

Electronic Lighting in Italy

'Practical market insights on your product'

Although Italy had to overcome some challenging issues during the economic crisis, the lighting industry remained relatively strong, driven by the mandatory substitution of existing lighting. The lighting market in Italy is split between local small and medium-sized enterprises and international brands. Italian market players have managed to establish a strong market share, but mainly in indoor lighting. Outdoor lighting is a rapidly growing application and offers potential both to the market players and suppliers of LEDs from developing countries. Italy is known for innovative and creative design in electronic lighting. Investments in electronic lighting are dedicated primarily to design, but also to innovative solutions in order to stay competitive on the market.

Product Definition

Light-emitting diodes (LEDs), HS code 85414010, are a semiconductor light source. LEDs illuminate when an electrical charge passes through them, converting energy directly into light of a single colour. LEDs are used for very different functions and applications both indoors and outdoors and in residential and industrial areas. LED lights are very efficient at turning energy into light.

Organic light-emitting diodes (OLED), HS code 85414010, have an organic compound film which turns energy into light. OLEDs have been mainly used in consumer electronics, but ongoing R&D has enabled the penetration of OLEDs into industries such as lighting and the automotive sector. The main differences between OLED and LED are indicated in the table below. However, OLEDs have made significant progress in development and in the improvement of efficiency in the last two years.

Advantages of LED	Advantages of OLED	
LED is more efficient than OLED	OLED has a larger-area emission	
Lifetime of LED is much longer than OLED	OLED offers better design flexibility	
LEDs are much more cost-efficient than OLEDs	OLED has a higher colour comfort	
Source: IDTechEx	·	

Table 1: Advantages of LED and OLED

Efficient lighting is one of the EU requirements. LEDs play a more significant role in the electronic lighting market than OLEDs, because LED is <u>currently</u> more efficient than OLED, and its lifetime is much longer than that of OLED. The price

of OLEDs is much higher than LED, limiting OLED penetration possibilities. For these reasons, the report will focus mainly on opportunities for DC exporters in LED and will not feature OLED in detail.

Strong brand names are important in electronic lighting in all industrial applications, including automotive, indoor, and outdoor lighting. The leading suppliers of lighting in Italy are typically small and medium-sized enterprises such as <u>Castaldi Lighting</u>, <u>Martini Light</u>, <u>Kathod Optoelectronic</u>, <u>Eqoluce</u>, <u>Fabbian</u> and <u>Ivela</u>, but there are also larger players such as <u>AEC Lighting</u> and <u>Gemmo</u>.

Product Specifications

Quality:

High product quality and compliance with international and the European standards on safety, as well as national legislation and practices are key for European companies. Product safety is essential. Suppliers of electronic lighting and components must meet ISO 9001, RoHS and REACH standards (see "Buyer



requirements").

OLEDs and LEDs are just starting to enter the lighting market and there is huge potential for the improvement of electronic lighting. Thus quality is being constantly improved and new buyer requirements are being redefined along with innovation progress.

The expected buyers' specifications include wavelength, light colour, voltage drop, as well as life expectancy, and most likely semiconductor material. There is still room for DC

exporters to improve the life expectancy of LEDs.

Several features of LED lights need to be considered in its design, since it is both an electronic and an optic device. Desirable optical properties such as colour, brightness, and efficiency must be optimised without requiring an unreasonable electrical or physical design. These properties are affected by the

size of the diode, the exact semiconductor materials used to make it, the thickness of the diode layers, and the type and the treatment of the semiconductor.

LED performance is temperature-dependent. Most manufacturers' published ratings for LEDs are for an operating temperature of 25 °C. LEDs used outdoors, such as



traffic lights or in-pavement signal lights, could result in low signal intensities or even failure.

Use of efficient, up-to-date or intelligent technology is gaining importance in Europe. Intelligent lighting may include:

- Integration of hardware and software (e.g. a contemporary street light is an intelligent solution),
- Sensor integration for temperature measurements,
- Connectivity to renewable energy sources such as solar panels,
- Use of appropriate material as the interface material for LEDs.

Labelling:

Products marketed in Italy must be labelled in accordance with the EU requirements and must provide product information as indicated below.

