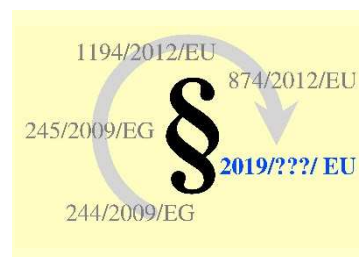


Texte zu den geplanten neuen EU-Regelungen zur umweltgerechten Produktgestaltung und zur Energieverbrauchs-kennzeichnung in der Beleuchtung – Zusammenstellung * des Umweltbundesamtes (UBA), Deutschland



Entwürfe der EU-Kommission vom 3. Juli 2018
Stellungnahme des Herstellerverbandes LE **
vom August 2018
 – Hauptanliegen –

Hinweis: Bitte beachten Sie, daß der angehängte Text nur in Englisch verfaßt ist.

EN: Information on the coming EU Lighting Regulations – Ecodesign and Energy Labelling
 – Compilation * of the Federal Environment Agency (UBA), Germany

The EU Commission's drafts of 3 July 2018

Comments by the Industry Association LE **
as of August 2018
 – Main concerns –

FR: Informations sur les futures réglementations de l'UE concernant l'éclairage –
 l'écoconception et l'étiquetage énergétique – Compilation * de l'Agence Fédérale de
 l'Environnement (UBA), Allemagne

Les projets de la Commission Européenne du 3 juillet 2018

Commentaires de l'association de producteurs LE ** d'août 2018
 – Préoccupations principales –

Indication : Veuillez noter que le présent texte n'est disponible qu'en anglais.

* <https://www.eup-network.de/de/eup-netzwerk-deutschland/offenes-forum-eu-regelungen-beleuchtung/dokumente/texte/>

** LE = Lighting Europe; <http://www.lightingeurope.org/>

Liste der von Lighting Europe (LE) im August 2018 versandten Dokumente und Kennzeichnung des vorliegenden Textes

- Hauptanliegen (10. August 2018)
- Produktgestaltung (29. August 2018)
- Produktinformation (29. August 2018)

EN: List of the documents, sent out by Lighting Europe (LE) in August 2018 and identification of the text at hand

- Main concerns (10 August 2018)
- Product design (29 August 2018)
- Product information (29 August 2018)

FR: Liste des documents qui Lighting Europe (LE) a envoyé en août 2018 et marquage de le présent document

- Préoccupations principales (10 août 2018)
- Conception des produits (29 août 2018)
- Informations relatives au produit (29 août 2018)

Es folgt ein unveränderter Originaltext.

EN: The following is an unmodified original text.

FR: Ce qui suit est un texte original.

Main messages

How to strengthen eco-design
and energy labelling
measures for lighting

10 August 2018

Comments to DG ENER's Working Documents for the Inter-Service Consultation

Summary | Ecodesign

Definition of containing product

- Sealed-for-life products have to be clearly defined as light sources

Circular Economy requirements – Removability

- Severe removability requirements need detailed Impact Assessment

Timeline for the phase-out of products

- 2021 is too early, further time is needed for a realistic approach

Lumen maintenance factor

- Maintain 500 h early failure test OR include UN Model failure test (1,000 h)

Tolerances

- Some tolerances have to be increased from 5 % to 10 %

Other issues of major concern

- The introduction of a long list of unnecessary parameters, some yet not fully measurable (like flicker and stroboscopic effects) or contradicting such as chromaticity requirements
- The lack of exemptions for some special purpose lamps (e.g.: white LED source for studio, or work-of-art)
- The 'pre-regulation' of items in view of the 2024 review
- In the reference control setting, test conditions can not be defined by manufacturers

Summary | Energy Labelling

Scope exclusion

Regulation shall not apply to light sources marketed as part of a luminaire and not intended to be removed by the end-user

Obligation for suppliers (rescaling)

Delete requirements, or find more reasonable solutions to giving information for provision by retailers on the pre-existing and the existing energy classes

Product information

Further limit to information that is only relevant to the energy efficiency label

EPREL

Postpone applicability of and access to EPREL until 1 May 2021

Other issues of major concern

- Too strict and too many irrelevant information requirements, as they are redundant or not available
- The use of a black and white arrow is not allowed
- Proposed changes of requirements in promotional material

Main messages

Eco-design measures for
lighting (Single Lighting
Regulation)

