

Prüfbericht - Nr.: 10015314 002		Seite 1 von 37 Page 1 of 37
Test Report No.:		
Auftraggeber: Client:	Elo TouchSystems Inc. 301 Constitution Drive Menlo Park, CA 94025-1111, USA	
Gegenstand der Prüfung: Test Item:		Geprüft und Genehmigt (Reviewed and approved) OCT 19 2007 TÜV Rheinland Group
Bezeichnung: Identification:	ET1529L-X₁X₂X₃A-X₄-X₅X₆-X₇X₈-X₉X₁₀X₁₁X₁₂X₁₃X₁₄-G	Serien-Nr.: Refer to page 4, test report Serial No.: 1.2 Remark Definition
Wareneingangs-Nr.: Receipt No.:	TPE33770	Eingangsdatum: 2007-10-09 Date of Receipt:
Prüfort: Testing Location:	TÜV Rheinland Taiwan Ltd. , 7F, No. 2, Ming Chuan East Rd. Sec.3 Taipei, Taiwan, R.O.C.	
Prüfgrundlage: Test Specification:	WEEE Directive 2002/96/EC Article 7-Recovery	
Prüfergebnis: Test Result:	Der Prüfgegenstand entspricht oben genannter Prüfgrundlage(n). <i>The test item passed the test specification(s).</i>	
Prüflaboratorium: Testing Laboratory:	TÜV Rheinland Taiwan Ltd.	
geprüft/ tested by:	kontrolliert/ checked by:	
		
2007-10-19	Claire L.F. Su / Project Engineer	2007-10-19
Datum	Name/Stellung	Datum
Date	Name/Position	Date
	Unterschrift	Unterschrift
	Signature	Signature
Sonstiges/ Other Aspects:		
Order number: 113097856		
- Refer to original testing report No. 10015314 001.		
- The original testing sample is model no. ET1529L-XXXA-X.		
- ET1529L-XXXA-X and ET1529L-X ₁ X ₂ X ₃ A-X ₄ -X ₅ X ₆ - X ₇ X ₈ -X ₉ X ₁₀ X ₁₁ X ₁₂ X ₁₃ X ₁₄ -G are different in Barcode Scanner.		
Abkürzungen:	P(ass) = entspricht Prüfgrundlage	Abbreviations: P(ass) = passed
F(ail) = entspricht nicht Prüfgrundlage	N/A = nicht anwendbar	F(ail) = failed
N/T = nicht getestet		N/A = not applicable
		N/T = not tested
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.</i>		

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1. General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix 1: Photos of tested sample



LCD Touchmonitor / ET1529L-X₁X₂X₃A-X₄-X₅X₆- X₇X₈-X₉X₁₀X₁₁X₁₂X₁₃X₁₄-G



1.2 Remark Definition

Variable:	Range of Variable:	Content:
Model ET1529L-X ₁ X ₂ X ₃ A-X ₄ -X ₅ X ₆ - X ₇ X ₈ -X ₉ X ₁₀ X ₁₁ X ₁₂ X ₁₃ X ₁₄ -G:		
X ₁	0, 3, 6, 7, 8, 9, A	X ₁ = Touch Screen Type 0= No Touch 3= Surface Capacitive 6= Secure Touch 7= AccuTouch 8= IntelliTouch 9= CarrollTouch A= Acoustic Pulse Recognition
X ₂	C, S, U, N	X ₂ = Touch Interface Type C= Combo Serial/USB Touch Controller S= Serial Touch Controller U= USB Touch Controller N= No Touch Controller
X ₃	W, J	X ₃ = Market Geographic Designation W= Worldwide J= Japan
X ₄	1, N	X ₄ = Glass Surface Treatment 1= Antiglare N= No Touch Glass
X ₅ X ₆	TR or None	TR= Touch Ready None= No above Function
X ₇ X ₈	BG, GY	X ₇ X ₈ = Cabinet Color BG= Beige GY= Dark Gray
X ₉ X ₁₀ X ₁₁ X ₁₂ X ₁₃ X ₁₄	M2, M3, C2, B, S4, S5, T, NL, NS or None	X ₉ X ₁₀ , X ₁₁ X ₁₂ , X ₁₃ X ₁₄ M2= MSR unit (USB HID) M3= MSR unit (USB Keyboard Emulation) C2= Customer Display B= Fingerprint S4= 1-D Scanner S5= Omni-directional Scanner T= Tall Stand NL= No Logo NS= No Stand None= No above device unit

2. General Product Information

2.1 Product Description

The product is LCD Touchmonitor. It is classified as Category 3 under Annex IA of Directive 2002/96/EC.

