



Ecma/TC38-TG3/2015/026 (Rev. 1 – 15 April 2015)

Annex B2 - Product environmental attributes Computers and computer monitors

The declaration may be published only when all rows and/or fields marked with * are filled-in (n.a. for not applicable). Additional information regarding each item may be found under P15.

Brand *	Lenovo	Logo
Company name *	Lenovo	
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	Morrisville, North Carolina 27560	
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Additional information		

	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.						
conforms to the statemer	its given in this declaration.						
Type of product *	NB						
Commercial name *	Lenovo V320-14						
Model number *	81MJ						
Issue date *	2018/9/1						
Intended market *	Global Europe Asia, Pacific & Japan Americas Other						
Additional information							

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

About Annex B2

Annex B2 reflects Product environmental attributes relevant for Computers and Computer Monitors. The following items from the ECMA-370 Main body are not shown in the template:

P4.1 – P4.3 Consumable materials

P9.1 TEC and Print speed

P10.2 - P10.3 Chemical emissions from printing products

P11.1 - P11.3 Consumable materials for printing products.

Model nu	ımber *	81MJ	Logo	Long		
Issue da	te *	2018/9/1		Lend) _{TM}
Product	t environ	mental attributes - Legal requirements		Require	ment	met
Item				Yes	No	n.a.
P1		ous substances and preparations				
P1.1*	Products	s do comply with current European RoHS Directive. (See legal reference and ^{NO} TE E	3 ¹)			
P1.2*		s do not contain Asbestos (see legal reference).		\boxtimes		
		nt: Legal reference has no maximum concentration value.				
P1.3*		s do not contain Ozone Depleting Substances: Chlorofluorocarbons (CFC),				
		omofluorocarbons (HBFC), hydrochlorofluorcarbons (HCFC), Halons, carbontetrach				
		ethane, methyl bromide (see legal reference). Comment: Legal reference has no m ration values.	axımum			
P1.4*		ation values. s do not contain more than; 0,005% polychlorinated biphenyl (PCB), 0,005% polychl	lorinated			
Г 1. 4		of the contain more than, 0,003% polyclilorinated diphenyl (FCB), 0,003% polyclil (PCT) in preparations (see legal reference).	omateu		Ш	
P1.5*		s do not contain more than 0,1% short chain chloroparaffins (SCCP) with 10-13 carb	on atoms in t	he 🔀		
	chain co	ntaining at least 48% per mass of chlorine in the SCCP (see legal reference).				
P1.6*	Parts wit	th direct and prolonged skin contact do not release nickel in concentrations above 0	,5 μg/cm²/wee	ek 🔀		
	, ,	al reference).		_		
		nt: Max limit in legal reference when tested according to EN1811:2011-5.				
P1.7*	REACH	Article 33 information about substances in articles is available at (add URL or mail of	contact):	\boxtimes		
P2	Batterie					
P2.1*		oduct contains a battery or an accumulator, the battery/accumulator is labeled with t	he disposal	\boxtimes		
50.0 1		Information on proper disposal is provided in user manual. (See legal reference)				
P2.2*	referenc	,	iium. (See leg	al 🔀		
P2.3*	Batteries	s and accumulators are readily removable. (See legal reference)				
P3		nity verification & Eco design (ErP)				
P3.1*		duct is CE-marked to show conformance with applicable legal requirements (see leg	jal reference).			
		laration of Conformity can be requested at (add link or e-mail address):				
		ww.lenovo.com/social_responsibility/us/en/ec_doc_notebooks/				
P3.2*	•	duct complies with the Eco design requirements for energy-related products,				
	, ,	al reference).				
	Required	d information is; given in item P15 or added to this document,			Ш	
		available at (add URL):				
	http://w	ww.lenovo.com/social_responsibility/us/en/datasheets_notebooks/				

Packaging and packaging components do not contain more than 0,01% lead, mercury, cadmium and hexavalent chromium by weight of these together.

The packaging materials are marked with abbreviations and numbers indicating the nature of the material(s)

The product packaging material is free from ozone depleting substances as specified in the Montreal Protocol

P5

P5.1*

P5.3*

P6

P6.1*

Product packaging

(see legal reference).

Treatment information

used (see legal reference).

Comment: Legal reference has no maximum concentration values.

Information for recyclers/treatment facilities is available (see legal reference).

