Form 1 (F-01s-02)

Product Environmental Aspects Declaration

Network camera (PCR No.BH-01)

No. BH-09-047
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Panasonic

http://panasonic.co.jp/pcc/products/en/netwkcam/
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Sensor Camera *VL-CM210*

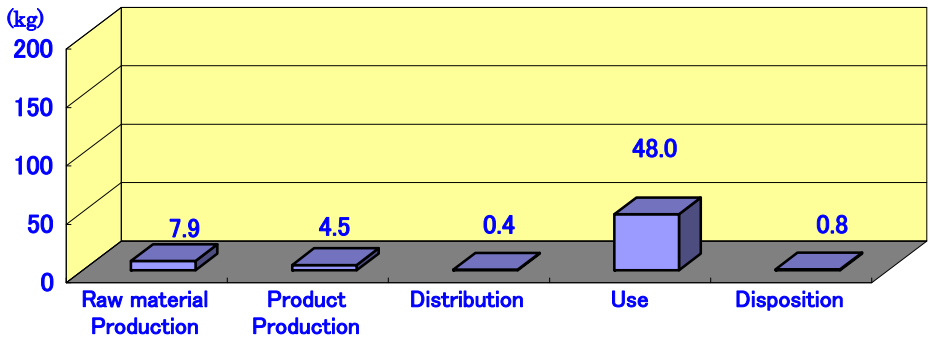
Product Specification

1) Lens : Fixed Focus 3.6mm、F 2.8、Non - Optical Zoom
2) Image Sensor : 1/4-inch CMOS Sensor 320,000 pixels
3) Network Interface : 10Base-T/100Base-TX
4) Mechanism : Pan/Tilt Mechanism
Max Speed Pan/Tilt (50±3degrees/second)
5) Video Compression : H.264 , JPEG(VGA:7.5fps,QVGA:15fps)
6) Installation environment of a camera : Indoor use
7) Weight [catalog] : about 230g (0.507 lb.) (Only the unit)

Life Cycle Impacts

	Total,all stage
Global warming(CO_2 equivalent)	61.7 kg
Acidification(SO_2 equivalent)	0.077 kg
Energy Consumption	1,326 MJ

Global warming Impact (CO_2 equivalent)



The main part of a product, manuals, accessories, packing material, and the set box are contained in the range for public presentation.
The conditions of a use stage: usable-years five years,picture transmitting time 30 minute/one day, In picture transmitting time 30 minute, Pan/Tilt is ten round trips. standby status 23.5 hours / one dayn.

Notes:

1. Original LCA data is available on PEIDS: Product Environmental Information Declaration Sheet, and Product Data Sheet.
2. Unified rules and requirements for EcoLeaf LCA, for intended product category, are available as a PCR: Product Category Rule.
Visit EcoLeaf website under JEMAI homepage at http://www.jemai.or.jp/ecoleaf_e/ for details.
3. Although this product is manufactured in Malaysia, Japanese data have been used as EcoLeaf generic data, instead of Malyasia data that have not been developed.

[Supplemental environmental information]

Assembly production of this product and production of a mounting circuit board are performed at the ISO 14001 authorization acquisition factory.
Specific brominated flame retardants(PBB and PBDE) are not used in appearance plastic material.
Pb-free solder is used for the main circuit board.
A chrome free surface treated steel plate that doesn't contain the hexavalent chromium is used for the sheet metal of the product.

PCR review was conducted by :the chair Mr.Hisashi Ishitani, KEIO University at PCR Deliberation Committee in January 1, 2008.
Independent verification of the declaration and data, according to ISO14025:2006 ☐internal ■external
Third party verifier: name of the third party verifier *was Mr.Keiichi Aramaki.

Programme operator: Japan Environmental Management Association for Industry, ecoleaf@jemai.or.jp

* In the case of an business entity certified as an Ecoleaf-data-collection system, the names of certification auditors are written.