2.2 Submitted Documents

Client's declaration email dated on 2007/10/9.

3. Assessment Description

3.1 Disassembly, Recovery and Recycling Flow

The product is disassembled into different parts (clumps) and grouped by the type of material sharing common characteristic or physical relationship (waste fractions) primarily based on the treatment requirements as set out in the WEEE directive annexe II, followed by the current state of the art recycling and recovery technology available in Europe and Taiwan. Materials for which currently no recycling technology is available or where the recycling is economically not feasible, or which contain hazardous substances, are assumed to be shredded, incinerated or disposed of to landfill with out further use.

Only bigger clumps that can be easily separated and that share a common characteristics or physical relationships are included in the recycling and reuse calculation. Other parts, respectively materials that cannot be separated by e.g. standard tools are classified as either unspecified materials or distributed to the relative waste fraction with highest content of waste is expected with reduced recovery rate.

3.2 Parameters

The calculation is based on waste fractions consisting of a typical material or substance composition for typical materials. (e.g. a power cord consists of copper wire and PVC, where as the PVC consists of a PVC, polyamide and polyester blend). For every waste fraction a theoretical recovery share for recycling and for incineration respectively waste disposal is assumed based on information provide by recycling companies. The recovery share may change over time as the recycling technology advances. The current recovery shares are available upon request.

3.3 Definition

3.3.1 Regular: Reuse, Recycling and Recovery Rate: Applying commonly used recycling technology.

3.3.2 Ideal: Recycling Rate: Applying highest recycling technology.

3.3.3 Recycling Classification

A class : Common recycling technology and high market need

B class : Recycling technology not popular and high market need

C class : Common recycling technology and low market need

D class : Recycling technology not popular and low market need

4. Assessment Results

4.1 Assessment Summary

Product Name/No.	LCD Touchmonitor / ET1529L-X ₁ X ₂ X ₃ A-X ₄ -X ₅ X ₆ - X ₇ X ₈ -X ₉ X ₁₀ X ₁₁ X ₁₂ X ₁₃ X ₁₄ -G	
		
Total Weight (g)	8420.4	
Connection Technique	Combination ×11 Snap ×72 Glued ×46 Form ×5	Screw ×155 Cable ×36 Welding ×32
Disassembly Tools	Slotted Screwdriver Philip Screwdriver Hexagon Clump Pliers Hand	
Disassembly Time, sec	1165	
Recommended Disassembly Sequence	See 4.7 Recommended Disassembly Sequence	
Derivative Summary	See 4.2 Product Derivative Table	
Derivative Rate	See 4.3 Product Derivative Summary	
Reuse/Recycling Rate	See 4.4 Test Result	
Recovery Rate	See 4.4 Test Result	
Estimated Treatment Cost, NTD/Set*	-0.9	
Note	Estimated Treatment Cost = Disassembly manpower cost+ Equipment/Utility expenses+ Waste disposal cost - Income from selling derivative The selling price is floating and variable with raw material.	

4.2 Product Derivative Table

Product Name/Type			LCD Touchmonitor / ET1529L-X ₁ X ₂ X ₃ A-X ₄ -X ₅ X ₆ - X ₇ X ₈ -X ₉ X ₁₀ X ₁₁ X ₁₂ X ₁₃ X ₁₄ -G					
Derivative		Weight (g)	Weight (%)		Reuse (%)	Recycling (%)	Incineration (%)	Disposal (%)
Seat Assembly	Metal	1383.6	16.4			✓		
	Plastic, ABS	202.8	2.4			✓		
	Plastic with Coating, ABS	87.0	1.0			✓		
	Rubber	2.2	0.0				✓	
Rear Cover Assembly	Plastic, ABS	115.7	1.4			✓		
Card Reader and VFD	Metal	176.5	2.1			✓		
	Plastic, NY	17.0	0.2			✓		
	Plastic, ABS	5.5	0.1			✓		
	Plastic, ABS+PC	181.4	2.2			✓		
	Plastic, PC	6.7	0.1			✓		
	Mixed Metal	24.3	0.3	Ideal		✓ (0.3)		
				Regular		✓ (0.2)		✓ (0.1)
	Fibreglass	44.1	0.5	Ideal		✓ (0.5)		
				Regular				✓ (0.5)
	PVC, PE	15.6	0.2	Ideal		✓ (0.2)		
				Regular			✓ (0.2)	
	Mixed Plastic	3.2	0.0				✓	
	Display Board	139.4	1.7					✓