SLR | Definition of containing products

Art. 2(1)(2nd c):

For the purpose of this Regulation, the following products are not considered to be light sources: products containing light source(s) from which these light source(s) can be removed for verification;

Art 2(4):

containing product' means a product containing one or more light sources and/or separate control gears. Examples of containing products are luminaires that can be taken apart to allow separate verification of the contained light source(s), household appliances containing light source(s), furniture (shelves, mirrors, display cabinets) containing light source(s), and other products that cannot be practically verified as light source themselves, so that the contained light source(s) have to be considered;

LightingEurope:

If a containing product is sealed-for-life and has to be considered as a light source and has to be measured as such, this should be clearly stated: one should not have to read between the lines to understand the meaning of legislation.

Proposal:

Add in Art. 2(4): 'containing product' means a product containing one or more light sources and/or separate control gears **that can be removed for verification. (...) If a containing product cannot be taken apart for verification of the light source and separate control gear, then the entire product is to be considered a light source.**

SLR | Removability (1/2)

Article 4.1:

*Manufacturers and importers of containing products shall ensure that light sources and separate control gears can be removed without being permanently damaged for verification purposes by market surveillance authorities and **without permanent damage to the containing product**. For containing products, instructions should be available on request on how light sources and separate control gears can be removed for verification without these being permanently damaged **and without permanent damage to the containing product**.*

LightingEurope:

By adding these words, the whole earlier carefully constructed structure of the LightingEurope proposal of Article 4 is destroyed. It makes the provisions in Article 4(2) and 4(3) superfluous. Most importantly, the requirements become more severe than in the previously communicated and discussed drafts, with no prior Impact Assessment. This phrase should be deleted across the entire eco-design and energy labelling texts, where it is used in connection to removability for verification.

Proposal:

Manufacturers and importers of containing products shall ensure that light sources and separate control gears can be removed without being permanently damaged for verification purposes by market surveillance authorities ~~and without permanent damage to the containing product~~. For containing products, instructions should be available on request on how light sources and separate control gears can be removed for verification without these being permanently damaged ~~and without permanent damage to the containing product~~.

SLR | Removability (2/2)

Art. 4(3):

Manufacturers and importers of containing products shall provide information about the replaceability or non-replaceability of light sources and control gears by end-users or qualified persons without permanent damage to the containing product. Such information shall be available on free-access websites. For products sold directly to end-users, this information shall be on the packaging, at least in the form of a pictogram.

LightingEurope:

This requirement is indeed only relevant to replaceability. We propose to better clarify the text in order to avoid confusion.

Proposal:

Manufacturers and importers of containing products shall provide information about the replaceability **without permanent damage to the containing product** or non-replaceability of light sources and control gears by end-users or qualified persons ~~without permanent damage to the containing product~~. (...)

SLR | Realistic Timeline (1/2)

Annex II, 1(a) and Table 1:

From 1 September 2021 ...

| | η [lm/W] | L [W] |
|--|------------------|----------|
| <i>FL T8 other than LFL 2-, 4- and 5-foot (incl. FL T8 U-shaped)</i> | 89.7 | 4.5 |

LightingEurope:

LightingEurope and market users request a realistic timeline for the phase-out of these products – 2021 is too early. There are not enough alternatives available. A premature ban will create unnecessary costs and waste.

Proposal:

Maintain current efficiency requirements and review need for regulatory action at a later time.

| | η [lm/W] | L [W] |
|--|------------------|----------|
| FL T8 other than LFL 2-, 4- and 5-foot (incl. FL T8 U-shaped) | 89.7 | 4.5 |

SLR | Realistic Timeline (2/2)

Annex II, 1(a) and Table 1:

From 1 September 2021 ...

Missing lines for halogen G9, G4, and GY6.35

LightingEurope:

LightingEurope and market users request a realistic timeline for the phase-out of these products – 2021 is too early. Halogen G9, G4, GY6.35 currently do not have (nor will have in the near future) LED retrofit solution, therefore they should be kept on the market.