Form 2-A(F-02As-02)

Product Environmental Information Data Sheet (PEIDS)

Document control no.	F-02As-02
Product vendor	Panasonic System Networks Co.,Ltd.
EcoLeaf registration no.	BH-09-047

Unit Function DB version	v2.1
Characterization Factor DB version	v2.1

PCR name	Network Camera		Product type	SENSOR CAMERA VL-CM210			
PCR code	BH-01	Product weight (kg)	0.21	Package (kg)	0.91	Weight total (kg)	1.12

In/Out items \ Life Cycle Stage						Unit	Production		Distribution	Use	Disposition	Total
							Raw material	Product				
Energy Consumption						MJ	1.38E+02	9.90E+01	5.69E+00	1.08E+03	1.14E+00	1.33E+03
						Mcal	3.29E+01	2.36E+01	1.36E+00	2.59E+02	2.73E-01	3.17E+02
Inventory analyses	Impact by Resource Consumption	Exhaustible resources	Energy resources		Coal	kg	6.96E-01	5.77E-01	1.33E-05	6.16E+00	5.58E-03	7.44E+00
					Crude oil (for fuel)	kg	1.63E+00	6.52E-01	1.24E-01	6.96E+00	1.46E-02	9.39E+00
					LNG	kg	2.87E-01	2.89E-01	1.92E-03	3.08E+00	2.94E-03	3.66E+00
					Uranium content of an ore	kg	3.55E-05	3.91E-05	9.00E-10	4.17E-04	3.77E-07	4.92E-04
			Mineral resources		Crude oil (for material)	kg	2.95E-01	0	0	0	0	2.95E-01
					Iron content of an ore	kg	7.21E-02	0	0	0	0	7.21E-02
					Cu content of an ore	kg	3.09E-02	0	0	0	0	3.09E-02
					Al content of an ore	kg	1.60E-03	0	0	0	0	1.60E-03
					Ni content of an ore	kg	7.85E-04	0	0	0	0	7.85E-04
					C content of an ore	kg	1.08E-03	0	0	0	0	1.08E-03
					Mn content of an ore	kg	4.04E-04	0	0	0	0	4.04E-04
					Pb content of an ore	kg	2.22E-03	0	0	0	0	2.22E-03
					Sn content of an ore	kg	-	-	-	-	-	
					Zn content of an ore	kg	2.18E-02	0	0	0	0	2.18E-02
					Au content of an ore	kg	-	-	-	-	-	
					Ag content of an ore	kg	-	-	-	-	-	
					Silica Sand	kg	1.31E-01	0	0	0	0	1.31E-01
					Halite	kg	2.09E-01	0	0	0	5.30E-04	2.09E-01
					Limestone	kg	4.41E-02	0	0	0	6.86E-03	5.09E-02
					Natural soda ash	kg	2.32E-03	0	0	0	0	2.32E-03
					Wood	kg	1.18E+00	0	0	0	0	1.18E+00
					Water	kg	9.31E+02	4.37E+02	1.01E-02	4.66E+03	4.67E+00	6.04E+03
	Impact by Emission/Discharge to the environment	to Atmosphere			CO2	kg	7.77E+00	4.48E+00	4.04E-01	4.79E+01	7.60E-01	6.13E+01
					Sox	kg	5.74E-03	3.42E-03	2.17E-04	3.65E-02	4.11E-04	4.63E-02
					Nox	kg	1.03E-02	2.71E-03	1.43E-03	2.90E-02	1.07E-03	4.44E-02
					N2O	kg	6.11E-04	4.90E-05	7.46E-05	5.23E-04	1.66E-06	1.26E-03
					CH4	kg	9.46E-05	1.04E-04	2.41E-09	1.11E-03	1.01E-06	1.31E-03
					CO	kg	1.10E-03	6.63E-04	2.84E-04	7.08E-03	2.47E-04	9.38E-03
					NMVOC	kg	1.85E-04	2.05E-04	4.71E-09	2.18E-03	1.98E-06	2.57E-03
					CxHy	kg	2.79E-04	1.07E-05	5.05E-05	1.14E-04	7.80E-06	4.62E-04
					Dust	kg	9.30E-04	1.46E-04	1.46E-04	1.56E-03	6.62E-05	2.85E-03
		to Water system	to Water domain		BOD	kg	-	-	-	-	-	
					COD	kg	-	-	-	-	-	
					N total	kg	-	-	-	-	-	
					P total	kg	-	-	-	-	-	
					SS	kg	-	-	-	-	-	
		to Soil system			Unspecified Solid Waste	kg	5.97E-02	0	0	0	6.64E-01	7.23E-01
					Slag	kg	1.53E-01	0	0	0	0	1.53E-01
					Sludge	kg	-	-	-	-	-	
					Low level radio-active waste	kg	2.49E-05	2.72E-05	6.29E-10	2.91E-04	2.63E-07	3.43E-04
Impact assessment	by Res				Energy resources (crude oil equivalent)	kg	2.72E+00	1.69E+00	1.27E-01	1.80E+01	2.48E-02	2.26E+01
					Mineral resources (Iron ore equivalent)	kg	9.43E+00	0	0	0	0	9.43E+00
	by Emission / Discharge to environment	to Atmosphere			Global Warming (CO2 equivalent)	kg	7.94E+00	4.50E+00	4.24E-01	4.80E+01	7.61E-01	6.17E+01
					Acidification (SO2 equivalent)	kg	1.29E-02	5.32E-03	1.22E-03	5.68E-02	1.16E-03	7.74E-02
					Photochemical Oxidant	kg	5.69E-04	1.51E-04	7.99E-05	1.61E-03	3.13E-05	2.44E-03