Product Name/Type			LCD Touchmonitor / ET1529L-X ₁ X ₂ X ₃ A-X ₄ -X ₅ X ₆ - X ₇ X ₈ -X ₉ X ₁₀ X ₁₁ X ₁₂ X ₁₃ X ₁₄ -G					
Derivative		Weight (g)	Weight (%)		Reuse (%)	Recycling (%)	Incineration (%)	Disposal (%)
Front Frame Assembly	Metal	79.9	0.9			✓		
	Glass	575.0	6.8			✓		
	Plastic, ABS	100.2	1.2			✓		
	Polyester	0.1	0.0				✓	
	Loss, Plastic	0.6	0.0					✓
Rear Enclosure Assembly	Metal	6.7	0.1			✓		
	Plastic, ABS	295.5	3.5			✓		
PCB / Protection Cover Assembly	Metal	1210.8	14.4			✓		
	Mixed Metal	132.3	1.6	Ideal		✓ (1.6)		
				Regular		✓ (1.1)		✓ (0.5)
	PVC, PE	12.3	0.1	Ideal		✓ (0.1)		
				Regular			✓ (0.1)	
	Fibreglass	295.4	3.5	Ideal		✓ (3.5)		
				Regular				✓ (3.5)
	Loss, Plastic	11.8	0.1					✓
Speaker Assembly	Mixed Metal	27.2	0.3			✓		
	Plastic, ABS+PC	3.4	0.0			✓		
	PVC, PE	3.6	0.0	Ideal		✓ (0.0)		
				Regular			✓ (0.0)	
	Loss, Plastic	1.8	0.0					✓

Product Name/Type			LCD Touchmonitor / ET1529L-X ₁ X ₂ X ₃ A-X ₄ -X ₅ X ₆ - X ₇ X ₈ -X ₉ X ₁₀ X ₁₁ X ₁₂ X ₁₃ X ₁₄ -G					
Derivative		Weight (g)	Weight (%)		Reuse (%)	Recyclin g (%)	Incineratio n (%)	Disposal (%)
Rear Metal Cover Assembly	Metal	880.0	10.5			✓		
	Mixed Metal	1.4	0.0			✓		
	PVC, PE	3.4	0.0	Ideal		✓ (0.0)		
				Re- gular			✓ (0.0)	
	Polyester	0.5	0.0				✓	
	Loss, Plastic	10.1	0.1					✓
Front Metal Frame Assembly	Metal	78.3	0.9			✓		
	Aluminium	0.3	0.0			✓		
	Polyester	4.5	0.1				✓	
	Loss, Plastic	1.2	0.0					✓
LCD Assembly	Metal	0.2	0.0			✓		
	Mixed Metal	5.7	0.0	Ideal		✓ (0.0)		
				Re- gular		✓ (0.0)		✓ (0.0)
	PVC, PE	5.2	0.1	Ideal		✓ (0.1)		
				Re- gular			✓ (0.1)	
	Fibreglass	28.2	0.3	Ideal		✓ (0.3)		
				Re- gular				✓ (0.3)
	Polyester	0.1	0.0				✓	
	Liquid Crystal Glass	300.8	3.6					✓

