

Nice

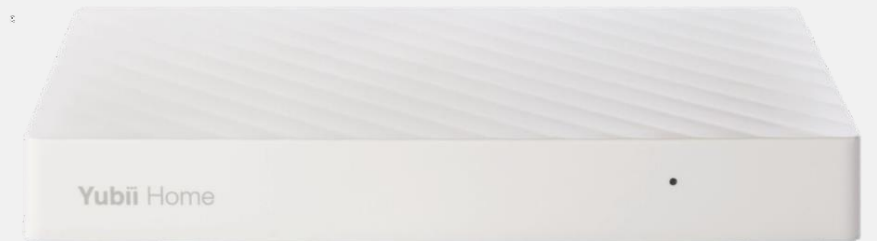


Environmental Product Declaration In
accordance with ISO 14025 for:

Yubii Home

From:
Nice S.p.A.

Programme:	The International EPD® System, www.environdec.com
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An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com

Nice

Company information

A world without barriers.

This is the aspiration, the *vision* of Nice, an Italian multinational company and international leader in the **Home Automation, Home Security** and **Smart Home** sectors.

A *mission* that aims to improve people's quality of life by **simplifying everyday movements** in total safety and maximum comfort, for a 100% living space.

The Nice world

Founded in 1993 in Oderzo (Treviso) by Lauro Buoro, current Chairman, Nice designs, manufactures and commercialises integrated and connected solutions for applications in residential, commercial and industrial contexts, in the field of:

- Smart Home
- Smart Home Security
- Solar Shading automations
- Gate & Garage Doors automations
- Access control

Today Nice count on an organization of more than 3,000 people on 5 continents, with a rich background of competences and different cultures, as well as 15 R&D centers (Italy, Germany, Poland, Brazil, USA, South Africa, Canada, India, Russia, China) and 13 production plants (Germany, Italy, Poland, Brazil, USA, Australia, South Africa and Canada) serving its partners and customers in over 100 countries worldwide.

Thanks to its global presence, Nice contributes to promoting the excellence, style and know-how of *Made in Italy* in the world with the high quality of its Home Automation solutions: products that skillfully combine technology, design, innovation and ease of use.



The value of Sustainability – NiceLoveEarth

For Nice sustainability means ensuring comfort and wellbeing, simplifying people's daily gestures, thanks to the quality and advanced technology of its products, which reduce the environmental impact of living spaces.

For people

Nice is actively committed to improve people's quality of life, making it more sustainable, by developing solutions that optimise the management of natural light and heat. Wellbeing is a top priority for Nice, thanks to the solutions for humidity control, intelligent heating and cooling, air quality measurement, carbon monoxide detection and notification in case of dangerous situations, in order to always guarantee the right environmental conditions to protect the wellbeing of people living at home.

For products

Nice is committed to reduce the environmental impact of its products, following ecodesign principles, reducing the energy consumption of home automations and using recycled materials. The packaging of the products is made of natural cardboard, 100% recyclable, all plastic parts have been removed and instructions are available in digital format. Furthermore, in a circular economy perspective, Nice works to limit the production of industrial waste, encouraging recovery systems.