Model number *	81MJ	Logo	Lanava
Issue date *	2018/9/1		Lei IOVO,

Produc	t environmental attributes - Market requirements (See General NOTE GN below)			
		Require	ment	met
Item	*=mandatory to fill in. Additional information regarding each item may be found under P14.	Yes	No	n.a.
P7	Design Disassembly recycling			
P7.1*	Disassembly, recycling Parts that have to be treated separately are easily separable			
P7.2*	Plastic materials in covers/housing have no surface coating.		H	Ħ
P7.3*	Plastic parts > 100 g consist of one material or of easily separable materials.		H	Ħ
P7.4*	Plastic parts > 25 g have material codes according to ISO 11469 referring ISO 1043-4.		Ħ	Ħ
P7.5	Plastic parts are free from metal inlays or have inlays that can be removed with commonly available tools.	\square	H	Ħ
P7.6*	Labels are easily separable. (This requirement does not apply to safety/regulatory labels).		H	∺
	Product lifetime			
P7.7*	Upgrading can be done e.g. with processor, memory, cards or drives		П	
P7.8*	Upgrading can be done using commonly available tools	X	Ħ	Ħ
P7.9	Spare parts are available after end of production for: 5 years			Ħ
P7.10	Service is available after end of production for: 5 years			Ħ
	Material and substance requirements			
P7.11*	Product cover/housing material type (e.g. plastics, metal, aluminum):			
	Material type: plastics Material type: plastics Material type: plastics			
P7.12	Insulation materials of external electrical cables are PVC free.			
P7.13	Insulation materials of internal electrical cables are PVC free.			
P7.14	External plastic casing/cover parts > 25 g contain no more than 0,1% weight (1000 ppm) bromine and 0,1%			
	weight (1000 ppm) chlorine attributable to brominated flame retardants, chlorinated flame retardants, and polyvinyl chloride or 0,3% weight (3000 ppm) bromine and 0,3% weight (3000 ppm) chlorine in parts containing			
	more than 25% post-consumer recycled content.	J		
P7.15	Printed circuit boards, PCBs (without components) are low halogen: all PCBs > 25 g are low haloger	1	X	
	as defined in IEC 61249-2-21. (See 1NOTE B2)			
P7.16	Flame retarded plastic parts > 25 g in covers / housings are marked according ISO 1043-4: Marking: >PC+ABS-FR(40)<			
P7.17	Alt. 1: Chemical specifications of flame retardants in printed circuit boards > 25 g (without components):			
	TBBPA (additive), TBBPA (reactive) (See NOTE B3), Other: Brominated epoxy resin , CAS #:	\boxtimes		
	26265-08-7			
	Alt. 2: Chemical specifications of flame retardants in printed circuit boards (without components) > 25 g according ISO 1043-4: FR(16)			
P7.18	Alt. 1: Flame retarded plastic parts > 25 g contain the following flame retardant substances/preparations in	<u> </u>		
	concentrations above 0,1%:	\boxtimes		
	1. Chemical name: confidential, CAS #: confidential (See NOTE B4)			
	2. Chemical name: , CAS #: "			
	3. Chemical name: , CAS #: "			
	Alt. 2: Chemical specifications of flame retardants in plastic parts > 25 g according ISO 1043-4:FR(40)		Щ	
P7.19	In plastic parts > 25 g, flame retardant substances/preparations above 0,1% are used which have been			
	assigned the following Risk phrases; and Hazard statements:			
D7 20*	The source(s) for these classifications is/are found at (add URL(s)): , (See note B5)			
P7.20*	Postconsumer recycled plastic material content is used in the product (See Note B6):	Ш	\boxtimes	
	If YES; at least one of the two alternatives below shall be answered;			
	a) Of total plastic parts' weight > 25 g, the postconsumer recycled plastic material content (calculated as			
	a percentage of total plastic by weight) is 0%.			
	or b) The weight of recycled material is 0 g.			

GENERAL NOTE Standard references should direct to the latest version of a standard. If an older version of a standard is used, section P15 shall be used for explanation.

NOTE B2 IEC 61249-2-21 defines maximum limits of 900 ppm for each of the substances chlorine and bromine and a maximum limit of 1500ppm of these substances combined. The standard does not address fluorine, iodine and astatine which are included in the group of halogens.

NOTE B3 and B4 A Guidance document on Chemical substances is available; see http://www.ecma-international.org/publications/standards/Ecma-370.htm

NOTE B5 If a certain substance has been assigned a certain risk phrases / hazard statement in the referenced source, this does not necessarily mean the substance has been tested for all of the hazards referred to by a certain customer.

NOTE B6 Applies to a product containing plastic parts whose combined weight exceeds 100 g with the exception of printed circuit boards, cables, connectors and electronic components and bio-based plastic material.