Product Name/Type			LCD Touchmonitor / ET1529L-X ₁ X ₂ X ₃ A-X ₄ -X ₅ X ₆ - X ₇ X ₈ -X ₉ X ₁₀ X ₁₁ X ₁₂ X ₁₃ X ₁₄ -G					
Derivative		Weight (g)	Weight (%)		Reuse (%)	Recycling (%)	Incineration (%)	Disposal (%)
Backlight Module	Metal	0.3	0.0			✓		
	Aluminium	191.6	2.3			✓		
	Plastic, PC	34.4	0.4			✓		
	Plastic, PMMA	354.7	4.2			✓		
	Optical Membrane, PET	64.8	0.8			✓		
	CCFL	7.0	0.1					✓
	Polyester	0.2	0.0				✓	
	Loss, Plastic	1.2	0.0					✓
USB Touchscreen Cable	Mixed Metal	37.4	0.4			✓		
	PVC, PE	60.0	0.7	Ideal		✓ (0.7)		
				Regular			✓ (0.7)	
Monitor Power Cable (US / Canada)	Mixed Metal	60.5	0.7			✓		
	PVC, PE	141.5	1.7	Ideal		✓ (1.7)		
				Regular			✓ (1.7)	
European Monitor Power Cable	Mixed Metal	46.9	0.6			✓		
	PVC, PE	110.1	1.3	Ideal		✓ (1.3)		
				Regular			✓ (1.3)	
Audio Cable	Mixed Metal	12.5	0.1			✓		
	PVC, PE	18.8	0.2	Ideal		✓ (0.2)		
				Regular			✓ (0.2)	

Product Name/Type			LCD Touchmonitor / ET1529L-X ₁ X ₂ X ₃ A-X ₄ -X ₅ X ₆ - X ₇ X ₈ -X ₉ X ₁₀ X ₁₁ X ₁₂ X ₁₃ X ₁₄ -G					
Derivative		Weight (g)	Weight (%)		Reuse (%)	Recyclin g (%)	Incineratio n (%)	Disposal (%)
DVI Cable	Mixed Metal	79.0	0.9			✓		
	PVC, PE	118.5	1.4	Ideal		✓ (1.4)		
				Re- gular			✓ (1.4)	
Video Cable	Mixed Metal	85.4	1.0			✓		
	PVC, PE	126.6	1.5	Ideal		✓ (1.5)		
				Re- gular			✓ (1.5)	
Compact Disc	Plastic, PC	14.0	0.2			✓		
	Plastic Powder with Metal Coating	1.5	0.0				✓	
Barcode Scanner A	Metal	24.9	0.3			✓		
	Plastic, ABS	30.4	0.4			✓		
	Plastic, PMMA	2.6	0.0			✓		
	Mixed Metal	6.0	0.0	Ideal		✓ (0.0)		
				Re- gular		✓ (0.0)		✓ (0.0)
	PVC, PE	0.9	0.0	Ideal		✓ (0.0)		
				Re- gular			✓ (0.0)	
	Fibreglass	12.9	0.2	Ideal		✓ (0.2)		
Re- gular							✓ (0.2)	

Product Name/Type			LCD Touchmonitor / ET1529L-X ₁ X ₂ X ₃ A-X ₄ -X ₅ X ₆ - X ₇ X ₈ -X ₉ X ₁₀ X ₁₁ X ₁₂ X ₁₃ X ₁₄ -G					
Derivative		Weight (g)	Weight (%)		Reuse (%)	Recycling (%)	Incineration (%)	Disposal (%)
Barcode Scanner B	Metal	20.7	0.2			✓		
	Copper	0.8	0.0			✓		
	Plastic, ABS	30.4	0.4			✓		
	Plastic, PMMA	2.6	0.0			✓		
	Mixed Metal	37.7	0.4	Ideal		✓ (0.4)		
				Regular		✓ (0.3)		✓ (0.1)
	PVC, PE	0.9	0.0	Ideal		✓ (0.0)		
				Regular			✓ (0.0)	
Fibreglass	13.0	0.2	Ideal		✓ (0.2)			
			Regular				✓ (0.2)	
Barcode Scanner Holder	Metal	2.7	0.0			✓		
	non-Ferrous Metal	74.9	0.9			✓		
	Plastic, ABS	32.5	0.4			✓		
	Mixed Metal	22.4	0.2	Ideal		✓ (0.2)		
				Regular		✓ (0.2)		✓ (0.0)
	PVC, PE	50.9	0.6	Ideal		✓ (0.6)		
				Regular			✓ (0.6)	
	Fibreglass	3.2	0.0	Ideal		✓ (0.0)		
Regular							✓ (0.0)	
Loss, Metal		1.6	0.0					
Total		8420.4	100.0	Ideal	0.0	94.3	0.1	5.6
				Regular		80.8	8.1	11.1

(Note: For decimal rounding reason, the total % may not be reached exactly 100.0%.)