Label information must also be electronically readable. Examples of suitable label technologies include:

- Bar Codes
- Data Matrices
- Radio Frequency ID



Electronic lighting is typically labelled with the description of content, including the following types of information:

- type of product,
- model type,
- quantity,
- net and gross weight (in kilograms),
- supplier/manufacturer name,
- supplier/manufacturer location,
- serial number,
- various environmental logos,
- country of origin based on assembly.

Packaging:

 Typically the buyer defines the preferred type of packaging

Packaging must protect products from damage and protect consumers' possible injuries by avoiding the use of



prohibited chemicals or materials.

- Packaging for products marketed in Italy must meet certain EU requirements. Make sure that your packaging:
 - has minimal weight and volume;

- has reduced content of hazardous substances and materials in the packaging material;
- is recyclable.
- LED components are supplied in strips, LED bulbs (for replacement) are packed in boxes with fixed fittings, while LED lighting is packaged in individual packs – typically in plastic bags and cardboard boxes.

Buyer Requirements

To assure durability and safety, products *must* comply with relevant EU regulations and standards. Compliance with 1) *must* requirements, 2) *common* requirements and 3) *niche* requirements, is a basic necessity for *all exporters* in the electronics and electrical engineering sector. Below you will find all of the standards that apply to **electronic lighting**. Familiarise yourself with the guidelines on the application of all *must, common,* and *niche* requirements.

Requirements you must meet

1. CE marking

- For the intra-European trade, electronic lighting and components must be marked with the CE mark, which shows that the product was assessed before commercialisation and that it meets EU safety, health, and environmental protection requirements. For electronic lighting, the most important Directives on CE marking are:
 - Electromagnetic compatibility (EMC Directive 2004/108/EC).
 - Low voltage equipment (LVD 2006/95/EC),
 - Ecodesign for Energy related products (Directive 2009/125/EC), which are not standards but implementing measures,
 - RoHS (see below).

Considerations for action:

- Apply for CE marking for all your products, **before** approaching potential customers in Italy.
- <u>The European Commission page on CE marking</u> is a useful starting point to find out how the legislation on CE marking is relevant to you; it illustrates the key steps you need to take to comply and have your products CE marked.
- Check information for relevant standards and guidelines on the application of LVD, EMC and Ecodesign in the <u>Buyer Requirements</u> section on CBI's Market Intelligence platform.
- Familiarise yourself with standards that apply for electronic lighting <u>here</u> (LVD) and <u>here</u> (EMC)
- Familiarise yourself with implementing measures on ecodesign <u>here</u>
- Read more about CE marking for <u>low voltage equipment</u> and <u>electromagnetic</u> <u>compatibility</u> in the EU Export Helpdesk.

2. Chemicals

• Use of certain chemicals is restricted by the EU and is regulated through several Directives and Regulations.

Considerations for action:

Exporters of electronics and electronic components have to meet the requirements under both RoHS and REACH.

• Restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS). The Directive sets maximum levels for lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE) in electronic equipment (0.01% by weight for cadmium and 0.1% for the other substances). The Directive covers all electronic lighting components with the exception of the products mentioned in <u>Annex III</u> to the Directive. Since 2013, CE marking is required in relation to RoHS compliance of final products. This includes technical documentation and a declaration of conformity.

Considerations for action:

- Make sure that you provide the EU buyer with all information required in relation to chemicals used in electronic lighting. Fill out this information in the form required by your EU buyer, e.g., by providing information in Material Safety Data Sheets (MSDS) or software in which you declare the chemical content of your product (e.g. <u>BOMcheck</u> – a collective data system developed by a group of large electronics companies to collect chemical composition information from suppliers).
- Provide the EU buyer with technical documentation and a declaration of conformity for the products supplied.
- REACH Regulation. This legislation restricts the use of certain dangerous chemicals (as per <u>Annex XVII of the Regulation</u>) and sets requirements on indicating information for the chemicals used. Manufacturers are required to provide information on the properties of chemical substances used to their buyers.

Considerations for action: List all chemicals, including raw materials and additional materials, used in your production process. Check the candidate list of <u>Substances of Very High Concern</u>.

• Waste of Electrical and Electronic Equipment (WEEE). EU producers are obliged to participate in product take-back schemes. This does not directly affect exporters from developing countries, but specific requirements on the design may be set in order to facilitate the reuse and recycling set out by WEEE.