Model number *	81MJ	Logo	Lonovo
Issue date *	2018/9/1		Lei IOVO,

Product environmental attributes - Market requirements (continued)	Requi	remer	nt met
Item	Yes	No	n.a.

		tance requirements	,			
P7.21*	Biobased plastic m	aterial content is used	in the product (See No	OTE B7):		
	If YES: at least one	e of the two alternative	s below shall be answe	ered:		
	,			aterial content (calculat	ed as a percentage of	
	total plastic by	weight) is %.	·	•		
	or					
D= 00+		the biobased plastic n				
P7.22*			less than 0,1 mg/lamp.	maraum, aantant na		
P8	Batteries	specify: Number of lan	ips: and maxim	um mercury content per	rlamp: mg	
P8.1*		omnosition: Lision Pol	ymer, lithium mangai	1000		
			ymer, nandm mangar	1636		
P9		tion (See NOTE B8)	s or energy consumption	ana ara ranartad:		
Energy mod		Power level at	Power level at	Power level at	Reference/Standard for energy	
		100 V AC	115 V AC	230 V AC	modes and test method *	
Peak (On-r		65 W	65 W	65 W	Full load	
Category	<u>/ 1</u>					
Short Idle	State - WOL	4.92 W	4.06 W	4.48 W	Reference	
Enabled						
Long Idlo	State - WOL	2.88 W	2.00 W	2.59 W	Reference	
Enabled	state - WOL	2.00 VV	2.00 VV	2.33 VV	Kererence	
27145754						
Sleep (S3)	- WOL Enabled	0.45 W	0.45 W	0.49 W	Reference	
Sleep (S3)	- WOL Disabled	0.45 W	0.45 W	0.49 W	Reference	
Off (S5) - V	VOL Enabled	0.24 W	0.24 W	0.28 W	Reference	
Off (S5) - V	VOL Disabled	0.24 W	0.24 W	0.28 W	Reference	
EPS No-loa	ıd	0.055 W	0.058 W	0.15 W		
(External power si	upply / charger plugged in the connected from the product.)					
PTEC *	connected from the product.)	W	W	W		
	ergy Consumption					
ETEC *		17.31 kWh/year	14.29kWh/year	16.12 kWh/year		
	rgy Consumption	-	-			
		•	Efficiency Marking Pro	otocol) * : VI		
Display reso	olution * : 1920*108	0 megapixels				
Default time	e to enter energy sa	ve mode: minut	es			
P9.2*			on is provided with the	product.		
P9.3		lass (monitors only):	•	-		
P10	Emissions	,,,,,				
. 10		Declared according to	ISO 9296 (See NOTE	B9)		
P10.1		lode description	(A-weighted sound power level, L _{WA,c} (B)	
- "	Idle *	Idle		* 2.6	J 3222 222 222 222 222 222 222 222 222 2	
	Operation *	CPU Operating		* 4.1		
	Other mode					
		ıg to: 🔀 ISO 7779 🗌	ECMA-74	•		
	Other (only if not covered by ECMA-74)					

NOTE B7 The following is to be excluded from the calculation of percentage: printed circuit boards, labels, cables, connectors and electronic components and postconsumer recycled plastic

NOTE B8 A Guidance document on Energy Efficiency is available; see http://www.ecma-international.org/publications/standards/Ecma-370.htm

NOTE B9 A Guidance document on Acoustic Noise is available; see http://www.ecma-international.org/publications/standards/Ecma-370.htm

Model nur	nber *	81MJ				Logo	Long	1/0	
Issue date	*	2018/9/1					Leno	VO,	М
Product	environn	nental attributes	- Market requirements (c	ontinued)			Require	ment	met
Item							Yes	No	n.a.
		nagnetic emission							
P10.4	Compute		requirement for low frequency	electromagnetic fields	of the follo	owing voluntary	′		
P12		nics for computing	g products						
P12.1*			nomic requirements of ISO 924	1-307 for visual display	/ technolog	gies.			
P12.2*	The phys	sical input device m	eets the requirements of ISO 9	9995 and ISO 9241-410).			\boxtimes	
P13	Packagi	ng and document	ation						
P13.1*	Product	packaging material packaging material packaging material	type(s): carton weight	(0,					
P13.2*			aging is free from PVC.				\boxtimes		
P13.3*		luct primary corruger recovered fiber co	ated fiberboard packaging, spontent: 80 %	pecify the contained pe	ercentage	of minimum p			
P13.4*		media for user and ronic, Paper,	product documentation (tick bo Other	x):					
P13.5	Ùser and		tem if paper documentation us ation on paper media is chlorir						
	Totally c	hlorine-free							
	Elementa	al chlorine-free							
	Processe	ed chlorine-free							
P14	Volunta	ry programs							
P14.1	The prod	luct meets the requ	irements of the following volun	tary program(s):					
	Eco-labe	el:	Criteria version: ES 7.0 Criteria version: Criteria version:	Date: 2018/9/27 Date: Date:	Product of Product of Product of	· .			
P15	Addition	al information (Se	e NOTE B10)						
P9	Energy	consumption of sp	pecific configuration may vai	ry; description of the	tested pro	duct configur	ation:		
									