Proposal:

| | η [lm/W] | L [W] |
|---|------------------|----------|
| Halogen lamps with G9, G4, and GY6.35 lamp caps | 19.5 | 7.7 |

SLR | Lumen maintenance factor

Annex II, Table 4:

The lumen maintenance factor $XLMF\%$ after endurance testing according to Annex V shall be at least $XLMF,MIN\%$ calculated as follows:

*$XLMF,MIN\% = 100 * e^{((3000 * \ln(0,7))/L70)}$ where $L70$ is the declared $L70B50$ lifetime (in hours)*

Upper limit for $XLMF,MIN\%$: the calculated required lumen maintenance of the sample shall not exceed 96.0% (i.e. $XLMF, = 96.0\%$)

LightingEurope:

Combined with a required testing cycle of 3,600 hours or 21 weeks (!), this very complex formula goes against the starting point as described in Preamble Paragraph 7: aiming for “better regulations” to facilitate better verification, to reduce the number of parameters from compliance testing, and to decrease the time for test procedures.

Question: what does “provisional endurance” test mean? (Annex V, Para. 2)

Proposal:

Maintain 500 h early failure test OR include UN Model failure test (1,000 h)

SLR | Tolerances

Annex IV, Table 6:

Tolerances for various products have been reduced

LightingEurope:

The tolerance for the useful luminous flux, efficacy, CCT should be increased to 10 % regardless of lamp sample size:

- the luminous flux measurement of lamps does have an intrinsic uncertainty of 10 % coming from testing equipment, test procedure and lamp-to-lamp variations
- decreasing the samples number from 20 to 10 could lead to an additional uncertainty of test values, so tolerances should not be further decreased
- survival factor – since we are talking about statistical data, the wording ‘the determined value shall not be less than the declared value’ cannot be interpreted in real life. Keep the 10 % as it is in 245/2009
- The current version does not refer to any harmonised standards concerning the calibration of the verification labs

Proposal:

Tolerances for Useful Luminous Flux, Efficacy, CCT to be increased from 5 % to 10 %

Main messages

Energy Labelling Regulation
for lighting

ELR | Light sources

Art. 1:

(...) The requirements also apply to light sources placed on the market in a containing product. (...)

LightingEurope:

This implies unfair conditions to the objectives of the ELR, because

- implication on the EPREL database (uploading of data, maintenance of data and time to market)
- it implies the obligation to test *all the modules* to assign the energy label
- no useful information given to the end-user, especially for professional use

Proposal:

Replace by: “This Regulation also shall not apply to ~~light sources placed on the market in a containing product~~ light sources marketed as part of a luminaire and not intended to be removed by the end-user, except when they are offered for sale, hire or hire purchase or displayed separately to the end-user, for example as spare parts.” (as in Art. 1(2)(d) of Reg. 874/2012)

ELR | Obligations for suppliers

Art. 3(1)(i):

on request of dealers in accordance with Article 4(e), printed labels to rescale products are provided as a sticker, of the same size as the one which is already on the package;

Art. 4(e):

existing labels on light sources at points of sale are replaced by the rescaled labels that shall be attached to the packages in such a way as to cover the existing label by nine months from the application of this Regulation.

LightingEurope:

The requirement for the products already on the market is unfeasible (e.g.: stickering on shelf; opening of boxes of containing products)

Proposal:

Delete requirements, or find more reasonable solutions to give information at the retailer on the pre-existing and the existing energy classes

EPREL | Matching timelines

Preamble, para. 9:

(...) suppliers of luminaires should be exempted from the obligations related to the product database (...)

Art. 9(1):

This Regulation shall enter into force on the 20th day following its publication in the Official Journal of the European Union.

Art. 9(2)(b):

For the purpose of the obligations laid down in Article 3(1)(b) this Regulation shall apply from 1 May 2021

LightingEurope:

There is a gap between 1 January 2019 (applicability of EPREL) and the entry-into-force of the ELR, creating confusion and uncertainty for luminaire producers. How are luminaires going to be exempted from EPREL starting from 1 January 2019?

Proposal:

- Postpone applicability of and access to EPREL until entry-into-force of energy labelling regulations for product groups
- Modify Art. 9(2)(b) as follows: For the purpose of the laid-down obligations in Article 3(1)(b) **and in Article 4 of Regulation 2017/1369**, this Regulation shall apply from 1 May 2021

ELR | Product information

Annex V:

Too many details are being asked

LightingEurope:

The information required is far too much and far too complicated. LightingEurope does not see any reason nor any added value in this. It is only generating a huge administrative burden for the manufacturers and importers without helping the market surveillance authorities. It goes against the aim of having simple and easily enforceable regulations in place.

