

Results of LightingEurope Online Mystery Shopper Exercise

Executive summary

LightingEurope has carried out a new Mystery Shopper Exercise through 2024. This year's results reveal alarmingly high rates of non-compliance among lighting products sold on online marketplaces in the EU. **Of the 275 products surveyed, 100% of those inspected online were found to be non-compliant.**

Using a risk-based approach, 36 of the 275 products were also physically inspected for their packaging information requirements; 81%, i.e. 29 of the 36 products, were again found to be non-compliant. In addition, 20 of the 29 products, including children's night lights and LED strips, were selected and tested against the relevant safety standards in an accredited laboratory and **all were found to be non-compliant.**

These findings raise serious concerns for consumer safety, EU industry competitiveness and the effective enforcement of EU legislation, confirming a worrying trend already identified by LightingEurope in its previous assessments in 2021 and 2023. The presence of unsafe, non-compliant products continues to undermine law-abiding manufacturers and jeopardises consumer confidence. We therefore need a harmonized EU approach to the issue of non-compliance online.

To address non-compliance online, LightingEurope recommends:

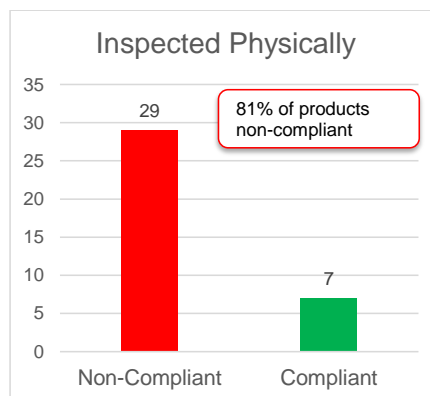
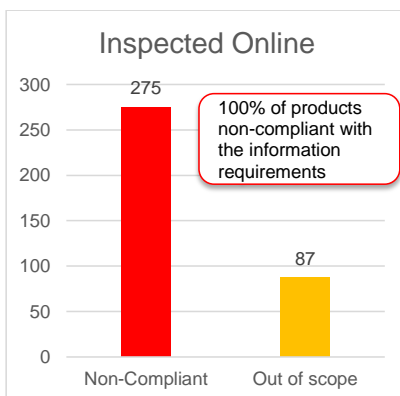
- **Liability for all product requirements:** our Mystery Shopper Exercise showed that products are non-compliant and/or unsafe. When there is no EU-based representative, online marketplaces should be held liable. Just as with products sold in physical stores, there must be someone legally liable for every product sold online.
- **Stricter Enforcement:** Implement more rigorous checks and penalties for non-compliant products, including online.
- **Enhanced Obligations for online marketplaces:** Online marketplaces should have clear obligations to accurately verify the information provided by traders selling on their platform and to identify fraudulent traders.

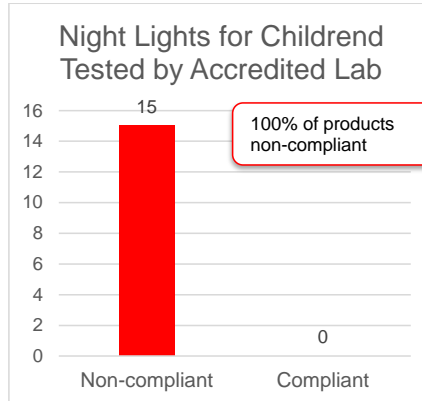
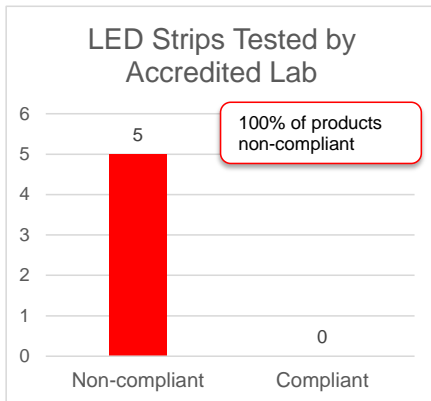
Key findings

