


Product environmental attributes – THE ECO DECLARATION

The declaration may be published only when all rows and/or fields marked with an * are filled-in (n.a. for not applicable).
Additional information regarding each item may be found under P14.

Brand *	<i>Lenovo</i>	Logo 
Company name *	<i>Lenovo</i>	
Contact information *	<i>Lenovo Global Environmental Affairs Alvin L Carter 1009 Think Place Building 2 / 5F1 Morrisville, North Carolina 27560 alcarter@lenovo.com</i>	
Internet site *	<i>http://www.lenovo.com/social_responsibility/us/en/environment.html</i>	
Additional information	<i>The latest version of this document can be found at http://www.lenovo.com/social_responsibility/us/en/datasheets_notebooks.html</i>	

The company declares (based on product specification or test results based obtained from sample testing), that the product conforms to the statements given in this declaration.

Type of product *	<i>All-in-One Desktop PC</i>
Commercial name *	<i>Lenovo C455</i>
Model number *	<i>10139; F0A3</i>
Issue date *	<i>14/05/2014</i>
Intended market *	<input checked="" type="checkbox"/> Global <input type="checkbox"/> Europe <input type="checkbox"/> Asia, Pacific & Japan <input type="checkbox"/> Americas <input type="checkbox"/> Other
Additional information	

This is an uncontrolled copy when in printed form. Please refer to the contact information for the latest version.

Quality Control		Requirement met	
		Yes	No
QC1 *	The company enforces an internal quality control scheme to ensure the correctness of this eco declaration	<input checked="" type="checkbox"/>	<input type="checkbox"/>
QC2 *	The company is a member of an eco declaration system that enforces regular independent quality control such as organized by IT-Företagen (see www.itecodeclaration.org).	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Model number *	Lenovo C455	MT:10139/F0A3	Logo	lenovo
Issue date *	14/05/2014			

Product environmental attributes - Legal requirements		Requirement met		
Item		Yes	No	n.a.
P1 Hazardous substances and preparations				
P1.1*	Products do not contain more than; 0.1% lead, 0.01% cadmium, 0.1% mercury, 0.1% hexavalent chromium, 0.1% polybrominated biphenyls (PBB) or 0.1% polybrominated diphenyl ethers (PBDE). (See legal reference and Note B1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
P1.2*	Products do not contain Asbestos (see legal reference). Comment: Legal reference has no maximum concentration value.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
P1.3*	Products do not contain Ozone Depleting Substances: Chlorofluorocarbons (CFC), hydrobromofluorocarbons (HBFC), hydrochlorofluorocarbons (HCFC), Halons, carbontetrachloride, 1,1,1-trichloroethane, methyl bromide (see legal reference). Comment: Legal reference has no maximum concentration values.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
P1.4*	Products do not contain more than; 0.005% polychlorinated biphenyl (PCB), 0.005% polychlorinated terphenyl (PCT) in preparations (see legal reference).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
P1.5*	Products do not contain more than 0.1% short chain chloroparaffins (SCCP) with 10-13 carbon atoms in the chain containing at least 48% per mass of chlorine in the SCCP (see legal reference).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
P1.6*	Textile and leather parts with direct skin contact do not contain Tri-(2,3,-dibromopropyl)-phosphate (TRIS), Tris-(aziridiny)-phosphineoxide (TEPA), polybrominated biphenyl (PBB) (see legal reference). Comment: Legal reference has no maximum concentration values.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
P1.7*	Textile and leather parts with direct skin contact do not contain more than 0.003% Azo colorants that split aromatic amines. (See legal reference and Note B1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
P1.8*	Wooden parts do not contain arsenic and chromium as a wood preservation treatment as well as pentachlorophenol and derivatives (see legal reference). Comment: Legal reference has no maximum concentration values.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
P1.9*	Parts with direct and prolonged skin contact do not release nickel in concentrations above 0.5 microgram/cm ² /week (see legal reference). Comment: Max limit in legal reference when tested according to EN1811:1998.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P1.10*	REACH Article 33 information about substances in articles is available at (add URL or mail contact): http://www.lenovo.com/social_responsibility/us/en/materials.html	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P2 Batteries				
P2.1*	If the product contains a battery or an accumulator, it is labeled with the disposal symbol and if it contains more than 0.0005% of mercury (for button cells only) by weight, or more than 0.004% of lead, it shall be marked with the chemical symbol for the metal concerned, Hg or Pb. Information on proper disposal is provided in user manual. (See legal reference)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
P2.2*	Button cells used in the product do not contain more than 2% by weight of mercury. Other batteries or accumulators do not contain more than 0.0005% of mercury or 0.002% of cadmium. (See legal reference)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
P2.3*	Batteries and accumulators are easily removable by either users or service providers (as dependent on the design of the product). Exception: Batteries that are permanently installed for safety, performance, medical or data integrity reasons do not have to be "easily removable". (See legal reference)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
P3 Safety, EMC connection to the telephone network and labeling				
P3.1*	The product complies with legally required safety standards as specified (see legal reference).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P3.2*	The product complies with legally required standards for electromagnetic compatibility (see legal reference).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P3.3*	If product is intended for connection to a public telecom network or contains a radio transmitter, it complies with legally required standards for radio and telecommunication devices (see legal reference).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P3.4*	The product is labeled to show conformance with applicable legal requirements (see legal reference).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P4 Consumable materials				
P4.1*	If a photo conductor (drum, belt etc.) is used in the product, it does not contain cadmium max 0.01% (see legal reference and Note B1).	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
P4.2*	If ink/toner is used in the product, it does not contain cadmium max 0.1% by weight (see legal reference).	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
P4.3*	If the ink/toner formulation/preparation is classified as hazardous according to applicable regulations, the product/packaging is adequately labeled and a Safety Data Sheet (SDS) in accordance with these requirements is available (see legal reference).	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
P5 Product packaging				
P5.1*	Packaging and packaging components do not contain more than 0.01% lead, mercury, cadmium and hexavalent chromium by weight of these together.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
P5.2*	Plastic packaging material is marked according to ISO 11469 referring ISO 1043 (see legal reference).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P5.3*	The product packaging material is free from ozone depleting substances as specified in the Montreal Protocol (see legal reference). Comment: Legal reference has no maximum concentration values.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Note B1: Restriction applies to the homogeneous material, unless other specified and expressed in weight %.