4.3 Product Derivative Summary

	LCD Touchmonitor / ET1529L-X ₁ X ₂ X ₃ A-X ₄ -X ₅ X ₆ - X ₇ X ₈ -X ₉ X ₁₀ X ₁₁ X ₁₂ X ₁₃ X ₁₄ -G	
	Percentage of Weight (%)	
	Ideal	Regular
Reuse Weight	0.0	
Recycling Weight	94.3	80.8
Incineration Weight	0.1	8.1
Disposal Weight	5.6	11.1
Product Sample Weight	100.0	

4.4 Test Result

PASSED

	LCD Touchmonitor / ET1529L-X ₁ X ₂ X ₃ A-X ₄ -X ₅ X ₆ - X ₇ X ₈ - X ₉ X ₁₀ X ₁₁ X ₁₂ X ₁₃ X ₁₄ -G	
	Percentage of Weight (%)	
	Ideal	Regular
Required Reuse/Recycling Rate		
65%	94.3%	80.8%
Required Recovery Rate	Testing Recovery Rate	
	Ideal	Regular
75%	94.4%	88.9%

4.5 Product Component Disassembly Assessment Summary

Component Assessment -1

Component Name		Seat Assembly	
			
Weight, g		1675.6	
Disassembly Tools		Philip Screwdriver, Hexagon Clump, Slotted Screwdriver, Hand	
Connection Technique		Screw ×10 Combination ×2 Glued ×5 Snap ×5 Screw-Nut ×2	
Disassembly Time, Sec		98	
Material		Metal : 1383.6 g Plastic, ABS : 202.8g Plastic with Coating, ABS : 87.0g Rubber : 2.2g	
Recycling Evaluation	Reuse Weight, g	-	
	Recycling Weight, g	1673.4	
	Incineration Weight, g	2.2	
	Disposal Weight, g	-	
Recycling Potential*		Metal	A class
		Plastic, ABS	A class
		Plastic with Coating, ABS	C class
		Rubber	-

Component Assessment -2

Component Name		Rear Cover Assembly	
			
Weight, g		115.7	
Disassembly Tools		Hand, Slotted Screwdriver	
Connection Technique		Snap ×6	
Disassembly Time, Sec		15	
Material		Plastic, ABS : 115.7g	
Recycling Evaluation	Reuse Weight, g	-	
	Recycling Weight, g	115.7	
	Incineration Weight, g	-	
	Disposal Weight, g	-	
Recycling Potential*		Plastic, ABS	A class

Component Assessment -3

Component Name		Card Reader and VFD
		
Weight, g		613.7
Disassembly Tools		Philip Screwdriver, Hand, Slotted Screwdriver
Connection Technique		Screw ×37 Cable ×7 Snap ×8 Glued ×2 Welding ×28
Disassembly Time, Sec		243
Material		Metal : 176.5g Plastic, NY : 17.0g Plastic, ABS : 5.5g Plastic, ABS+PC : 181.4g Plastic, PC : 6.7g Mixed Metal : 24.3g Mixed Plastic : 3.2g Fibreglass : 44.1g PVC, PE : 15.6g Display Board : 139.4g
Recycling Evaluation	Reuse Weight, g	-
	Recycling Weight, g	411.4
	Incineration Weight, g	18.8
	Disposal Weight, g	183.5

Recycling Potential*	Metal	A class
	Plastic, NY	A class
	Plastic, ABS	A class
	Plastic, ABS+PC	C class
	Plastic, PC	A class
	Mixed Metal	B class
	Mixed Plastic	-
	Fibreglass	-
	PVC, PE	D class
	Display Board	-

Component Assessment -4

Component Name		Front Frame Assembly	
			
Weight, g		755.8	
Disassembly Tools		Philip Screwdriver, Hand, Slotted Screwdriver	
Connection Technique		Screw ×14 Glued ×1 Snap ×9	
Disassembly Time, Sec		93	
Material		Metal : 79.9g Glass : 575.0g Plastic, ABS : 100.2g Loss, Plastic : 0.6g Polyester : 0.1g	
Recycling Evaluation	Reuse Weight, g	-	
	Recycling Weight, g	755.1	
	Incineration Weight, g	0.1	
	Disposal Weight, g	0.6	
Recycling Potential*		Metal	A class
		Glass	A class
		Plastic, ABS	A class
		Loss, Plastic	-
		Polyester	-