For buildings

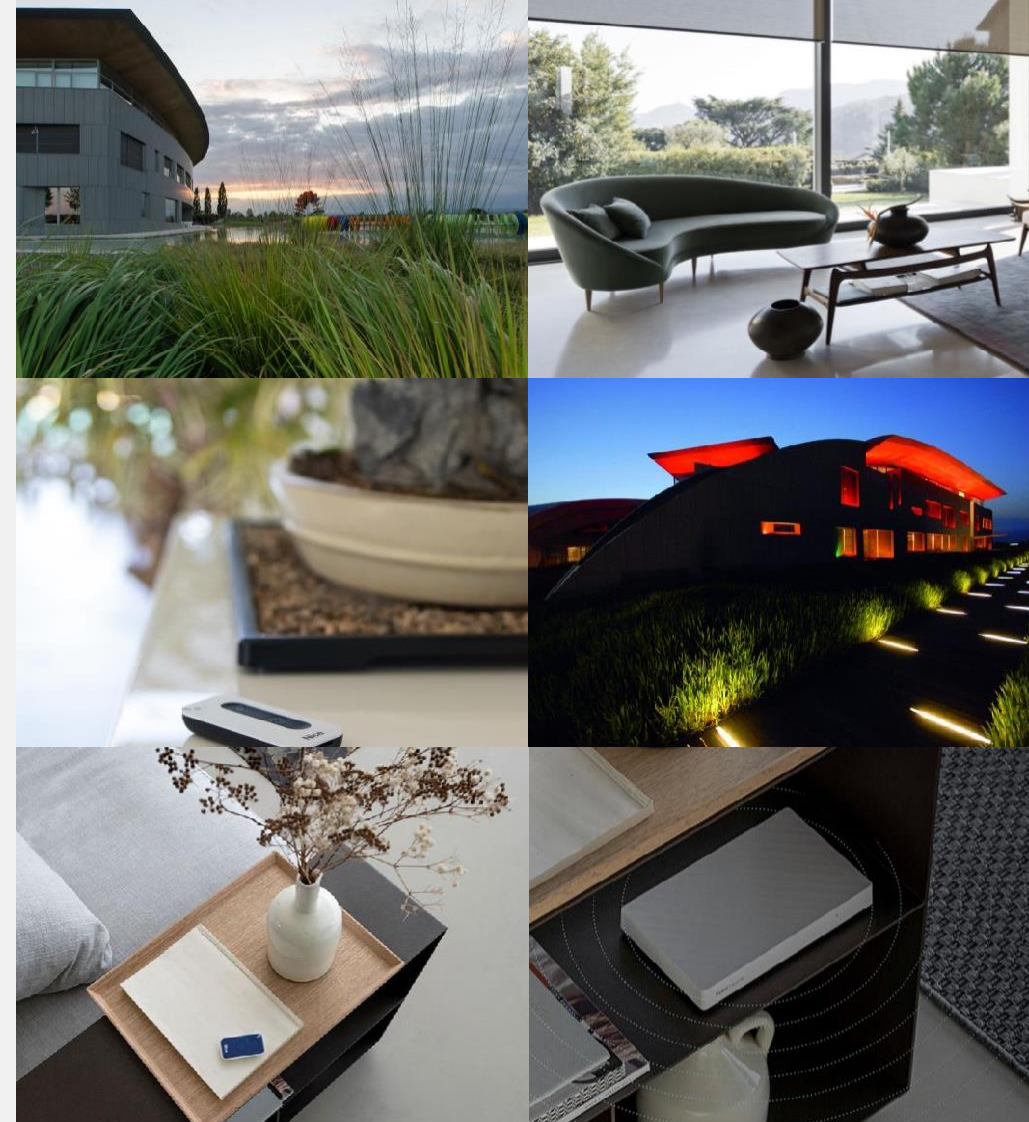
Nice technology makes life for individuals and communities more connected, easier and safer, ensuring greater wellbeing inside buildings. The application of Nice solutions contributes to making buildings sustainable, minimising the environmental impact of our homes, promoting energy efficiency through intelligent control of heating, cooling, lighting and monitoring of electrical loads to reduce consumption. Nice is a facilitator of simple daily gestures that can have a great impact on the entire planet and encourage the green evolution of buildings.



Nice Innovation

Nice continuously invests in its 15 research and development centres located in Italy, Poland, Germany, Brazil, USA, Canada, South Africa, India and China. This is where the international R&D team operates, made up of highly specialized professionals who, in addition to performing rigorous and accurate tests to ensure the highest standards of quality and safety, work constantly to study, develop and implement cutting-edge solutions able of meeting and anticipating market demands.

*"Human capital - declares **Lauro Buoro, Chairman and Founder of Nice** - is a fundamental asset for the development and expansion strategy of our company. Thanks to the excellent professionals who work in Nice and to their ideas, we create innovation to facilitate even the smallest daily gestures".*



Product information

The Yubii Home YH-001 is the Nice Hub, the core element of the home automation system. It allows to integrate smart home devices into a single system to provide convenient control and powerful automation. Yubii Home is compatible with over 3,000 third-party devices thanks to support the Nice, Z-Wave and WiFi protocols. Yubii Home allows also monitor and manage Energy consumption in a smart way. It can also integrate with alarm and surveillance systems.