LightingEurope considers the Product Information Data (Annex V) not to be relevant for custom (built to spec) B2B light sources, as they are not available on the general market. This would have impact on administrative burden (with 0 added value), and also disclose commercially sensitive information of custom designs. LightingEurope therefore proposes to limit the information for custom-built B2B light sources to Annex V.1 (technical information for verification purposes).

Proposal:

Further limit to information that is relevant to the energy efficiency label

Other issues

Ecodesign and Energy Labelling for
lighting products

SLR | Evaluation

Article 9:

The Commission shall assess this Regulation and shall present the results of this assessment, including, if appropriate, a draft revision proposal, to the Consultation Forum no later than five years after its entry into force. This assessment shall review the requirements in the light of the technological progress and shall address in particular:

- setting more stringent energy efficiency requirements for all light source types, in particular for non-LED light source types, and for separate control gears;*
- setting requirements on lighting control parts;*
- setting more stringent requirements on flicker and stroboscopic effects;*
- setting requirements on dimming, including the interaction with flicker;*
- setting more stringent requirements on (networked) standby power;*
- lowering or abolishing the power bonus for colour-tuneable light sources and removing the exemption for high colour purity;*
- substituting the CRI colour rendering metric by a more adequate metric;*
- verifying the adequacy of lumen as a stand-alone metric for the quantity of visible light;*
- setting additional resource efficiency requirements for products in accordance with the principles of the circular economy.*

LightingEurope:

This assessment is foreseen for 2024, so in 6 years from now. It is against any logic or proper governance to “pre- regulate” items so long in advance, thereby limiting any future consumer choice, freedom of enterprise, blocking future innovation etc. This is not to the benefit of the EU nor of its citizens.

Proposal:

This assessment shall review the requirements in the light of the technological progress ~~and shall address in particular...~~ [and delete everything that follows in this article]

SLR | Definition reference control setting

Annex I – Definition (26):

(...) For light sources that allow the manufacturer of a containing product to make implementation choices that influence light source characteristics (e.g. definition of the operating current(s); thermal design), and that cannot be controlled by the end-user, the reference control settings need not be defined. In that case the test conditions defined in applicable standards apply;

LightingEurope:

The reference to “*test conditions defined in applicable standards*” is unclear (we are not aware to which standards this refers, or those standards are not ready yet) – and should be replaced by something which is recognised in the lighting industry. Another problem is that, whatever test condition is chosen, it is not generally representative of how it is used in the containing product.

Proposal:

For light sources that allow the manufacturer of a containing product to make implementation choices that influence light source characteristics (e.g. definition of the operating current(s); thermal design), and that cannot be controlled by the end-user, the reference control settings need not be defined. In that case the **nominal** test conditions ~~defined in applicable standards~~ **apply as defined by the light source manufacturer;**

SLR | High Luminance Light Source

Annex II, Table 2:

Missing definition for 'high luminance light source'

LightingEurope:

Earlier proposals for high luminance light sources were not taken into account in the draft. High-luminance light sources are a key element for directional lighting applications (e.g. spotlights, roadway lighting and stadium lighting). High-luminance light sources enable narrower beam angles with smaller optics, resulting in more light delivered on target, energy savings, volume reduction (miniaturisation) and cost savings. High-luminance LED light sources have intrinsic efficacy penalties at source level, but these are offset at application level by the higher light use efficiency enabled by the small source size, yielding a net energy benefit. A bonus is therefore required to maintain high-luminance light sources on the market.

Proposal:

Add definition for high luminance light source: “high-luminance light source” means a light source comprising one or more discrete light emitting elements, each having a luminous emittance greater than $100/R \text{ lm/mm}^2$, based on the projected light-emitting surface area A from definition (55), where $R=(\text{CRI}+80)/160$ ”

Add bonus: High-luminance light source C+0.5

See slide 27 – 28 on studio and theatre lighting for further application specific concerns

SLR | Flicker and stroboscopic effect

Annex II, Table 4:

Pst LM ≤ 1.0 at full load; SVM ≤ 1.6 at full load

LightingEurope:

Instead of a few parameters that can be well enforced, a long list of unnecessary parameters is introduced of which some are not yet fully defined nor measurable, like flicker and stroboscopic effects