Considerations for action: To have a better understanding of WEEE requirements, familiarise yourself with information published in <u>the EU Export</u> <u>Helpdesk</u>.

Common Buyer Requirements

Quality management systems (QMS). If you plan to export to Italy, all
products must meet buyers' quality demands. ISO 9001 and 14001 are
designed to make sure that the manufactured and/or exported products to
Europe meet the needs of customers. Compliance with <u>VDE</u> (a European
standard with several variations) is often required by Italian buyers as well.

Considerations for action:

- Apply for ISO 9001 as quickly as possible and plan for ISO 14001.
- Familiarise yourself with VDE requirements.
- Consider forming a Quality Assurance team within your company that will
- assure the high product quality required by EU buyers.
- **Corporate Social Responsibility (CSR)**. Italian buyers increasingly look for products that have been manufactured with due respect for human rights, labour conditions and the environment. Bigger EU companies even develop their own CSR policies and require suppliers to conform to these requirements. In particular, workers' health and safety are sensitive topics in Europe and buyers want to avoid reputation loss.

Considerations for action:

 Understand what CSR policies are required by your customers by checking websites of electronic companies in Italy.

- An important initiative for the electronics sector is the <u>EICC Code of Conduct</u>. Most big electronics companies have implemented this code and require their suppliers to act in accordance with it.
- <u>SA 8000</u> is a certification standard for social conditions. Although certification
 may be too much, the standard is publicly available, so you can find out
 about the most important issues.
- Consider implementing OHS Occupational Health and Safety that deals with aspects related to labour conditions. These requirements are not mandatory, but will definitely give you an advantage over other DC exporters.

Niche Buyer Requirements

Ecolabels

There is a growing niche market for environmentally friendlier/greener electronics. Green electronic assemblies can be sold under ecolabels to a third party, such as the "<u>EU Ecolabel</u>".

Considerations for action: Familiarise yourself with the "<u>EU Ecolabel</u>" or other European ecolabels. See if your customers need to have your products labelled. Consider selling your components to manufacturers of ecolabelled products.

Macro-Economic Statistics

Italy has successfully overcome the economic crisis and has been slowly recovering since 2013. Italy's GDP was down by 0.5 CAGR (Compound Annual Growth Rate) between 2009 and 2013, but it is forecast to record a healthy growth of over 4% CAGR between 2014 and 2018. In 2014 alone, Italy's GDP is expected to grow by nearly 5% compared to 2013.

Figure 1: GDP (current prices) Compound Annual Growth Rate (CAGR) for 2009-2013 and estimate for 2014-2018 for Italy, the EU and selected countries



Source: IMF 2014, World Economic Outlook Database

Italy holds a 12% share of total GDP and of total manufacturing. The population of the EU was estimated at 506 million in 2013 and Italy contributes 12% to the total EU population, approximately 60 million.



Figure 2: Key 2013 macroeconomic indicators for Italy, the EU and selected countries, in \pounds billions (population in millions)

Source: IMF and OECD 2014

Trade Statistics

Production and consumption

A well-established market in lighting solutions, Italy is strong in innovations and creative design in electronic lighting. The use of LEDs in street lighting is rapidly growing. LED component price remains the key factor, favouring DC exporters that are able to offer better-priced products. Product quality and innovative technology are also important.

- The European lighting market is expected to grow from €16.3 billion in 2012 to €19.8 billion in 2020. The key driver in the market is LED lighting, which is set to increase its market share from 15% in 2012 (or even 9% in 2011) to 72% in 2020. (Source: McKinsey) By 2020, nearly all lighting sales will involve LED and OLED lighting, the demand for which is driven by energy efficiency, penetration to new applications, high R&D investments and support by EU policies.
- DC exporters have greater opportunities for supplying local manufacturers with LEDs and OLEDs on the component level (semiconductors). There are limited opportunities on the system/solution level, because after-service availability is important and means that the DC exporter must be represented through a local partner.

Considerations for action:

- Approach manufacturers of LED lighting with your LED component offering, such as semiconductors. These manufacturers can be approached directly or through distributors/wholesalers. To keep your marketing costs low, consider cooperation with a larger wholesaler of semiconductors in your country (which exports to Italy/Europe). In this case be aware that the margin will be lower than approaching European manufacturers directly.
- Set up a local representative office or partner with a local service company if you are going to supply the Italian market with LED solutions.
- Italy has a well-established lighting market. It is known for creative and innovative decorative lighting and it is very strong in indoor electronic lighting. Street lighting in Italy is a fast growing application. Local authorities are increasingly installing the efficient and innovative electronic lighting in cooperation with local players in Italy such as AEC Lighting.