LightingEurope's 2024 mystery shopper exercise reveals alarming rates of non-compliance among lighting products sold online in the European market, particularly concerning LED strips and luminaires for children. **The study's findings highlight significant safety and regulatory concerns sold in online product marketplace.**

LightingEurope carried out a mystery shopper exercise in 2024. The purpose of this exercise was to establish the rate of non-compliant lighting products sold online via marketplaces that make products available to European customers, including products for children. This year, in addition to inspecting mandatory product information to be provided online and on the product packaging, LightingEurope also picked products for safety testing carried out by an accredited laboratory (third party independent assessment). For completeness and transparency, the full methodology is detailed in the Annex of this paper and the exercise used a risk-based approach. The exercise has been carried out over 4 EU countries and 5 online marketplaces, focusing on two different categories of products: LED strips and luminaires for children.

A total of 362 products were surveyed online (G4 lamps, night lights and LED strips). If we consider that out of 362 products checked online, 87 were out of scope, 275 products inspected online resulted non-compliant with the relevant information requirements, meaning that **non-compliance online was at 100%**. Despite clear search key input, 65 of the products surveyed were found not to match the search criteria (thus falling outside the scope of the study) and thus were not further analysed for compliance. **While 81% of products physically inspected were found non-compliant with the mandatory information requirements. All 15 products tested, both night lights for children and LED strips, failed to comply with the relevant standards for safety** (precise standard references are listed in the Annex). The graphs below show those main results:





Non-Compliance Issues

1. Mandatory Information Requirements: **Many products failed to provide required information both online and on packaging** (i.e., brand, product identifier, WEEE registration).
2. Safety Standards: A significant number of products **did not meet current safety standards**.

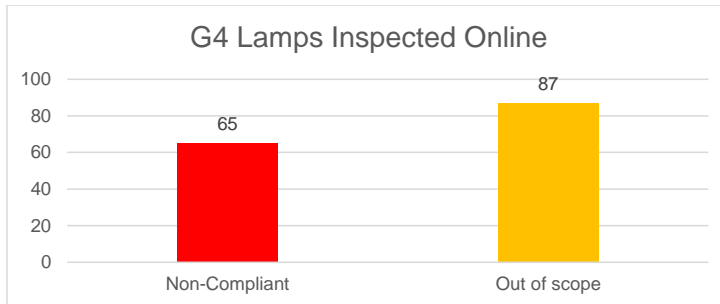
Implications

1. Customer Safety: The **high rate of non-compliance**, especially for children's night lights, **poses serious safety risks**.
2. Market Integrity: The prevalence of **non-compliant products creates an unfair advantage** over law-abiding manufacturers and sellers.
3. Regulatory Gaps: The findings suggest **inadequate enforcement of EU regulations** in online marketplaces.
4. Children's Product Concerns: The inclusion of luminaires for children in the study highlights the **critical nature of compliance for products aimed at vulnerable customers**.
5. LED Strip Risks: The focus on LED strips indicates potential **widespread issues in this popular lighting category**.

Detailed findings for G4 lamps

One of the target products for this year's edition of the LightingEurope Online Mystery Shopper Exercise were G4 lamps sold for use "on mains", which means that they are sold to be placed on mains voltage (220V). **Our mystery shoppers categorised the product as non-compliant if it mentioned in the product page that it could be placed on mains.** The standard of reference for G4 LED lamps is the EN 62838:2016 which foresees operation on a rated voltage equal to or less than 50 V on alternate current or equal to or less than 120 V on direct current. The interchangeability requirement does not allow G4 lamps to be used for mains voltage lamps. **Per standard, G4 LED lamps cannot be placed on mains voltage (220V).**

Those products were not bought for physical inspection and testing as their sale “on mains” makes them non-compliant by default.