[Notes for readers: EcoLeaf common rules]

I. Stage related

A. "Production" stage is intended for two sub-stages listed below.

(1) "Raw material" production: consists of mining, transportation and raw material production.

(2) "Product" production: consists of the parts processing, assembly and installation.

B. "Distribution" stage is intended for transportation of produced product. Transportation of consumables and maintenance goods (e.g. replacement parts) for use of the product are included into "Use" stage.

C. "Use" stage is intended for use of the product (active mode, standby mode, etc.) and production, transportation to disposal of consumables/maintenance goods (e.g. replacement parts).

D. "Disposition" stage is intended for environmental impacts by product disposition.

II. Inventory analyses

A. Data of mineral ore on "Exhaustible resources" are presented in weight of pure ingredients (e.g. iron, aluminum) in the ore.

B. Data on energy resources are presented based on origin in calorific value. e.g. Data on uranium ore presents weight of uranium concentrate, which is available for use as an atomic fuel.

C. Data of discharge to water system are in actual figure (not calculated using unit function in inventory analyses).

III Impact analyses

Result of the "Impact analyses" is found in converting results of inventory analyses into total amount of a reference material (e.g. CO_2 in case of "Global Warming").

A. Impact "by resource consumption" represents magnitude of impacts to resource depletion.

B. Impact "by emission/discharge to environment" represents magnitude of impacts to Atmosphere, Water and Soil system.

IV Data entry format

A. Exponential notation, after the decimal point to two, should be used.

B. Indicate "0" instead exponential notation, if the result of calculation or estimation is considered as "zero" or negligible in comparison to related results.

C. Indicate " — " if calculation nor estimation can not be done, in order to differentiate to indicate "zero".

D. Row total of the data is automatically calculated, excluding a row includes " — " item. Row total of such is presented as a blank (no data).
(BGD for material production are for production from mineral ore. Those data do not include reclaiming processes like recovery from scrap.)