Nice Green Products, with specific technological innovations or materials that permit **energy efficiency of the buildings** and a **low impact on the environment**.

DESCRIPTION	TECHNICAL SPECIFICATION
Product type	Home automation
Power supply	5V DC, max. 1A (adapter included)
Operating temperature; humidity	0-40°C; max. 75% relative humidity (non-condensing)
Power connector	USB Micro B

UN CPC code for YH-001 is 47211

Transmission apparatus incorporating reception apparatus.

Yubii is composed by device (weights 187g) and Power Supply with cable (weights 65g).

Packaging for one product weight 185g.

The presence of the different materials in the product YH-001 is reported below:

MATERIALS	PERCENTAGE
Plastic	55%
Circuit boards	18%
Metals	1%
Others	26%

The products do not contain any of the substances of very high concern (SVHC) regulated by the Regulation (EC) No 1907/2006 (REACH) or the Regulation (EC) No 1272/2008 of European parliament.

Methodology

Inventory analysis was conducted using specific data from Nice S.p.A. and Fibaro Group SA production site in Poland, a company part of the Nice Group. The Upstream phase refers to the BOM of the product in focus, while the Core and Downstream (production and distribution) phases, refer to 2021. The use phase has been calculated on the basis of the product in object, Yubii Home YH-001.

Selected generic data from international databases were used (in particular Ecoinvent 3.8) regarding the production processes of raw materials and auxiliary materials used for the gateway device production, generation and distribution of electricity, means of transport and waste treatment processes related to the production that takes place in the outsourcing partner production plant.

In addition, data on ground transportation distances were calculated using the Google Maps online calculator and those by sea using the Searates online tool.

Product system boundaries refers to CEI EN 50639 standard. The calculation method adopted for the LCA study reported in this EPD is described in the document "GPI for an International EPD® System" version 4.0, while the characterization factors, used to convert the data deriving from the inventory analysis of the life cycle in impact categories, are described in the reported at www.environdec.com. All calculations have been done with SimaPro software version 9.4.



LCA information

Functional Unit

The functional unit for the life cycle is represented by a Hub Device capable of managing and communicate with different smart devices for automation, in its Reference Service Life (RSL) of 10 years.

System boundaries

The present study is defined "from-cradle-to-grave", therefore the life cycle of the product for the device under study is subdivided into Manufacturing, Distribution, Installation, Use and End-of-life stages.

Manufacturing phase includes the production of all the materials that enter the production process, plus transport and processes that combine to create the finished product:, as detailed below:

- operations of extraction, transport and treatment of resources;
- the production of raw materials (components) that constitute the product, including their packaging;
- the production of auxiliary for the assembly, printing and lubrication materials;
- packaging production;
- the production of electricity and fuels used at the companies that produce the materials described in the previous points.
- transport of materials from the place of production to the manufacturing site: the specific transport of every component has been calculated;
- consumption of electricity for product assembly;
- storage and packaging;
- air emissions;
- treatment of waste produced during manufacture.

Distribution stage includes transport from production site to the final retailer.

Installation stage comprehend:

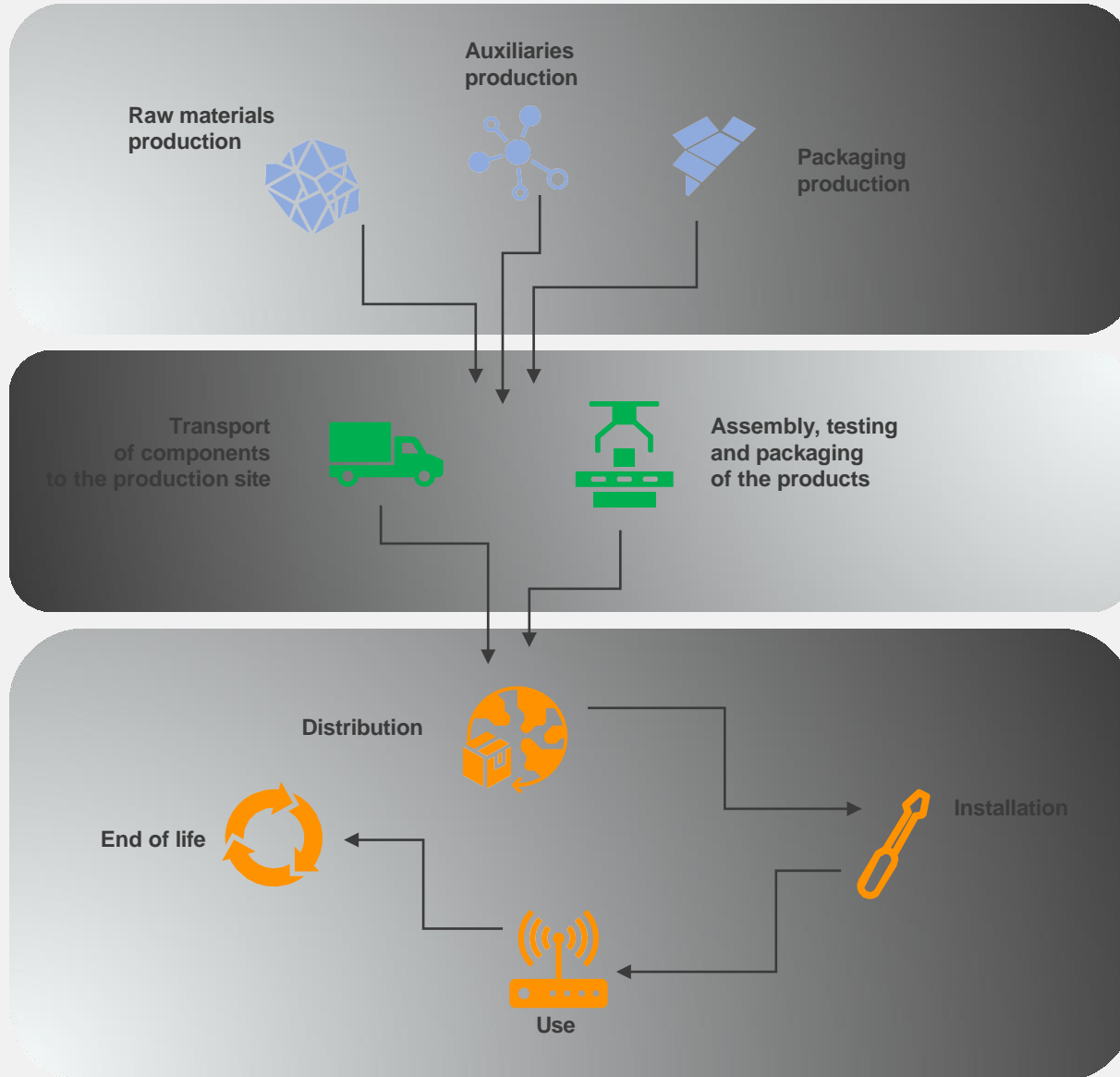
- installation, considered irrelevant for this product, because it is made manually, hence with no significant environmental impact.
- Collection and end-of-life of packaging after unpacking.

Use stage refers to the actual usage of the product (throughout its RSL): the device Yubii Home works with electricity, thus the consumption of 2,5 Wh has been allocated to all the hours per 1 year (continuous work, the product use Radio all time), then to its complete RSL (10 years).

End of life stage includes:

- De-installation, considered irrelevant for this product (manual deactivation);
- Collection and end-of-life of the product after use.





Data quality and cut-off

In accordance with the cut-off rule, flows of less than 1% of the total inventory were excluded, i.e.:

- construction of company plants and processing machinery (with a life of more than three years);
- staff travel and home-work transfers;
- research and development activities;
- the materials necessary for cleaning the machinery;
- product installation, its maintenance and its de-installation.