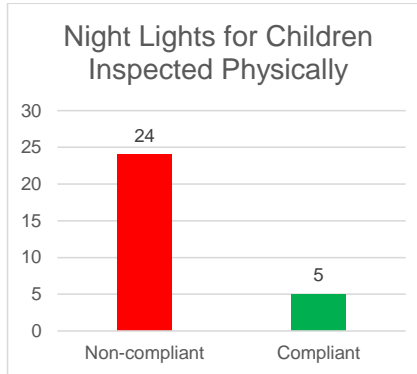
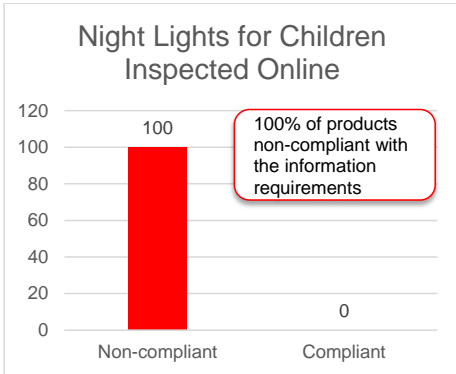


Examples of non-compliance found throughout the exercise

- Across the 5 checked online platforms, out of the first 152 products proposed by the search algorithm based on the search keyword, 87 were found upon inspection not to match the search criteria, and the remaining 65 were non-compliant, as described above, meaning that non-compliance online was at 100%.

Detailed findings of inspection for night lights for children

Customer protection is a pillar of the internal market and is enshrined in the European Treaties. It becomes even more relevant when it comes to vulnerable customers, like children. In our quest to raise awareness of non-compliance online, **this year night lights for children were selected as a product category to assess, and the results were shocking. All 100 night lights inspected** (20 from each of the 5 selected online platforms) **failed the online inspection**. 24 out of 29 physically inspected night lights failed to comply with the information requirements. It is also relevant to note that **23 non-compliant products were sponsored/recommended by the online marketplaces** (in 2 different online marketplaces). Additionally, numerous products were found not compliant with WEEE requirements and registration into national schemes.



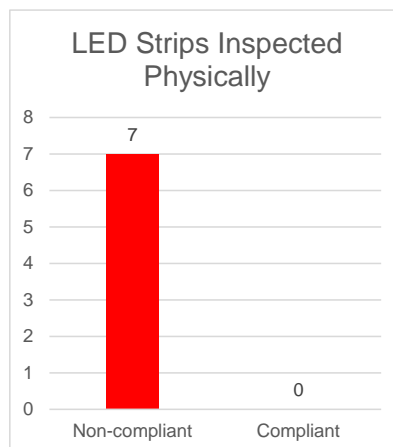
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Examples of non-compliance found throughout the exercise

- In 45% of cases, the suppliers were not registered in the national WEEE register.
- 62% of physically inspected products lacked the mandatory LVD requirements in information requirements in the relevant national language.

Detailed findings of inspection for LED Strips

An increasingly popular product category is the LED strip. Their adaptability and flexibility make LED strips a sought after item. For the purposes of the exercise, we classified the LED strips as luminaires, meaning that we checked compliance with LVD, WEEE, repairability information and energy class of the light source inside. **All 110 online checked LED strips failed to comply with the information requirements. All 7 physically inspected LED strips also failed to comply with the information requirements.** It should also be noted the high number of WEEE non-compliant products.



Detailed findings for testing of night lights children and LED Strips

As mentioned, this year LightingEurope wanted to take a step further in our Mystery Shopper Exercise. According to our members, compliance costs 25% of their revenue. Compliance efforts are done to ensure that the products can be placed on the European Market, but to also ensure that the products are safe for customers. Testing their products and making sure that their products comply with the relevant safety standards is part of the compliance process our members follow to be able to legally and safely place and make available products on the Internal Market.