NOTE B10 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 B2

Reference	Declaration item
Directive 2011/65/EU (RoHS Directive) * * Specific exemptions apply for certain products and applications.	P1.1
Regulation (EC) 1907/2006(REACH, Annex XVII	P1.2, P1.4, P1.6, P1.7
Regulation (EC) 2037/2000, 2038/2000, 2039/2000 (Marketing and use of Ozone layer depleting substances)	P1.3, P5.3
Norwegian regulation relating to restrictions on the use of certain dangerous chemicals 20.12.2002	P1.5
Directive 2013/56/EC (Battery and accumulators Directive) * * These provisions shall not apply where, for safety, performance, medical or data integrity reasons, continuity of power supply is necessary and requires a permanent connection between the appliance and the battery or accumulator.	P2.1, P2.2, P2,3, P8.1
Directive 2006/95/EC (Low Voltage Directive)	P3.1
Directive 2004/108/EC (EMC Directive)	P3.1
Directive 1999/5/EC (R&TTE Directive)	P3.1
Regulation (EC) 801/2013 amending Regulation (EC) No 1275/2008 with regard to ecodesign requirements for standby, off mode electric power consumption of electrical and electronic household and office equipment, and amending Regulation (EC) No 642/2009 with regard to ecodesign requirements for televisions	P3.1, P3.2
Regulation (EC) No 1272/2008 (CLP Regulation)	P7.19
Directive 2004/12/EC (Packaging Directive)	P5.1
Decision 97/129/EC (Secondary packaging legislation)	P5.2
Directive 2012/19/EU (WEEE directive)	P6.1

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	Lenovo V320-14	Logo	
Model Number	81MJ		Lonovo
Issue Date	2018/9/1		Lenovo.
Additional information			

d)	year of manufacture:				2018
e)	Etec value (kWh) per ErP Lot 3 Catego disabled and if the system is tested with				cards (dGfx) are
7)	Etec value (kWh) per ErP Lot 3 Categorianable	ry and capability adjus	tments applied when a	all discrete graphics	cards (dGfx) are
		Category A (according to ErP Lot 3)	Category B (according to ErP Lot 3)	Category C (according to ErP Lot 3)	Category D (according to ErP Lot 3)
	Memory over base [GB]	12		12	
ents ting	Additional internal storage	YES (Yes / No)	(Yes / No)	YES (Yes / No)	(Yes / No)
capability adjustments applied during testing	Discrete television tuner	NO (Yes / No)	(Yes / No)	NO (Yes / No)	(Yes / No)
ability a	Discrete Audio Card	NO (Yes / No)	(Yes / No)	NO (Yes / No)	(Yes / No)
cap	Discrete graphics Card(s) [number / #]	NO #: (Yes / No)	#: (Yes / No)	YES #: 1 (Yes / No)	#: (Yes / No)
	Category of discrete graphics Card(s)			G3	
saults	Etec Value (kWh) - dGfx disabled all discrete graphics cards (dGfx) are disabled/ UMA is active for switchable graphics/ product has no graphics cards (dGfx)				
Test results	Etec Value (kWh) - dGfx enabled all discrete graphics cards (dGfx) are enabled	10.91		7.86	
g)	Idle state power demand (Watts);	I			A: 3.26;
h)	Sleep mode power demand (Watts);				C: 2.12 A: 0.55
i)	Sleep mode with WOL enabled power d	emand (Watts) (where	enabled);		C: 0.51 A: 0.61;
i)	Off mode power demand (Watts);				C: 0.57 A: 0.34:
,,		1000			C: 0.34
k)	Off mode with WOL enabled power dem	and (Watts) (where er	nabled);		A: 0.34; C:0.34
l)	Internal power supply efficiency at 10 %	, 20 %, 50 % and 100	% of rated output pow	er (if applicable):	
	10% 20% 50%	100% Avera	age		
m)	external power supply efficiency (if appli	cable)*:			
	Average active efficiency: 88.45%,88.64 COMPAL meet Level V internal note: show values for all available external p		0.03%,88.93%		
0)	Minimum number of loading cycles that		tand (applies only to n	otebook computers):	300
p-1)	Measurement methodology used to dete	ermine information me	ntioned in points (I) – in	nternal PSU efficiency	<u> </u>