Considerations for action: DC exporters will benefit by offering better priced, labour-intensive LEDs and OLEDs. Consider approaching companies active in indoor and outdoor lighting. Street lighting suppliers offer the best opportunities

for DC exporters, as this is a rapidly growing market where established partnerships in the supply chain are becoming increasingly important.

 Being a creative nation with a rich tradition in innovation and design, Italian local players invest significantly in R&D in order to stay competitive both nationally and globally. Italy has a strong background in lighting innovation and skilled people in the industry.

Considerations for action: It is important to continue working on the improvement of know-how and product quality. Consider cooperating with innovation clusters to meet the rapidly changing requirements in the LED sector.

Import and export

Unlike the economic situation in Italy, the lighting industry has been quite stable throughout the last 5 years. Total imports of LEDs and OLEDs grew continuously, except for the slowdown in 2012 and 2013. Price, reliability and product quality are key to staying competitive on the market, while an improved longevity of LEDs may become the suppliers' Unique Buying Proposition.



Figure 3: Imports of Light-Emitting Diodes (LED/OLED) to Italy, value in € million

Despite hard economic times in Italy in the last five years, the electronic lighting industry has remained strong, keeping the nation's economy afloat. The total import of (O)LEDs to Italy demonstrated solid performance in 2009-2013, up by nearly 10% CAGR in 2009-2014. Import of (O)LEDs from DCs recorded a -4% CAGR in the last 5 years. Malaysia and China are the leading importers of LEDs and OLEDs, because the major subsidiaries of American, Japanese and Korean manufacturers are located in these countries. However, both countries' exports of (O)LEDs to Italy declined, as European companies switched to countries with lower labour costs such as Vietnam, Thailand, the Philippines and Mexico. These countries recorded the fastest growth in Italian imports in 2009-2013.

Considerations for action: Be aware of the severe competition with Chinese and Malaysian companies (the leading exporters of LEDs and OLEDs) and work on your *Unique Buying Proposition, (i.e.* why should European OEMs buy your product?). Demonstrate your reliability and product quality, highly valued by Italian companies, while offering competitive prices. Improve the product quality and LED/OLED longevity (the focus improvement area among the European buyers), in order to increase your competitive advantage over other exporting countries.

Source: Eurostat (June 2014)



Figure 4: Exports of Light-Emitting Diodes (LED/OLED) from Italy, value in $\ensuremath{\varepsilon}$ million

Source: Eurostat (June 2014)

 Italian exports of LEDs and OLEDs within Europe grew by 13.5% CAGR in 2009-2013. Exports to Switzerland and the Netherlands have increased the most, profiting from the favourable market conditions in these countries and well-established lighting roadmaps in Europe. Switzerland and Germany are the largest destination markets in terms of their export value size.

Considerations for action: Italy has well-established collaborations with other European countries. By approaching Italian suppliers of LEDs and OLEDs, DC exporters can indirectly target other European countries through re-exports.

Market Trends

- *Political measures*: Europe is accelerating the switchover to more ecological lighting sources.
 - In September 2012, the EU banned the sale of all traditional incandescent lamps. Halogen lamps will be phased out by 2016, which means that the energy-efficient LED lights will have a broader market to replace traditional lighting.
 - Energy infrastructure requirements and incentives for entire building infrastructures are also being extended. The EU, for example, has ruled that by 2020 all new building structures should consume "nearly zero" energy.
 - The demand for electronic lighting in Italy is currently driven by the mandatory substitution of existing lighting in various applications. Italy increasingly implements outdoor LED installations. For example, a recent installation involved a road tunnel near Florence. The project was implemented by AEC Lighting in cooperation with the Italian highways authority Autostrade per l'Italia.