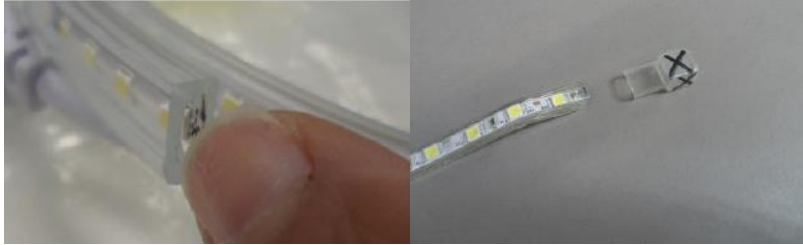
LightingEurope commissioned testing of two product categories: LED Strips and Night lights for children. The tests were carried out in an accredited laboratory, which is also ENEC certified¹.

The results of the testing should warrant decisive action for the safety of citizens and of our children. **All the night lights tested failed to comply with the relevant standards.** All the nightlights except one failed due to weak construction, which **resulted in easy to breakage and open access to the mains and direct current, and subsequent risk of electric shock.** The pictures below are taken from the test reports we received from the accredited laboratory.



Similarly, **all LED strips failed to comply with the relevant standards** The pictures below are taken from the test reports we received from the accredited laboratory.

¹ [ENEC](#) is the high quality European Mark for electrical products that demonstrates compliance with European standards (EN).



These levels of non-compliance of safety issues, make us question the possible non-compliance with other relevant legislation, such as RoHS. **If products are not electrically safe, we can expect that they will be chemically unsafe too.**

Online marketplace non-compliance with WEEE requirements

While the main focus of the paper was to check compliance with LVD and ecodesign requirements, our mystery shoppers also checked, when possible, for WEEE compliance with respect to the national register available in the country. The results are below and are in line with the findings already presented by EucoLight in their 2022 study on WEEE compliance through online-marketplaces.

Night Lights		
Countries checked	WEEE Non-Compliant	WEEE Compliant
Country 1	25	5
Country 2	12	27
Country 3	8	22
Total	45	54

LED Strips		
Countries checked	WEEE Non-Compliant	WEEE Compliant
Country 1	55	3
Country 4	30	0
Total	85	3

For the remaining products the check was not carried out and as a result they are not considered.

Conclusion: Call for ambitious EU legislation of online marketplaces to ensure customers' safety, compliance and level playing field

Online sales have been increasing at a rapid rate. A recent [fitness check on EU consumer law on digital fairness](#) carried out by the European Commission highlights that **B2C e-commerce market revenues grew by 85% between 2017 and 2023 from EUR 187.7 billion to EUR 347.3 billion**. Whilst online sales provide customers with quick and easy access to products, LightingEurope is concerned by the significant number of non-compliant and dangerous (lighting) products sold on online marketplaces.

The availability of non-compliant products not only puts customer's safety at risk, but also distorts the level playing field between the law-abiding companies that invest in compliance – up to 25% of annual turnover for some of LightingEurope members - **and the free-riders** that benefit from not complying with the EU legislation. The investment of companies illustrates how much resource, financial and manpower are allocated to place a compliant product on the market.

It is also relevant to stress that, **one of the major legal loopholes** is linked to the fact that **online marketplaces are not considered economic operators for products sold on their platforms**, unless they themselves place products on the EU market, thus acting as a supplier or importer. Additionally, it is worth noting that these platforms benefit financially from the sale of these non-compliant products.

Unfair Competitive Advantage

Non-compliance affects both customers and manufacturers. The safety aspect was already mentioned, but the market also suffers from unfair competition by non-compliant products:

- **Cost Disparity:** Companies that invest in compliance incur significant costs that non-compliant competitors avoid, including:
 - Research and development to meet safety standards
 - Quality control processes
 - Certification and testing fees
 - Ongoing compliance monitoring
 - Monitoring regulatory changes
 - Adapting packaging and product marking and labelling; preparing and maintaining the required documentation
 - Maintaining legislation-prescribed product databases
 - Legislation-prescribed fees and reporting
- **Price Undercutting:** Non-compliant products can be sold at lower prices, attracting cost-conscious customers and potentially driving compliant companies out of the market.