Model number *	Lenovo C455	MT:10139/F0A3	Logo	lenovo
Issue date *	14/05/2014			

Product environmental attributes - Market requirements - Environmental conscious design			Requirement met		
Item	*=mandatory to fill in. Additional information regarding each item may be found under P14.		Yes	No	n.a.
P6 Treatment information					
P6.1*	Information for recyclers/treatment facilities is available (see legal reference).		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P7 Design					
Disassembly, recycling					
P7.1*	Parts that have to be treated separately are easily separable		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P7.2*	Plastic materials in covers/housing have no surface coating.		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
P7.3*	Plastic parts >100g consist of one material or of easily separable materials.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P7.4*	Plastic parts >25g have material codes according to ISO 11469 referring ISO 1043.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P7.5	Plastic parts are free from metal inlays or have inlays that can be removed with commonly available tools.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P7.6*	Labels are easily separable. (This requirement does not apply to safety/regulatory labels).		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Product lifetime					
P7.7*	Upgrading can be done e.g. with processor, memory, cards or drives		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P7.8*	Upgrading can be done using commonly available tools		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P7.9.	Spare parts are available after end of production for: 5 years				<input type="checkbox"/>
P7.10	Service is available after end of production for: 5 years				<input type="checkbox"/>
Material and substance requirements					
P7.11*	Product cover/housing material type: Material type: ABS Material type: Material type:				
P7.12	Electrical cable insulation materials of power cables are PVC free.		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
P7.13	Electrical cable insulation materials of signal cables are PVC free		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
P7.14	All cover/housing plastic parts >25g are free from chlorine and bromine.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P7.15	All printed circuit boards (without components) >25g are halogen free. as defined in IEC61249-2-21. (See Note B2)		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
P7.16	Flame retarded plastic parts >25g in covers / housings are marked according ISO 1043-4: Marking:		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P7.17	Alt. 1 Chemical specifications of flame retardants in printed circuit boards >25g (without components): TBBPA (additive) <input type="checkbox"/> , TBBPA (reactive) <input type="checkbox"/> , Other; chemical name: , CAS #: Alt. 2 Chemical specifications of flame retardants in printed circuit boards (without components) >25g according ISO 1043-4: Brominated Epoxy Resin See P14		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P7.18	Alt. 1 Flame retarded plastic parts >25g contain the following flame retardant substances/preparations in concentrations above 0.1%: Comment: No legal limits exist, this is a market requirement. 1. Chemical name: , CAS #: 2. Chemical name: , CAS #: 3. Chemical name: , CAS #: Alt. 2 Chemical specifications of flame retardants in plastic parts >25g according ISO 1043-4:		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P7.19	Plastic parts >25g are free from flame retardant substances/ preparations above 0.1% classified as R45, R40, R46, R48, R50, R51, R53, R60, R61 and any combination of these (See Note B3)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P7.20	Of total plastic parts' weight >25g, recycled material content is 75% .				
P7.21	Of total plastic parts' weight >25g, biobased material content is 0% .				
P7.22	Light sources are free from mercury If mercury is used specify: Number of lamps: and max. mercury content per lamp: mg		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P8 Batteries					
P8.1*	Battery chemical composition:				<input type="checkbox"/>
P8.2	Batteries meet the requirements of the following voluntary program/s:				<input type="checkbox"/>