Considerations for action:

- Currently, key opportunities are still in the indoor market, but other opportunities exist in the outdoor market as the use of LEDs in municipal outdoor lighting in Italy is rapidly growing.
- If you decide to supply European and Italian companies with **intelligent lighting solutions**, consider partnering with other manufacturers from developing countries in order to strengthen your product portfolio or to codesign electronic lighting solutions. However, be aware that the opportunities in supplying **components** for electronic lighting are greater than in supplying complete solutions.
- Joining the supply chain with low-cost products: European OEMs are beginning to separate high-price and low-price electronic lighting. Electronic

solutions (also lighting) are becoming more intelligent and integrated. Thus, there are opportunities for DCs in supplying low-tech components for high-tech solutions.

Considerations for action:

- Supply local manufacturers primarily with LEDs and OLEDs on the component level (semiconductors). You may also think about creating a product portfolio on a modular basis, enabling lighting components and also lighting solutions to be ordered. Be aware that opportunities in supplying electronic lighting at the solution level are limited.
- Product quality: Besides economical advantage, Italian Buyers are looking for high-quality electronic lighting, i.e. long life expectancy among other factors. High product quality is required, because local suppliers must guarantee product quality and provide after-service to their customers. LEDs are expected to change the transmission parameter (wavelength) to a wider range for new applications of electronic lighting and this may increase the product-quality expectations with respect to DC exporters.

Considerations for action:

Continuously work on improving product quality and LED/OLED life expectancy, in order to increase your competitive advantage over other exporting countries. If you are lacking in product knowledge, look for proof of quality by European partners.

 Minimisation of the total cost of ownership: With the growing role of international cooperation, European companies will increasingly be facing various risks that need to be measured and managed in order to keep the total cost of ownership (TCO) at a reasonable (low) level. Both small and large companies will increasingly be looking for the most reliable suppliers and will try to eliminate risk through supplier contract and cost management.

Considerations for action:

- European small and medium enterprises (SMEs) present better opportunities as potential customers for DC exporters, but also larger companies may contact you as a potential supplier. That is why visibility on the market is crucial. Develop your sales and marketing strategy:
 - Work on well-structured and up-to-date content on your company's website;
 - o Attend trade shows several years in a row. Start preparations for the trade show far in advance (see a list of trade shows in 'Leading Trade Fairs in Italy' below in this document);
 - o Work on your *Unique Buying Proposition*, i.e. why should European OEMs buy your product.
 - o Work on product pricing.

For more information on entering the European market, please refer to <u>CBI</u> <u>Trendmapping for Electronics and Electrical Engineering</u>.Market Channels and Segments

See <u>CBI Channels and Segments for Electronics for Electronics and Electrical</u> <u>Engineering</u>, because the trade route for electronic lighting does not differ significantly from the general trade route.

Price

The price range of LEDs varies substantially. When talking about LEDs you could be referring to both the driver and the system. The price can also vary depending on the product brands and the supplier.

With regards to LED for illumination, this technology is still the most expensive on the market. This price difference is expected to reduce with time. The market for indoor illumination – both residential and commercial – is very price sensitive. Suppliers that are present in several European countries have harmonised their prices; any differences in pricing may occur because of different logistics, taxes and other local costs.

 Table 1: Price ranges and major suppliers for LEDs according to type and application

Type of LED	Main application	Price range (€)
High power LEDs	Industrial, consumer	0.20 up to 30
High power LED modules	Industrial, consumer	2.50- up to 150
High power LED drivers/power supplies	Industrial, consumer	3 up to 80

Be aware of different costs and value chain margins that add up to the product price. Production and administration costs of the manufacturer usually make up 47-54% of the end price (OEM volume price). The production and administration costs should include all raw material costs, development, labour, and other fixed and administration costs. To develop a unique selling proposition, understand your own costs, liabilities and responsibilities, and analyse product market price levels.

Figure 5:



Considerations for action:

- Strive to keep the overall production costs significantly lower than in Italy in order to have a competitive offer.
- Work on production process optimisation and delivery time reduction.
- Make the production process more efficient and flexible by introducing a modular production approach and using different technologies.
- Minimise the risk of damage during production and meet customer requirements in terms of product quality and delivery time.

Market Competitiveness

• Market *entry*: Strong brand names are important only for the end-user market. DC suppliers will most likely serve supply chain intermediates and

OEMs. Here better-priced and better-quality products are required by the market.

Considerations for action: To successfully enter the market, work on efficiency improvements in your production process to ensure a better-priced product's profitability. Continuously work on product quality improvement; introduce a Quality Assurance (QA) programme.