- **Reduced Profit Margins:** Compliant companies may be forced to lower their prices to compete, reducing their profit margins and potentially their ability to invest in further innovation and safety improvements.

By eliminating non-compliant products from the European Market and implementing the recommendations highlighted below, **policy makers can help create a more level playing field. This would not only protect compliant companies' investments but also encourage a market environment that values safety, quality, and innovation. Ultimately, this approach would benefit customers** by ensuring access to safe, high-quality products while fostering fair competition and innovation in the lighting industry.

Urgent recommendations

The results of this year's Mystery Shopper Exercise warrant special attention and concern, not only because we proved that unsafe and non-compliant products are being marketed on online marketplaces, but also because these products are intended for use by European children. Based on this year's Online Mystery Shopper findings described above, LightingEurope would like to urge the European Commission to consider implementing the recommendations listed below.

- **Liability for all product requirements:** our Mystery Shopper Exercise showed that products are non-compliant and/or unsafe. When there is no EU-based representative, online marketplaces should be held liable. Just as with products sold in physical stores, there must be someone legally liable for every product sold online.
- **Stricter Enforcement:** Implement more rigorous checks and penalties for non-compliant products, including online.
- **Enhanced Obligations for online marketplaces:** Online marketplaces should have clear obligations to accurately verify the information provided by traders selling on their platform and to identify fraudulent traders.

This year's LightingEurope findings underscore the urgent need for action to protect customers from potentially hazardous lighting products sold online. The high physical non-compliance rate for the tested products is a serious concern that demands immediate attention from regulators, manufacturers, and online marketplaces alike. The results show that we need a harmonised EU approach to the issue of non-compliance online. The EU needs a coordinated strategy to address non-compliance in online sales; what is illegal offline should be illegal online, and we need to allocate liability where it matters.

Contact

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LightingEurope is the voice of the lighting industry, based in Brussels and representing 32 companies and national associations. Together these members account for over 1,000 European companies, a majority of which are small or medium-sized. They represent a total European workforce of over 100,000 people and an annual turnover exceeding 20 billion euro. LightingEurope is committed to promoting efficient lighting that benefits human comfort, safety and wellbeing, and the environment. LightingEurope advocates a positive business and regulatory environment to foster fair competition and growth for the European lighting industry. More information is available at www.lightingeurope.org.

Annex I

Methodology

To ensure transparency of the Mystery Shopper Exercise it is important to highlight that the exercise was based on a risk-based approach. This means that the products acquired and subsequently tested were the ones that resulted the most non-compliant. To also ensure fairness and comparability of results throughout the exercise, no filtering option was used to alter the search algorithms of the online marketplaces. A set of key words to input in the search bar was agreed and full trust was given to the marketplaces' algorithms. The exercise was carried out in 4 EU countries and 5 online marketplaces.

The process in which the mystery shopper exercise was carried out across the participating countries was:

- Enter the agreed term in the search function – the same terms were used on all platforms inspected
- Selection of samples: Take screen-shots of the first 40 products to appear in the search results (selection done by the platform's algorithm)
- Online inspection: mystery shoppers checked the webpage for information on each individual product for the first 30 products
- Purchase the first 10 products that fail the online inspection. This was not the case for LED Light Strips, as due to budget constraints, less samples were bought.
- Check compliance of products received against a set list of EU requirements
- Physical inspection: during this phase the mystery shoppers check if the relevant mandatory information is displayed.
- 3 product types (exact keyword used):
 - 'LED Strip IP65 with 220V'
 - 'Night lights for kids' (for these, local language was used i.e., 'veilleuse enfant sur prise', 'nachtlampje kinderen stopcontact', 'lampka nocna dla dzieci do kontaktu')
 - '9W G4 LED on mains 220V'
- For the G4 lamps, 87 products were falling out of the scope, as they were not 9W G4 LED on mains 220V. Some of them were E14 lamps, 2W, 3W or 4W G4 lamps. Potential cases of non-compliance such as missing energy labels and lack of the technical fiche were identified also between these 87 products.
- For all intents and purposes, "online marketplaces" are defined as laid out in Article 4(1)(f) of Regulation EU 524/2013 on online dispute resolution for customer disputes.