Note B2: IEC61249-2-21 has maximum limits for chlorine and bromine but does not address fluorine, iodine and astatine which are included in the group of halogens.

Note B3: 'Starting from January 2009, Risk phrases can be replaced by Hazard phrases according to the Globally Harmonized System (GHS), mandatory by December 2010.

Model number *	Lenovo C455	MT:10139/F0A3	Logo	lenovo
Issue date *	14/05/2014			

Product environmental attributes - Market requirements (continued) Requirement met

Item Yes No n.a.

P9 Energy consumption

9.1 For the product the following power levels or energy consumptions are reported: [See P14](#)

Energy mode *	Power level at 100 V AC	Power level at 115 V AC	Power level at 230 V AC	Reference / Standard for energy modes and test method *	<input type="checkbox"/>
Peak (On-max)	53.981 W	54.499 W	56.476 W	Full load	<input type="checkbox"/>

Category I1

Short Idle State - WOL Enabled	30.576 W	30.269 W	30.006 W	Use for ENERGY STAR V6 registration (P _{idle})	<input type="checkbox"/>
Long Idle State - WOL Enabled	16.672 W	16.225 W	15.492 W	Use for ENERGY STAR V6 registration (P _{idle})	<input type="checkbox"/>
Sleep (S3) - WOL Enabled	1.4446 W	1.4205 W	1.4611 W	Use for ENERGY STAR V6 registration (P _{sleep})	<input type="checkbox"/>
Sleep (S3) - WOL Disabled	1.4389 W	1.4165 W	1.4588 W	Reference	<input type="checkbox"/>
Off (S5) - WOL Enabled	0.9268 W	0.9496 W	0.9786 W	Use for ENERGY STAR V6 registration (P _{off})	<input type="checkbox"/>
Off (S5) - WOL Disabled	0.8966 W	0.9326 W	0.9651 W	Use for EuP	<input type="checkbox"/>

Category I2

Short Idle State - WOL Enabled	W	W	W	Use for ENERGY STAR V6 registration (P _{idle})	<input type="checkbox"/>
Long Idle State - WOL Enabled	W	W	W	Use for ENERGY STAR V6 registration (P _{idle})	<input type="checkbox"/>
Sleep (S3) - WOL Enabled	W	W	W	Use for ENERGY STAR V6 registration (P _{sleep})	<input type="checkbox"/>
Sleep (S3) - WOL Disabled	W	W	W	Reference	<input type="checkbox"/>
Off (S5) - WOL Enabled	W	W	W	Use for ENERGY STAR V6 registration (P _{off})	<input type="checkbox"/>
Off (S5) - WOL Disabled	W	W	W	Use for EuP	<input type="checkbox"/>

Category I3

Short Idle State - WOL Enabled	34.702 W	32.718 W	34.859 W	Use for ENERGY STAR V6 registration (P _{idle})	<input type="checkbox"/>
Long Idle State - WOL Enabled	19.808 W	19.88 W	20.596 W	Use for ENERGY STAR V6 registration (P _{idle})	<input type="checkbox"/>
Sleep (S3) - WOL Enabled	3.0367 W	3.0694 W	3.2576 W	Use for ENERGY STAR V6 registration (P _{sleep})	<input type="checkbox"/>
Sleep (S3) - WOL Disabled	2.9863 W	3.0008 W	3.1233 W	Reference	<input type="checkbox"/>
Off (S5) - WOL Enabled	1.3070 W	0.8390 W	0.8665 W	Use for ENERGY STAR V6 registration (P _{off})	<input type="checkbox"/>
Off (S5) - WOL Disabled	0.9891 W	0.8201 W	0.8523 W	Use for EuP	<input type="checkbox"/>