This conflicts with paras. 7 and 17 of the Preamble: to reduce the number of parameters for compliance testing and to allow measurements through reliable, accurate, and reproducible measurements methods

Proposal:

- Delete flicker and stroboscopic effect requirements from both the eco-design and energy labelling proposals
- Furthermore, **some outdoor and some indoor lighting applications do not need such requirements**

SLR | Special purpose lamps

Annex III

Several lighting products are still missing



LightingEurope:

There are no LED substitutes available for various lighting applications in industry

Proposal:

- Halogen light sources with blade contact, metal lug, cable or litz wire connection or non-standard customised cap designed and marketed for industrial or professional electro-heating equipment (e.g. stretch blow-moulding process in PET-Industry, 3D-printing, gluing, inks, paint and coating hardening)
- Halogen light sources with R7s cap and a correlated colour temperature between 2,300 - 2,500 K for industrial or professional electro-heating equipment (e.g. stretch blow-moulding process in PET-Industry, 3D-printing, gluing, inks, paint and coating hardening)
- Halogen light sources with R7s cap with total length > **180** mm for professional customers
- Halogen light sources with R7s and Rx7s caps with efficacy ≥ 24 lm/W and rated lifetime B50 ≤ 300 h e.g. for studio, theatre and film/movie applications
- Fluorescent light sources with 2G11 cap and white light with CCT ≥ 5500 K and power < 60 W and life is ≤ 2000 h, CRI: > 85 and fluorescent light sources with 2G11 cap and white light with CCT ≤ 3200 K and power < 60 W and life is ≤ 2000 h, CRI: > 90, as both are designed and marketed specifically for scene lighting in film studios, TV studios, and photographic studios, or for stage lighting in theatres, discos, concerts, and other entertainment events
- In general, add heating, sewing machine, Hoover, swimming pool lamps, and others as defined by LightingEurope's Annex Z proposal (9 May 2018)

SLR | Exemptions (1/3)

Annex III, Point 3(I):

Halogen light sources with a beam angle of less than 10 degrees and intended for spotlighting applications requiring a very narrow light beam

LightingEurope:

This should include all technologies: in line with previous drafts and in order to avoid backsliding from LED to halogen. This is amongst others relevant for architectural lighting.

Proposal:

~~Halogen~~ Light sources with a beam angle of less than 10 degrees and intended for spotlighting applications requiring a very narrow light beam

SLR | Exemptions (2/3)

Annex III, Points 3(m):

(m) halogen light sources with cap-type G9.5, GX9.5, GY9.5, GZ9.5, G9.5HPL, G16d, GX16, GX16d, GY16, G22, G38, GX38, GX38Q, P28s, P40s, PGJX50, QXL, designed and marketed specifically for (...)

LightingEurope:

This should include all technologies

Proposal:

(m) **halogen** light sources with cap-type G9.5, GX9.5, GY9.5, GZ9.5, G9.5HPL, G16d, GX16, GX16d, GY16, G22, G38, GX38, GX38Q, P28s, P40s, PGJX50, QXL, **R7s**, and **RX7s** designed and marketed specifically for (...)

SLR | Exemptions (3/3)

Annex III:

Misses exemption for work-of-art

LightingEurope:

Work-of-art light sources and luminaires are made in low quantities (e.g. 1 or 3 pieces only), which makes the added costs of testing for verification of compliance with eco-design and energy labelling requirements too expensive

Proposal:

Add in point 3(t) (*new*) in Annex III: work-of-art (as in Directive 2001/84/EC)

SLR | Studio and theatre lighting (1/2)

Annex III:

Any white LED source for studio and theatre lighting is missing, regardless whether they are high luminance light sources or whether the operating conditions are different from general lighting usage. Two specific cases are considered representing entertainment applications, and based on them two exemptions criteria are proposed.

LightingEurope:

High luminance light engine (profiles, beam, spot fixtures); fixtures that adopt light sources based on SSL chip clusters:

- in which a clearance among emitters is needed to use optics on top of them to collect light and get much more than 100 lm/mm²
- with power from 20 W till values above 1 kW

Proposal:

Exempt light sources composed by clusters of LED in a matrix distribution with clearance among them of at least 3 times the LED/chips largest dimension (diagonal for a square or rectangular chip), and whose light output per area is above 264 lm/mm²

The light output is calculated as the light source lumen output

The area is calculated as the sum of the light emitting area of each emitter

SLR | Studio and theatre lighting (2/2)

Annex III:

Any white LED source for studio and theatre lighting is missing, regardless whether they are high luminance light sources or whether the operating conditions are different from general lighting usage. Two specific cases are considered representing entertainment applications, and based on them two exemptions criteria are proposed.