The type of information requirements that were inspected depended on the product and was also divided into information that is inspected online or physically once the product was purchased, ordered, and delivered.

Below are some examples:

- Product brand
- Product Identifier
- Energy class of the light source in the manual (EU 2019/2015)

- Energy label
- Wattage (LVD/Ecodesign)
- CE Mark
- WEEE Marking
- WEEE information requirements (e.g., crossed out wheely bin logo)
- Repairability information on the packaging (EU 2019/2020)

Non-compliance vis-à-vis relevant Regulations and standards

The samples for testing were selected on a risk-based approach: after the purchase and physical inspection, the samples that demonstrated the highest level of non-compliance were picked and tested.

The testing was carried out via an independent certified lab. The products were tested according to selected standards that are the ones applicable to test the safety of products as per the applicable regulation, more specifically the regulation that allows manufacturers to demonstrate conformity and affix the CE marking to products, which is the Low Voltage Directive 2014/35/EU. The harmonised standards used for testing were:

LED Strips: EN IEC 60598-2-1:2021 used in conjunction with EN IEC 60598-1:2021 + A11:2022

Night Light for kids: EN 60598-2-12:2-13 in conjunction with EN 60598-1:2021+A11:2022

The main regulations that non-compliant lighting products fail to meet include:

1. Low Voltage Directive (EU) 2014/35
 - Safety requirements to ensure conformity of products with the relevant associate standards and to affix CE marking when making available products on the European Market.
 - Non-compliant products fail to endure conformity with the relevant standards, as the round of testing proved.
2. Ecodesign Directive (EU) 2009/125
 - Sets energy efficiency standards for lighting products.
 - Non-compliant products often fail to meet minimum energy efficiency requirements.
 - Ecodesign Lighting Regulation (EU) 2019/2020
 - Sets higher performance thresholds for light sources.
 - Non-compliant products fail to meet these new efficiency standards.
 - Packaging Information Requirements: mandatory product information on packaging.
3. Energy Labelling Regulation (EU) 2017/1369
 - Requires proper energy efficiency labeling on products and packaging and imposes registration on the EPREL Database.
 - Many non-compliant products lack proper energy labels or use incorrect labels.
 - Packaging Information Requirements: mandatory product information on packaging.
 - Ecodesign Energy Labelling Lighting Regulation (EU) 2019/2015

- Sets light sources specific energy label to supplement the regulation.
 - Non-compliant products fail to display the correct energy label.
4. CE Marking:
 - Mandatory for products sold in the European Economic Area.
 - Some non-compliant products lack the required CE mark.
 5. WEEE (Waste Electrical and Electronic Equipment) Directive (EU) 2012/19:
 - Requires manufacturers to contribute to recycling costs.
 - Many non-compliant suppliers are not registered with national WEEE schemes.
 6. Product Safety Requirements:
 - General safety standards for electrical products.
 - Some non-compliant products pose safety risks like electric shock or fire hazards.
 7. Technical Documentation Requirements:
 - Mandates proper technical files and conformity documentation.
 - Many non-compliant products lack complete or accurate technical documentation.

Non-compliant products often lack the required information or have incorrect details. These regulations aim to ensure energy efficiency, safety, and environmental sustainability of lighting products in the EU market. Non-compliance with these regulations not only poses risks to customers but also creates an unfair competitive advantage over law-abiding manufacturers and sellers.