Product *competition:* Due to the imposed EU regulations, there are few substitutes to LEDs at the moment. Out of the traditional lighting technologies, both halogens and incandescent lights are being phased out. This is one of the reasons why the LED market is very attractive. Currently, LED lighting offers a better performance and better price than OLEDs. OLED lighting could gain market success if it clearly defines its unique selling points and carves out initial market niches. Intensive R&D in relation to possible applications for OLEDs is still ongoing.

Considerations for action: Regularly familiarise yourself with new developments on the LED and OLED markets and new applications for electronic lighting. If you have the know-how, consider investing in R&D or co-managing research projects with European peers.

• Company *competition*: The largest share of the electronic lighting market is concentrated in the hands of several leading companies (including Philips Lighting and OSRAM), but there are also smaller companies on the market. Major technology firms such as Sharp, Toshiba, and Samsung are entering the market to compete with both LED chip manufacturers (e.g., Cree, Lumileds) and traditional lighting players.

Considerations for action: European small and medium-sized enterprises (SMEs) present better opportunities as potential customers for DC exporters, but also larger companies may contact you as a potential supplier. Actively contact SMEs in Italy and participate in trade shows to enable larger market players to find out about your product offering. SMEs can be sourced through local company directories and specialised associations, as well as trade show exhibitor lists.

- The bargaining power of buyers is relatively high for the following reasons:
 Customers are buying LEDs/OLEDs in large volumes;
 - LEDs/OLEDs have a low degree of differentiation;
 - Switching to an alternative product is relatively simple and is not related to high costs.

Considerations for action: Diversify the distribution channel; join forces with other companies from DCs in order to diminish the risk of losing volume orders. Enter the supply chain by delivering better-priced components (e.g. LED semiconductors) to producers of high-tech solutions. Distribute your revenues evenly among your customers in different markets.

• There is a high level of competition among suppliers that impacts the product price level. High volume orders have a negative impact on bargaining power, since the buyer can cut volumes at any time.

Considerations for action: In order to increase the competitive advantage of your product offering as compared to the leading LED chip manufacturers such as Cree, continuously work on product quality improvement and look for European proof of quality.

For more information on the market competitiveness, please refer to <u>CBI Market</u> <u>Competitiveness for Electronics and Electrical Engineering</u> and <u>CBI Buyers' Black</u> <u>Box</u>.

Main Sources

- Eurostat, URL:
- <u>http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home</u>Eurostat Prodcom, URL:
- http://epp.eurostat.ec.europa.eu/portal/page/portal/prodcom/introduction
- European online magazine for LED lighting, URL: <u>http://ledsmagazine.com/</u>
- European Lighting Association, URL: <u>http://www.lightingeurope.org/</u>
- LEDs Magazine, URL: http://www.ledsmagazine.com

Leading Trade Fairs in Italy

- Euroluce, International Lighting Expo, URL: http://www.cosmit.it/en/euroluce
- Illuminotronica, Lighting Equipment and Technology trade fair, URL: <u>http://illuminotronica.it/en/</u>
- Expo Elettronica, trade fair for electronics and related products, URL: <u>http://expoelettronica.blunautilus.it/index.php/main/eventi</u>
- Affidabilitá & Tecnologie, Innovative Technologies, Solutions, Instrumentation and Services for Competitive Manufacturers, URL: http://www.affidabilita.eu/aet2014/default.aspx?site=ENG

More information

CBI market information: Promising EU export markets.

EU Expanding Exports Helpdesk - <u>http://exporthelp.europa.eu</u> - go to 'trade statistics'.

Eurostat - <u>http://epp.eurostat.ec.europa.eu/newxtweb</u> - statistical database of the EU. Several queries are possible. For trade, choose 'EU27 Trade Since 1995 By CN8'. Use the guide 'Understanding Eurostat: Quick guide to easy comext' (http://epp.eurostat.ec.europa.eu/newxtweb/downloadobject.do?keepsessionkey=true&fil enameOut=User guide EASY Comext EN 2 0 1.pdf&mimeType=application/pdf&object ID=2567&objectType=LOB&disposition=attachment) for instructions. International Trade Statistics - <u>http://www.trademap.org</u> - you have to register

This survey was compiled for CBI by Global Intelligence Alliance in collaboration with CBI sector expert Günther Fandrich

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