Component Assessment -5

Component Name		Rear Enclosure Assembly	
			
Weight, g		302.2	
Disassembly Tools		Philip Screwdriver	
Connection Technique		Screw ×10	
Disassembly Time, Sec		61	
Material		Metal : 6.7g Plastic, ABS : 295.5g	
Recycling Evaluation	Reuse Weight, g	-	
	Recycling Weight, g	302.2	
	Incineration Weight, g	-	
	Disposal Weight, g	-	
Recycling Potential*		Metal	A class
		Plastic, ABS	A class

Component Assessment -6

Component Name		PCB / Protection Cover Assembly	
			
Weight, g		1662.6	
Disassembly Tools		Philip Screwdriver, Hand, Pliers, Slotted Screwdriver, Hexagon Clump	
Connection Technique		Screw ×31 Cable ×17 Screw-Nut ×2	
Disassembly Time, Sec		215	
Material		Metal : 1210.8g Mixed Metal : 132.3g Fibreglass : 295.4g PVC, PE : 12.3g Loss, Plastic : 11.8g	
Recycling Evaluation	Reuse Weight, g	-	
	Recycling Weight, g	1343.1	
	Incineration Weight, g	12.3	
	Disposal Weight, g	307.2	
Recycling Potential*		Metal	A class
		Mixed Metal	B class
		Fibreglass	-
		PVC, PE	D class
		Loss, Plastic	-

Component Assessment -7

Component Name		Speaker Assembly	
			
Weight, g		36.0	
Disassembly Tools		Hand, Slotted Screwdriver, Pliers	
Connection Technique		Snap ×8 Welding ×4	
Disassembly Time, Sec		22	
Material		Mixed Metal : 27.2g Plastic, ABS+PC : 3.4g PVC, PE : 3.6g Loss, Plastic : 1.8g	
Recycling Evaluation	Reuse Weight, g	-	
	Recycling Weight, g	30.6	
	Incineration Weight, g	3.6	
	Disposal Weight, g	1.8	
Recycling Potential*		Mixed Metal	A class
		Plastic, ABS+PC	C class
		PVC, PE	D class
		Loss, Plastic	-

Component Assessment -8

Component Name		Rear Metal Cover Assembly	
			
Weight, g		895.4	
Disassembly Tools		Philip Screwdriver, Hand, Slotted Screwdriver, Pliers	
Connection Technique		Screw ×4 Glued ×2	
Disassembly Time, Sec		28	
Material		Metal : 880.0g Mixed Metal : 1.4g PVC, PE : 3.4g Polyester : 0.5g Loss, Plastic : 10.1g	
Recycling Evaluation	Reuse Weight, g	-	
	Recycling Weight, g	881.4	
	Incineration Weight, g	3.9	
	Disposal Weight, g	10.1	
Recycling Potential*		Metal	A class
		Mixed Metal	B class
		PVC, PE	D class
		Polyester	-
		Loss, Plastic	-

Component Assessment -9

Component Name		Front Metal Frame Assembly	
			
Weight, g		84.3	
Disassembly Tools		Hand, Slotted Screwdriver	
Connection Technique		Snap ×8 Glued ×8 Form ×4	
Disassembly Time, Sec		39	
Material		Metal : 78.3g Aluminium : 0.3 g Polyester : 4.5g Loss, Plastic : 1.2 g	
Recycling Evaluation	Reuse Weight, g	-	
	Recycling Weight, g	78.6	
	Incineration Weight, g	4.5	
	Disposal Weight, g	1.2	
Recycling Potential*		Metal	A class
		Aluminium	A class
		Polyester	-
		Loss, Plastic	-

Component Assessment -10

Component Name		LCD Assembly	
			
Weight, g		340.2	
Disassembly Tools		Philip Screwdriver, Hand, Slotted Screwdriver	
Connection Technique		Glued ×12 Cable ×2 Screw ×4	
Disassembly Time, Sec		39	
Material		Metal : 0.2g Liquid Crystal Glass : 300.8g Mixed Metal : 5.7g Fibreglass : 28.2g PVC, PE : 5.2g Polyester : 0.1g	
Recycling Evaluation	Reuse Weight, g	-	
	Recycling Weight, g	5.9	
	Incineration Weight, g	5.3	
	Disposal Weight, g	329.0	
Recycling Potential*		Metal	A class
		Liquid Crystal Glass	-
		Mixed Metal	B class
		Fibreglass	-
		PVC, PE	D class
		Polyester	-