LightingEurope:

Dense clustered light sources (Fresnel, Pebble, PC soft spot fixtures): light sources based on high dense LED/chip clusters (minimum clearance among LEDs/chips) to replace discharge lamps or halogen lamps from 0.5 kW till 5 kW in soft spot fixtures. This requires:

- High power light sources (>100 W)
- Compact dimensions: this high luminance corresponds to > 30 lm/mm² lambertian emitters (FWHM 120°)

Proposal:

Exempt dense clustered SSL light sources in a matrix with spacing among emitter less than the emitter largest dimension with

- at least 30 lm/mm²: 1) light output is calculated as the light source lumen output, 2) the area is calculated as either the outer perimeter of the polygon or circle including all emitting LED/chips or 3) in the case of COB, the declared light emitting area
- power package above 100 W

SLR | Verification (chromaticity)

Annex IV, Table 6:

Variation of chromaticity coordinates within a six-step MacAdam ellipse or less EL, Annexes Annex V 1.1 (u): the chromaticity coordinates; EL, Annexes IX Table 6: the determined x and y values shall not deviate from the declared value by more than 0,01 resp 0,005 units

LightingEurope:

Next to the remarks made above related to Better Regulation and the Preamble paras. 7 and 17 – 0.01 or 0.005 units are not even measurable – these two requirements related to colour consistency and colour point contradict each other:

1. These are two different and conflicting measurements for the same topic: colour consistency
2. Shape does not match: MacAdam ellipses have the shape of an ellipse, chromaticity coordinates result in a square shape
3. Does not fit with the requirements in Table 4: Table 6 should support the measurement of the performance criteria from Table 4 (one can only compare a MacAdam ellipse)

The remarks made above related to Better Regulation and the Preamble paras. 7 and 17 also apply here – the aim of the current legislation is to simplify the present regulatory framework and to set out requirements that are easy to understand, apply and to enforce

Proposal 1:

Remove x,y requirements

Proposal 2:

- 3 samples: the determined number of steps shall not exceed the declared number of MA ellipses steps. Centre of ellipses shall be the centre declared by the supplier with a tolerance of 0.01 units
- 10 samples: the determined number of steps shall not exceed the declared number of MA ellipses steps. Centre of ellipses shall be the centre declared by the supplier with a tolerance of 0.005 units

ELR | Product information (1/3)

Annex V, Point 1(1):

(m) the date (month, year) of first production of the light source for the EU market;

(n) if the light source is still in production for sale on the EU-market (yes/no);

LightingEurope:

Not only is it redundant, this information is not available and we will not be able to have it.

Proposal:

Delete (m) and (n)

ELR | Product Information (2/3)

Annex V, Point 2(2):

(...) the following text shall be visibly displayed, clear legible, on the outside of the containing product's packaging:

“This containing (...)” The text can be replaced by a pictogram (...)

The text shall be presented in any advertisement, formal price (...)

LightingEurope:

The information will not be available to end-users for a lot of containing products / luminaires (e.g. furniture, products displayed without packaging, professional luminaires, large products). The coloured arrow would be a further burden for containing product manufacturers, because marking on packaging is often black and white only.

Proposal:

- Delete the requirement of information on the product packaging
- At least allow the use of black and white arrow

ELR | Product Information (3/3)

Annex VII

Information to be provided in visual advertisements, in promotional material, in distance selling except selling on the internet

In promotional material, (...), the energy class and the range of efficiency classes available on the label shall be shown with an arrow matching the letter of the energy class, as indicated in Fig.1.

LightingEurope:

Regulation 874/2012 requires to provide “*the information contained in the label.*” A change of this requirement would imply a lot of changes in the ‘structure’ of the documents already available (catalogues, price lists, advertisements...)

Proposal:

In promotional material, (...), **the information about** the energy class and the range of efficiency classes available on the label shall be provided ~~shown with an arrow matching the letter of the energy class, as indicated in Fig.1.~~



LIGHTINGEUROPE

THE VOICE OF THE LIGHTING INDUSTRY