[Notes for readers: Target product specific]

Form 3(F-03s-02)

Product data sheet

(Input data and parameters for LCA)

Document control no.	F-03s-02
Product vendor	Panasonic System Networks Co.,Ltd.
EcoLEaf registration no.	BH-09-047

PCR name	Network Camera (PCR-ID: BH-01)	Product type	SENSOR CAMERA VL-CM210				
LCA/LCIA in units of:	1unit	Product weight (kg)	0.21	Package (kg)	0.91	Weight total (kg)	1.12

1. Product information (per unit): parts etc. by material and by process/assembly method

	Breakdown of primary materials				Math breakdown of parts, which need to apply Processing / Assembly Base Units (Parts B, C)			
	Material name	Weight (kg)	Material name	Weight (kg)	Process name	Weight (kg)	Process name	Weight (kg)
Product	Steel	1.90E-02	Paper	5.38E-01	Press molding:Iron (kg)	6.59E-02		
	Electroplated steel Plate	2.95E-02	Semiconductor circuit unit	1.50E-03	Injection molding (kg)	1.00E+00		
	Electromagnetic steel plate	3.90E-04	Assembled circuit board	9.37E-02				
	Stainless steel	4.96E-03	Medium-sized motor	1.82E-02				
	Copper	4.73E-02						
	Thermoplastic resin	3.65E-01						
	Thermosetting resin	2.00E-04						
	Rubber	3.20E-04						
	Subtotal	4.67E-01	Subtotal	6.51E-01				
	Total			1.12E+00	Subtotal	1.07E+00	Subtotal	0.00E+00

Note Product mass includes the main part of a camera. Accessories, such as the packing material , CD-ROM, and AC adapter, are appropriated for packing etc.

2. Production site information (per unit): Consumption and discharge/emission for production/processing/assembly within the site.

SOx and NOx should be indicated in SO_2, NO_2 equivalent.

Consumption	Classification	Energy							
	Distribution	Electricity (kWh)							
	Quantity	9.60E+00							
	Note								
Emission/Discharge	Classification								
	Distribution								
	Quantity								
	Note								

Note On the manufacture stage, the manufacture load of printed circuit board mounting and the manufacture load of the main part assembly are added up.

3. Distribution stage information (per unit): means, distance, loading ratio, consumptions and emissions/discharges.

Distribution	Means of transportation	Consumption	Consumption	Consumption	Consumption				
	Conditions	Diesel oil as fuel (kg)	Freight by ship (kg.km)	Diesel truck: 10 ton (kg.km)	Diesel truck: 4 ton (kg.km)				
	Quantity	3.10E-03	6.76E+03	5.13E+02	1.64E+01				
	Note								

Note The load of the land and marine transportation from the overseas manufacturing site to Japan are added up.
As for domestic transportation, distance is set to 500km according to the PCR regulation.

4. Use stage (per unit): use condition (mode, term) including active mode, standby mode and maintenance.

4.1 Product and accessories subject to this analysis

Product	Classification	Consumption							
	Distribution	Electricity (kWh)							
	Quantity	1.15E+02							
	Note								

Note According to PCR regulation, usable period, the picture transmitting time and the standby time were assumed to be five years, 30 minute / one day and 23 hours 30 minutes / one day, respectively.

4.2 Disposition/Recycle information on consumables and replacement parts

Consumables	Classification								
	Distribution								
	Quantity								
	Note								

Note There is not article of consumption of this model.

5. Disposition/Recycle stage information (per product): process method and scenarios

Scenario	Classification	Consumption	Consumption	Discharge	Discharge				
	Distribution	Diesel truck: 4 ton (kg.km)	Shredding (kg)	Incineration to landfill (as ash) (kg)	Landfill: General waste (kg)				
	Quantity	2.24E+02	1.12E+00	5.40E-01	5.80E-01				
	Note								

Note The product is crushed as wastes. The inflammables are appropriated for "Incineration", and the incombustibles are appropriated for "Landfill" afterwards.

6. Others