EPS No-load 0.1862 W 0.1881 W 0.2270 W

PTEC * N/A W N/A W N/A W

TEC * Cat11:63.52 Cat13:77.03 Cat11:62.05 Cat13:75.05 Cat11:59.64 Cat13:77.77

Typical Energy Consumption kWh/week
 ETEC * Annual Energy Consumption kWh/year
 $E_{TEC} = (8760/1000) \times (P_{off} \times 0.45 + P_{sleep} \times 0.05 + P_{ShortIdle} \times 0.35 + P_{LongIdle} \times 0.15)$
 P_{off}: Off Mode(S5) - WOL Enabled; P_{sleep}: Sleep Mode(S3) - WOL Enabled; P_{idle}: Idle State - WOL Enabled

Display resolution* : 1920*1080 Megapixels

Print Speed* : N/A Images per minute

Default time to enter energy save mode: 25 minutes

P9.2* Information about the energy save function is provided with the product.

P9.3* The product meets the energy requirements of the following voluntary program/s:
 ENERGY STAR® version: **Version 6.0** Tier: Product category:
 Others specify:

P10 Emissions

Noise emission – Declared according to ISO 9296

P10.1	Mode	Mode description	Declared A-weighted sound power level L _{WAd} (B)	Declared A-weighted sound pressure level L _{pAm} (dB)		<input type="checkbox"/>
				Operator position <input checked="" type="checkbox"/> Desktop or Desk side <input type="checkbox"/>	Bystander positions <input type="checkbox"/> (only if product is not operator attended)	
	Idle	* Idle	* 3.7 Bel(A)	32 dB(A)		<input type="checkbox"/>
	Operation	* CPU stress loading 80%	* 4.4 Bel(A)	39 dB(A)		<input type="checkbox"/>
	Other mode					<input type="checkbox"/>
	Measured according to: <input checked="" type="checkbox"/> ISO7779 <input checked="" type="checkbox"/> ECMA-74 <input type="checkbox"/> Other (only if not covered by ECMA-74 with L _{pAm} measurement distance m)					

P10.2 The product meets the acoustic noise requirements of the following voluntary program/s:

Model number *	Lenovo C455	MT:10139/F0A3	Logo	lenovo
Issue date *	14/05/2014			

Product environmental attributes - Market requirements (continued)		Requirement met		
Item		Yes	No	n.a.
Chemical emissions from printing products				
P10.3*	Test performed according to ECMA-328 (ISO/IEC 28360) standard <input type="checkbox"/> , other specify:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
P10.4	Typical emission rate (print phase) is (mg/h): Dust Ozone Styrene Benzene TVOC			<input checked="" type="checkbox"/>
P10.5	Chemical emission requirements of the following voluntary program/s are met for : Dust <input type="checkbox"/> Ozone <input type="checkbox"/> Styrene <input type="checkbox"/> Benzene <input type="checkbox"/> TVOC <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Electromagnetic emissions				
P10.6	Computer display meets the requirement for low frequency electromagnetic fields of the following voluntary program/s:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
P11 Consumable materials for printing products				
P11.1*	A Safety Data Sheet (SDS) is available for the ink/toner preparation, even if not legally required (see P4.3).	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
P11.2*	Paper containing post-consumer recycled fibers can be used, provided that it meets the requirements of EN12281.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
P11.3*	2-sided (duplex) printing/copying is an integrated product function.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
P12 Ergonomics for computing products				
P12.1*	The display meets the ergonomic requirements of ISO 9241-307 for visual display technologies.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P12.2*	The physical input device meets the requirements of ISO 9995 and ISO 9241-410.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P13 Packaging and documentation				
P13.1*	Product packaging material type(s): paper weight (kg): 1.13 Product packaging material type(s): PE weight (kg): 0.37 Product packaging material type(s): HDPE weight (kg): 0.009			
P13.2*	Product plastic packaging is free from PVC.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P13.3*	Specify media for user and product documentation (tick box): Electronic <input checked="" type="checkbox"/> , Paper <input checked="" type="checkbox"/> , Other <input type="checkbox"/>			<input type="checkbox"/>
P13.4*	For paper user and product documentation, please specify contained percentage of post-consumer recycled fiber: 0%			<input type="checkbox"/>
P14 Additional information (See Note B4)				
NOTE: Supplier makes no representations, guarantees, assurances or warranties whether express or implied, regarding the information contained in this document. All information provided by supplier in this document is provided based on supplier's knowledge available at the time of completion, and supplier shall have no obligation to update such information. The information provided here is approximate and provided for informational purposes only. See a Lenovo Account Representative for more information.				
P9	See Energy Star Qualified Notebooks & Tablet Computers for the latest information: http://www.energystar.gov/index.cfm?fuseaction=find_a_product.showProductGroup&pgw_code=CO			

Note B4: Additional lines may be inserted to declare further items, by positioning the cursor at the far right of the row and hitting the <Enter> key.