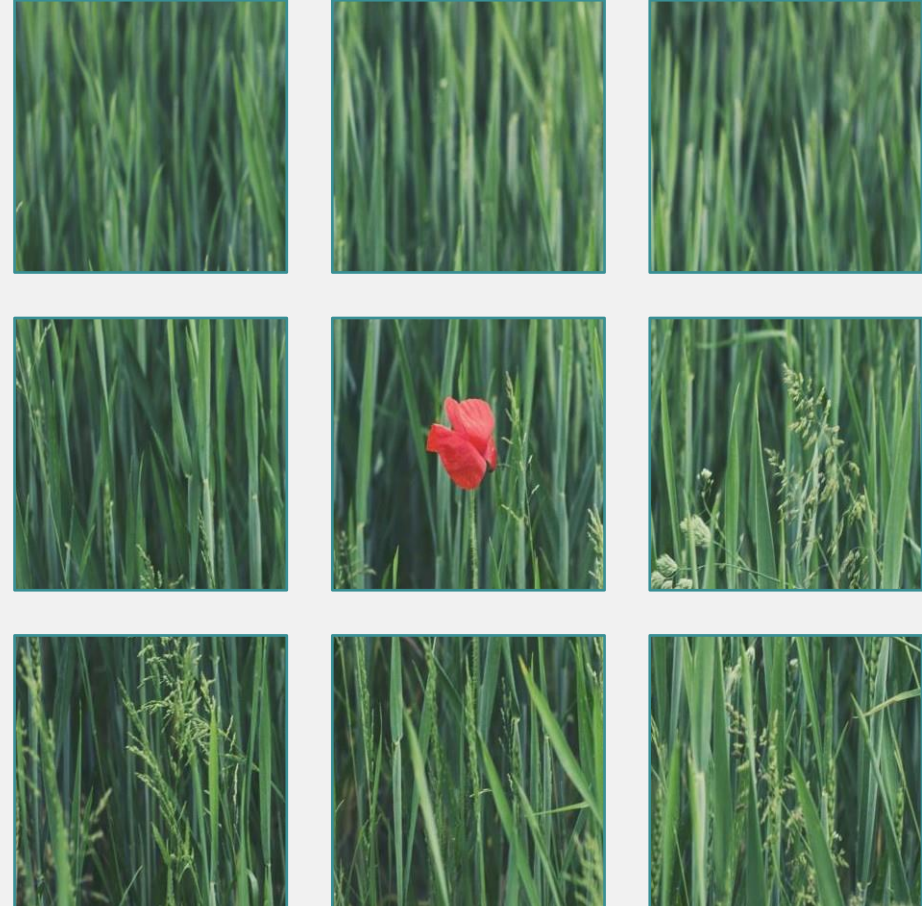
EPD validity

This document is a pre-certified EPD, it is valid globally and expires on 2023-07-26 as stated in Nice's EPD Process Certificate.

Environmental performance

The impact categories are:

- Global warming potential (GWP)
- Acidification potential (AP)
- Eutrophication potential (EP) freshwater, marine and terrestrial
- Photochemical oxidant formation potential (POFP)
- Abiotic depletion potential – Elements
- Abiotic depletion potential – Fossil resources
- Water scarcity potential
- Use of resources





