of the HP RoHS Compliance Statement, see HP RoHS position statement.
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

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	• Certain Brominated Flame Retardants – may not be used as flame retardants in plastics • Cadmium • Chlorinated Hydrocarbons • Chlorinated Paraffins • Bis(2-Ethylhexyl) phthalate (DEHP) • Benzyl butyl phthalate (BBP) • Dibutyl phthalate (DBP) • Diisobutyl phthalate (DIBP) • 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 Usage	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 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	HP 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:

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	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.

HP, Inc. 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://www8.hp.com/us/en/hp-information/environment/ecolabels.html
	  ISO 14001 certificates:
	     http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c04755842
	     and
	     http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf

footnotes	- Percentage of ocean-bound plastic contained in each component varies by product - Recycled plastic content percentage is based on the definition set in the IEEE 1680.1-2018 standard. - External power supplies, WWAN modules, power cords, cables and peripherals excluded. 100% outer box packaging and corrugated cushions made from sustainably sourced certified and recycled fibers. - Fiber cushions made from 100% recycled wood fiber and organic materials. - Plastic cushions are made from >90% recycled plastic.

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Summary

Change Log			
July 28, 2022	V1 to V2	Updated	Contains Recycled Plastics
February 21, 2023	V2 to V3	Updated	Pallet Information
March 6, 2023	V3 to V4	Added	Mercury-free LED display backlighting
April 12, 2023	V4 to V5	Updated	Color Management section
	V5 to V6		