Legal references Europe Annex B

Reference	Declaration item
2002/95/EC (ROHS Directive)	P1.1, P4.1
REACH, Annex XVII	P1.6, P1.8, P4.2
REACH, Annex XVII	P1.4
REACH, Annex XVII	P1.2
REACH, Annex XVII	P1.7
REACH, Annex XVII	P1.9
Regulation (EC) No. 2037/2000, 2038/2000, 2039/2000	P1.3
Norwegian regulation relating to restrictions on the use of certain dangerous chemicals 20.12.2002	P1.5
2006/66/EC (Battery and accumulators Directive)	P2.1, P2.2, P2.3, P3.4, P8.1
2006/95/EC (Low Voltage Directive)	P3.1, 3.4
2004/108/EEC (New EMC Directive)	P3.2, 3.4
1999/5/EC (R&TTE Directive)	P3.3, 3.4
"REACH" Regulation (1907/2006), annex VII	P1.10
(EC) No.1272/2008 regulation on classification, labeling and packaging (CLP)	P4.3
REACH article 31, annex II	P4.3
2004/12/EC (Directive on packaging and packaging waste)	P5.1
(97/129/EC) (Commission Decision on Identification System for Packaging Materials)	P5.2
2037/2000/EC Regulation on Substances that Deplete the Ozone Layer	P5.3
2002/96/EC (WEEE directive)	P3.4, P6.1
(EC) No.1272/2008 regulation on classification, labeling and packaging (CLP)	P7.19

Lenovo ErP Lot3 Information Sheet

- PC / Notebook -

As required by COMMISSION REGULATION (EU) No 617/2013 of 26 June 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for computers and computer servers (ErP Lot3).

Products scope of this sheet:

Desktop computer, integrated desktop computer, and notebook computer

This document is only valid in connection with the IT Eco Declaration of the specific Product.

Commercial name	C455	
Model Number	10139/F0A3	
Issue Date	14/05/2014	
Additional information	N/A	

P7.1.1 Product environmental attributes	
(d)	year of manufacture: <i>Date of manufacturing- please see product name plate</i>
(e)	E TEC value (kWh) and capability adjustments applied when all discrete graphics cards (dGfx) are disabled and if the system is tested with switchable graphics mode with UMA driving the display: Cat. D 157
(f)	E TEC value (kWh) per ErP Lot 3 Category and capability adjustments applied when all discrete graphics cards (dGfx) are enabled : Cat. D 203
(g)	idle state power demand (Watts); 20.6
(h)	sleep mode power demand (Watts); 3.12
(i)	sleep mode with WOL enabled power demand (Watts) (where enabled); 3.26
(j)	off mode power demand (Watts); 0.85
(k)	off mode with WOL enabled power demand (Watts) (where enabled); 0.87
(l)	internal power supply efficiency at 10 %, 20 %, 50 % and 100 % of rated output power (if applicable): 10% 80.77% 20% 87.00% 50% 89.90% 100% 90.59% Average 87.06%
(m)	external power supply efficiency (if applicable): 10% N/A 20% N/A 50% N/A 100% N/A Average N/A ; or Level: N/A
(o)	the minimum number of loading cycles that the batteries can withstand (applies only to notebook computers): N/A
(f)	test parameters for measurements: — test voltage in V and frequency in Hz, — total harmonic distortion of the electricity supply system, — information and documentation on the instrumentation, set-up and circuits used for electrical testing: Test Voltage: 230V-50HZ Test Equipment: Digital Power Meter: Chroma 66202 Measurement Test fixture : Chroma A662003 AC Source: Gwinstek ASP-9102
(p-1)	the measurement methodology used to determine information mentioned in points (l) – internal PSU efficiency: Test Equipment: AC Source CHROMA: 6430/64300000908 Electronic Load CHROMA: 63030/6300006368 Power Meter CHROMA: 66202/662022003033 Test Setup:

	<p><i>☐ Connect the EUT to suitably calibrated AC source, power meter and electronic load.</i></p> <p><i>☐ Warm up at least 30 minutes at 100% of nameplate current output.</i></p> <p><i>☐ The EUT shall be tested at 100%, 75%, 50%, 25% of nameplate output current and no load condition.</i></p> <p><i>☐ Measure the relative parameters required from test record.</i></p> <p><i>☐ The input test voltage shall be used 230V/50HZ.</i></p> <p><i>☐ Ambient temperature: 23 +/-5 °C.</i></p> <ul style="list-style-type: none"> • <i>No-Load mode: Not connection to a product or any other load.</i> • <i>Test procedure following Test Method for Calculating the Energy Efficiency of single-voltage External AC-DC and AC-AC Power Supplies and “IEC 62301”</i> 		
(p-2)	<p>the measurement methodology used to determine information mentioned in points (m) – external PSU efficiency:</p> <p style="text-align: center;"><i>N/A</i></p>		
(p-3)	<p>the measurement methodology used to determine information mentioned in points (o) – loadingcycles batteries:</p> <p style="text-align: center;"><i>N/A</i></p>		
(p-4)	<p>the measurement methodology used to determine information mentioned in maximum, idle, sleep, off mode power as defined in Point P9.1 in the Product IT Eco Declaration:</p> <p><i>Test Condition:</i></p> <p><i>long idle Mode: Measure Panel brightness 150cd/m2</i></p> <p><i>short idle Mode: Turn off the display: after 10minutes</i></p> <p><i>Max : Open Burn In Mode(Driver: Burn In Pro 7.1 Build 1017)</i></p> <p><i>Sleep(S3) : PC Setting go to Sleep</i></p> <p><i>Off(S5) : PC Setting to Shut down</i></p>		
(q)	<p>sequence of steps for achieving a stable condition with respect to power demand::</p> <p style="text-align: center;"><i>N/A</i></p>		
(r)	<p>description of how sleep and/or off mode was selected or programmed:</p> <p><i>Sleep Mode</i></p> <p><i>Step 1. Select Shut down or sign out</i></p> <p><i>Step2. Select Sleep</i></p> <p><i>Off Mode</i></p> <p><i>Step1. Select Shut down or sign out</i></p> <p><i>Step2. Select Shut down</i></p>		
(s)	<p>sequence of events required to reach the mode where the equipment automatically changes to sleep and/or off mode:</p> <p><i>Sleep Mode</i></p> <p><i>Step 1. Select control panel</i></p> <p><i>Step2. Select Power Options</i></p> <p><i>Step3. Select Choose when to turn off the display</i></p> <p><i>Step4. Setting Turn off the display</i></p> <p><i>Off Mode</i></p> <p><i>Step1. Select Shut down or sign out</i></p> <p><i>Step2. Select Shut down</i></p>		
(t)	<p>the duration of idle state condition before the computer automatically reaches sleep mode, or another condition which does not exceed the applicable power demand requirements for sleep mode (in minutes):</p> <p style="text-align: right;"><i>25 minutes</i></p>		
(u)	<p>the length of time after a period of user inactivity in which the computer automatically reaches a power mode that has a lower power demand requirement than sleep mode (in minutes):</p> <p style="text-align: right;"><i>25 minutes</i></p>		
(v)	<p>the length of time before the display sleep mode is set to activate after user inactivity (in minutes):</p> <p style="text-align: right;"><i>10 minutes</i></p>		
(w)	<p>information on the energy-saving potential of power management functionality:</p> <p><i>Press F1 Button to BIOS Setting:</i></p> <p><i>Step1. Select Enhanced Power Saving Mode(ErP)</i></p>		
(x)	<p>user information on how to enable the power management functionality:</p> <p><i>Press F1 Button to BIOS Setting:</i></p> <p><i>Step1. Select Automatic Power on</i></p> <p><i>Step2. Select Wake on LAN</i></p>		
(z)	<p>test parameters for measurements: — test voltage in V and frequency in Hz, — total harmonic distortion of the electricity supply system, — information and documentation on the instrumentation, set-up and circuits used for electrical testing:</p> <p><i>Test Voltage: 230V-50HZ</i></p> <p><i>Test Equipment:</i></p> <p><i>Digital Power Meter: Chroma 66202</i></p> <p><i>Measurement Test fixture : Chroma A662003</i></p> <p><i>AC Source: Gwinstek ASP-9102</i></p>		
Addition Notebook Battery Information:			
Yes	No	n/a	This notebook computer is operated by battery/ies that cannot be accessed and replaced by a non-professional

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	user. The battery[ies] in this product cannot be easily replaced by users themselves
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Additional information
<i>N/A</i>