Component Assessment -11

Component Name		Backlight Module	
			
Weight, g		654.2	
Disassembly Tools		Philip Screwdriver, Hand, Slotted Screwdriver	
Connection Technique		Glued ×13 Screw ×4	Combination ×9 Snap ×6
Disassembly Time, Sec		59	
Material		Metal : 0.3g Aluminium : 191.6g Plastic, PC : 34.4g Optical Membrane, PET : 64.8g Plastic, PMMA : 354.7g CCFL : 7.0g Polyester : 0.2g Loss, Plastic : 1.2g	
Recycling Evaluation	Reuse Weight, g	-	
	Recycling Weight, g	645.8	
	Incineration Weight, g	0.2	
	Disposal Weight, g	8.2	
Recycling Potential*		Metal	A class
		Aluminium	A class
		Plastic, PC	A class
		Optical Membrane, PET	C class
		Plastic, PMMA	A class
		CCFL	-
		Polyester	-
		Loss, Plastic	-

Component Assessment -12

Component Name		USB Touchscreen Cable	
			
Weight, g		97.4	
Disassembly Tools		-	
Connection Technique		-	
Disassembly Time, Sec		-	
Material		Mixed Metal : 37.4 g PVC, PE : 60.0g	
Recycling Evaluation	Reuse Weight, g	-	
	Recycling Weight, g	37.4	
	Incineration Weight, g	60.0	
	Disposal Weight, g	-	
Recycling Potential*		Mixed Metal	B class
		PVC, PE	D class

Component Assessment -13

Component Name		Monitor Power Cable (US / Canada)	
			
Weight, g		202.0	
Disassembly Tools		-	
Connection Technique		-	
Disassembly Time, Sec		-	
Material		Mixed Metal : 60.5 g PVC, PE : 141.5g	
Recycling Evaluation	Reuse Weight, g	-	
	Recycling Weight, g	60.5	
	Incineration Weight, g	141.5	
	Disposal Weight, g	-	
Recycling Potential*		Mixed Metal	B class
		PVC, PE	D class

Component Assessment -14

Component Name		European Monitor Power Cable	
			
Weight, g		157.0	
Disassembly Tools		-	
Connection Technique		-	
Disassembly Time, Sec		-	
Material		Mixed Metal : 46.9 g PVC, PE : : 110.1g	
Recycling Evaluation	Reuse Weight, g	-	
	Recycling Weight, g	46.9	
	Incineration Weight, g	110.1	
	Disposal Weight, g	-	
Recycling Potential*		Mixed Metal	B class
		PVC, PE	D class

Component Assessment -15

Component Name		Audio Cable	
			
Weight, g		31.3	
Disassembly Tools		-	
Connection Technique		-	
Disassembly Time, Sec		-	
Material		Mixed Metal : 12.5 g PVC, PE : 18.8g	
Recycling Evaluation	Reuse Weight, g	-	
	Recycling Weight, g	12.5	
	Incineration Weight, g	18.8	
	Disposal Weight, g	-	
Recycling Potential*		Mixed Metal	B class
		PVC, PE	D class

Component Assessment -16

Component Name		DVI Cable	
			
Weight, g		197.5	
Disassembly Tools		-	
Connection Technique		-	
Disassembly Time, Sec		-	
Material		Mixed Metal : 79.0g PVC, PE : 118.5g	
Recycling Evaluation	Reuse Weight, g	-	
	Recycling Weight, g	79.0	
	Incineration Weight, g	118.5	
	Disposal Weight, g	-	
Recycling Potential*		Mixed Metal	B class
		PVC, PE	D class

Component Assessment -17

Component Name		Video Cable	
			
Weight, g		212.0	
Disassembly Tools		-	
Connection Technique		-	
Disassembly Time, Sec		-	
Material		Mixed Metal : 85.4 g PVC, PE : 126.6g	
Recycling Evaluation	Reuse Weight, g	-	
	Recycling Weight, g	85.4	
	Incineration Weight, g	126.6	
	Disposal Weight, g	-	
Recycling Potential*		Mixed Metal	B class
		PVC, PE	D class