(p-2)		dology used to determine information mentioned in program Requirements for Single Voltage Externa Eligibility Criteria (Version 2.0)			
		inglomey of terral (version 210)			
(p-3)	Measurement methodology used to determine information mentioned in points (o) – loading cycles batteries: ≥70% of Cmin				
(p-4)	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: IEC 62623				
(q)	Sequence of steps for achieving a stable condition with respect to power demand:: **Power on -> Wait 5 minutes -> Stable condition**				
(r)	(r) Description of how sleep and/or off mode was selected or programmed: **Begin menu -> Power -> Select sleep or off mode** **Begin menu -> Select sleep or				
(s)	Sequence of events required to reach the mode where the equipment automatically changes to sleep and/or off mode:				
		NA NA			
(t)	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):			30min	
(u) 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):			NA		
(v)	Length of time before the display sleep mode is set to activate after user inactivity (in minutes): 10min				
(w)	(w) Information on the energy-saving potential of power management functionality: **Refer to User Guide**				
(x)) User information on how to enable the power management functionality: **Refer to User Guide**				
(z)	z) 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:				
230V50HZ-2%-Edition 2.0, 2011-01, Section 4, IEC62301					
Addition Notebook Battery Information:					
Additio	II Notebook Battery	Battery[ies] not user replaceable	Battery[ies] user replaceable	n/a	
		The battery[ies] in this product cannot be easily replaced by users themselves. 1)		.,,	
Internal/built-in Battery					
External/detachable Battery					
Bios Backup Battery		\boxtimes			
Other:					
Addition	al information				

Акумулаторната[ите] батерия[и] в този продукт не може да се замени[ят] лесно от самите потребители. Las baterías de este producto no pueden ser sustituidas fácilmente por los propios usuarios.

Výměnu baterie/baterií v tomto výrobku by neměli provádět sami uživatelé.

Brugeren kan ikke uden videre udskifte batteriet/batterierne i dette produkt.
Der Akku/die Akkus dieses Produkts kann/können nicht ohne weiteres vom Benutzer selbst ausgetauscht werden.

Kasutajad ei saa selle toote akut/akusid ise hõlpsasti asendada.

Η μπαταρία[-ες] στο προϊόν αυτό δεν μπορούν να αντικατασταθούν εύκολα από τους ίδιους τους χρήστες La/les batterie(s présente(s) dans ce produit ne peuvent être facilement remplacée(s) par les utilisateurs eux-mêmes.

Korisnik ne može lako zamijeniti Bateriju sam u ovom proizvodu.

La batteria/le batterie in questo prodotto non può/possono essere facilmente sostituita/e dall'utente. Lietotāji paši nevar nomainīt šā ražojuma akumulatoru(-us).

Šio gaminio baterijos [baterijų] pats vartotojas negali lengvai pakeisti.

Sio gaminio baterijos [baterijot pats variotojas negali lengvai pakeisti.

A termék akkumulátorát/akkumulátorait a felhasználó nem tudja egyedül egyszerűen kicserélni.

Il-batterija/batteriji f'dan il-prodott ma tistax/jistgħux tiġi/jiġu sostitwita/i mill-utenti stess.

Batteriet [ene] i dette produktet kan ikke lett erstattes av brukerne selv.

De batterij(en) in dit product is (zijn) door de gebruiker niet gemakkelijk vervangbaar.

Użytkownik nie może sam w łatwy sposób wymienić baterii w tym produkcie.

A ou as baterias deste produto não podem ser facilmente substituídas pelos próprios utilizadores.

Bateria (bateriile) din acest produs nu poate (pot) fi ușor înlocuită (înlocuite) de utilizatorii înșiși. Batériu(-ie) v tomto výrobku nemôže vymieňať používateľ.

Baterij/baterije v tem izdelku uporabniki sami ne morejo zlahka zamenjati.

Tämän tuottéen akku [akut] ei[vät] ole helposti käyttäjän vaihdettavissá. Det är inte enkelt för kunden att själv byta ut batteriet/batterierna.

Bu üründeki batarya(lar) kullanıcılar tarafından kolaylıkla değiştirilemez.

The battery[ies] in this product cannot be easily replaced by users themselves.