Yubii Home

Potential environmental impact

PARAMETER		UNIT	Manufacturing	Distribution	Installation	Use	End-of-life	TOTAL
Global warming potential (GWP)	Fossil	kg CO ₂ eq.	7,36E+00	1,80E-01	4,34E-03	6,80E+01	1,28E-02	7,56E+01
	Biogenic	kg CO ₂ eq.	2,73E-02	1,26E-05	4,01E-02	5,68E-01	4,40E-02	6,79E-01
	Land use and land transformation	kg CO ₂ eq.	1,12E-02	3,18E-06	5,35E-07	1,70E-01	4,66E-07	1,82E-01
	TOTAL	kg CO₂ eq.	7,40E+00	1,80E-01	4,44E-02	6,87E+01	5,68E-02	7,64E+01
Acidification potential (AP)		mol H ⁺ eq.	9,97E-02	2,56E-03	2,32E-05	3,73E-01	2,42E-05	4,76E-01
Eutrophication potential (EP) - freshwater		kg P eq.	6,88E-03	2,55E-06	1,44E-07	3,26E-02	1,11E-06	3,95E-02
Eutrophication potential (EP) - marine		kg N eq.	8,89E-03	6,92E-04	4,46E-05	6,13E-02	1,09E-04	7,10E-02
Eutrophication potential (EP) - terrestrial		mol N eq.	9,91E-02	7,67E-03	8,70E-05	5,98E-01	8,43E-05	7,05E-01
Photochemical oxidant formation potential (POFP)		kg NMVOC eq.	3,04E-02	1,96E-03	3,35E-05	1,63E-01	3,50E-05	1,96E-01
Abiotic depletion potential – Elements*		kg SB eq.	1,57E-03	1,07E-08	3,25E-10	3,26E-06	3,76E-10	1,57E-03
Abiotic depletion potential – Fossil resources*		MJ	9,46E+01	2,47E+00	5,46E-02	1,76E+03	7,38E-02	1,86E+03
Water scarcity potential*		m ³ eq.	3,04E+00	5,28E-04	3,26E-04	3,34E+01	3,70E-04	3,64E+01

*The results of this environmental impact indicator shall be used with care as the uncertainties of the results are high and as there is limited experience with the indicator.

NOTE: No significant aircraft GHG emissions have been detected in life cycle of the device.

Use of resources

PARAMETER		UNIT	Manufacturing	Distribution	Installation	Use	End-of-life	TOTAL
Primary energy resources Renewable	Use as energy carrier	MJ	7,82E+00	2,65E-03	5,20E-04	3,19E+02	9,96E-04	3,27E+02
	Used as raw materials	MJ	2,57E+00	5,86E-04	5,43E-05	1,99E+01	1,03E-04	2,25E+01
	TOTAL	MJ	1,04E+01	3,23E-03	5,75E-04	3,39E+02	1,10E-03	3,49E+02
Primary energy resources Non-renewable	Use as energy carrier	MJ	9,05E+01	2,62E+00	5,80E-02	1,83E+03	7,82E-02	1,93E+03
	Used as raw materials	MJ	1,05E+01	2,36E-05	2,29E-06	1,55E-02	5,24E-06	1,05E+01
	TOTAL	MJ	1,01E+02	2,62E+00	5,80E-02	1,83E+03	7,82E-02	1,94E+03
Secondary material		kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels		MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels		MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water		m ³	1,52E-01	4,27E-05	1,31E-05	1,17E+00	1,41E-05	1,33E+00

Programme information

Programme

The International EPD® System

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PCR:

Electronic devices, components and services (main PCR)

Estimated publication date:
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PCR Moderator:
Diaa Gab-Allah

This is a pre-certified EPD with
validity until 2023-07-26

Independent third-party verification of the declaration and data, according to ISO 14025:2006

- EPD process certification
- EPD verification

Third party verifier:

DNV Business Assurance Italy Srl

Procedure for follow-up of data during EPD validity involves third party verifier:

- Yes
- No

References:

- General Programme Instructions of the International EPD® System. Version 4.0.
- CEI EN 50693 - Product category rules for life cycle assessments of electronic and electrical products and systems.
- Ambiente Italia S.r.l., Life Cycle Assessment of Nice products for automation, version december 2022.
- ISO 14040:2006 Environmental management – Life cycle assessment - Principles and Framework
- ISO 14044:2006 Environmental management – Life cycle assessment – Requirements and Guidelines
- Eurostat, <http://ec.europa.eu/eurostat/data/> database, last update 2020
- Waste report ISPRA 2021, reference year 2020
- Barkmeyer, M., Kaluza, A., Pastewski, N., Thiede, S., & Herrmann, C., 2017. Assessment of end-of-life strategies for automation technology components. Procedia CIRP, 61, 34-39.
- Olivetti, E., Duan, H., & Kirchain, R., 2013. Exploration of carbon footprint of electrical products: guidance document for product attribute to impact algorithm methodology. A publication of the Materials Systems Laboratory, Massachusetts Institute of Technology, Cambridge.



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