Component Assessment -18

Component Name		Compact Disc	
			
Weight, g		15.5	
Disassembly Tools		-	
Connection Technique		-	
Disassembly Time, Sec		-	
Material		Plastic, PC : 14.0 g Plastic Powder with Metal Coating : 1.5 g	
Recycling Evaluation	Reuse Weight, g	-	
	Recycling Weight, g	14.0	
	Incineration Weight, g	1.5	
	Disposal Weight, g	-	
Recycling Potential*		Plastic, PC	A class
		Plastic Powder with Metal Coating	-

Component Assessment -19

Component Name		Barcode Scanner A	
			
Weight, g		77.7	
Disassembly Tools		Philip Screwdriver, Hand, Slotted Screwdriver	
Connection Technique		Screw ×14 Snap ×11 Cable ×4 Glued ×1	
Disassembly Time, Sec		88	
Material		Metal : 24.9g Plastic, ABS : 30.4g Plastic, PMMA : 2.6g Mixed Metal : 6.0g Fibreglass : 12.9g PVC, PE : 0.9g	
Recycling Evaluation	Reuse Weight, g	-	
	Recycling Weight, g	63.9	
	Incineration Weight, g	0.9	
	Disposal Weight, g	12.9	
Recycling Potential*		Metal	A class
		Plastic, ABS	A class
		Plastic, PMMA	A class
		Mixed Metal	B class
		Fibreglass	-
		PVC, PE	D class

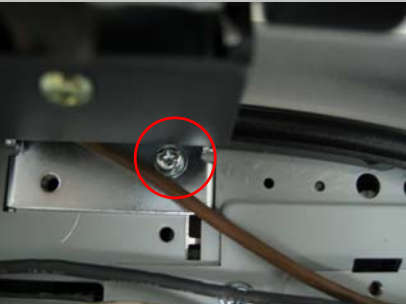
Component Assessment -20

Component Name		Barcode Scanner B	
			
Weight, g		106.1	
Disassembly Tools		Philip Screwdriver, Hand, Star Screwdriver, Slotted Screwdriver	
Connection Technique		Screw ×13 Snap ×11 Cable ×4	Glued ×2 Screw-Star ×4
Disassembly Time, Sec		126	
Material		Metal : 20.7g Copper : 0.8g Plastic, ABS : 30.4g Plastic, PMMA : 2.6g Mixed Metal : 37.7g Fibreglass : 13.0g PVC, PE : 0.9g	
Recycling Evaluation	Reuse Weight, g	-	
	Recycling Weight, g	92.2	
	Incineration Weight, g	0.9	
	Disposal Weight, g	13.0	
Recycling Potential*		Metal	A class
		Copper	A class
		Plastic, ABS	A class
		Plastic, PMMA	A class
		Mixed Metal	B class
		Fibreglass	-
		PVC, PE	D class

Component Assessment -21

Component Name		Barcode Scanner Holder	
			
Weight, g		188.2	
Disassembly Tools		Philip Screwdriver, Hand	
Connection Technique		Screw ×6 Cable ×2 Form ×1	
Disassembly Time, Sec		39	
Material		Metal : 2.7g non-Ferrous Metal : 74.9g Plastic, ABS : 32.5g Mixed Metal : 22.4g Fibreglass : 3.2g PVC, PE : 50.9g Loss, Metal : 1.6g	
Recycling Evaluation	Reuse Weight, g	-	
	Recycling Weight, g	132.5	
	Incineration Weight, g	50.9	
	Disposal Weight, g	4.8	
Recycling Potential*		Metal	A class
		non-Ferrous Metal	A class
		Plastic, ABS	A class
		Mixed Metal	B class
		Fibreglass	-
		PVC, PE	D class
		Loss, Metal	-

4.6 Findings and Recommendations

1.		It is recommended that mold the disassembly point directly on the plastic components (Front Frame Assembly). This will reduce the disassembly time and increase the recycling potential.
2.		It was not easy to disassemble some connecting points with screw connection. It is recommended, under safety and functional considerations, use other connection technique. This will reduce disassembly time and increase the recycling potential.
3.		Some metal materials were found inside the plastic component. This leads that the metal and plastic component cannot be recycled at the same time. It is recommended, under functional and safety consideration, exclude this design.

4.7 Recommended Disassembly Sequence

