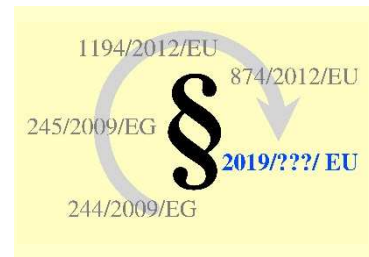


Texte zu den geplanten neuen EU-Regelungen zur umweltgerechten Produktgestaltung und zur Energieverbrauchs-kennzeichnung in der Beleuchtung – Zusammenstellung * des Umweltbundesamtes (UBA), Deutschland



Entwürfe der EU-Kommission vom 13. November 2017

Arbeitshilfe:

Begriffsbestimmungen: Zusammenstellung und Vergleich zwischen den Entwürfen zu Produktgestaltung und -information

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 13 November 2017

Working aid: Definitions – Compilation and comparison between the drafts for product design and product information

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 13 novembre 2017

Aide de travail : Compilation et comparaison entre les définitions pour conception des produits et celles pour l'information relative aux produits

Indication : Veuillez noter que dans le présent texte la traduction en français se limite aux titres et à quelques indications.

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

Übersicht darüber, welche Themen der folgende Text behandelt und welche nicht

Erklärungen:

abc behandeltes Thema

abc nichtbehandeltes Thema

Produktgestaltung

Produktinformation

Begriffsbestimmungen (Art. 2 und Anh. II)

Aufhebung bestehender Rechtstexte	Aufhebung bestehender Rechtstexte
Gegenstand und Geltungsbereich (Art. 1 und Anh. I)	Gegenstand und Geltungsbereich (Art. 1 und Anh. I)
Produktgestaltung (Art. 3 und 4 sowie Anh. III)	Pflichten der Lieferanten (Art. 3)
Regelungsumgehung (Art. 5)	Pflichten der Händler (Art. 4)
Konformitätsbewertung (Art. 6)	Etikett (Anh. III)
Nachprüfungsverfahren zur Marktaufsicht (Art. 7 und Anh. IV)	Energieeffizienzklassen (Anh. IV)
Funktionstüchtigkeit nach einer beschleunigten Lebensdauerprüfung (Anh. V)	Weitere Produktinformationen (Anh. V)
Unverbindliche Richtwerte (Art. 8)	Fernabsatz, außer Internetz (Anh. VI)
Aufhebung (Art. 9)	Fernabsatz über Internetz (Anh. VII)
Überprüfung (Art. 10)	Meßverfahren (Art. 5)
Inkrafttreten (Art. 11)	Nachprüfungsverfahren zur Marktaufsicht (Art. 6 und Anh. VIII)
	Überprüfung (Art. 7)
	Aufhebung (Art. 8)
	Inkrafttreten und Geltung (Art. 9)
	Sonstiges

EN: Overview of the issues which are addressed in the following document and which are not

Explanations:

abc issue addressed

abc issue not addressed

Product design

Product information

Definitions (Art. 2 and Ann. II)

Repealing of existing legal texts	Repealing of existing legal texts
Subject matter and scope (Art. 1 and Ann. I)	Subject matter and scope (Art. 1 and Ann. I)
Product Design (Art. 3 plus 4 and Ann. III)	Obligations of suppliers (Art. 3)
Circumvention (Art. 5)	Obligations of dealers (Art. 4)
Conformity assessment (Art. 6)	Label (Ann. III)
Verification procedure for market surveillance purposes (Art. 7 and Ann. IV)	Energy efficiency classes (Ann. IV)
Functionality after accelerated endurance testing (Ann. V)	Other product information (Ann. V)
Indicative benchmarks (Art. 8)	Distance selling, except on the Internet (Ann. VI)
Repeal (Art. 9)	Distance selling through the Internet (Ann. VII)
Revision (Art. 10)	Measurement methods (Art. 5)
Entry into force (Art. 11)	Verification procedure for market surveillance purposes (Art. 6 and Ann. VIII)
	Revision (Art. 7)
	Repeal (Art. 8)
	Entry into force and application (Art. 9)
	Others

FR : Aperçu de quels thèmes sont traitées dans le texte ou ne sont pas

Déclarations:

abc thème traité

abc thème non traité

Conception des produits

Information relative aux produits

Définitions (Art. 2 et ann. 2)

Abrogation de textes juridiques existants	Abrogation de textes juridiques existants
Objet et champ d'application (Art. premier et premier ann.)	Objet et champ d'application (Art. premier et premier ann.)
Conception des produits (Art. 3 et 4 et ann. III)	Obligations des fournisseurs (Art. 3)
Contournement (Art. 5)	Obligations des revendeurs (Art. 4)
Évaluation de la conformité (Art. 6)	Étiquette (Ann. III)
Procédure de vérification aux fins de la surveillance du marché (Art. 7 et ann. IV)	Classes d'efficacité énergétique (Ann. IV)
Fonctionnalité après un test d'endurance accéléré (Ann. V)	Autres information relative au produit (Ann. V)
Critères de référence indicatifs (Art. 8)	Vente à distance, sauf sur l'internet (Ann. VI)
Abrogation (Art. 9)	Vente à distance sur l'internet (Ann. VII)
Révision (Art. 10)	Méthodes de mesure (Art. 5)
Entrée en vigueur (Art. 11)	Procédure de vérification aux fins de la surveillance du marché (Art. 6 et ann. VIII)
	Révision (Art. 7)
	Abrogation (Art. 8)
	Entrée en vigueur et application (Art. 9)
	Autres

Es folgt ein unveränderter Originaltext.

EN: The following is an unmodified original text.

FR: Ce qui suit est un texte original.

Offenes Forum EU-Regelungen zur Beleuchtung:
**Begriffsbestimmungen in den Entwürfen der EU-Kommission
vom 13. November 2017**
— Arbeitshilfe von Christoph Mordziol, UBA —

EN:

Open Forum EU Policies on Lighting:
**Definitions in the draft regulations of the EU Commission
of 13 November 2017**
— Working aid by Christoph Mordziol, UBA —

FR:

Forum ouvert sur le politique européenne de l'éclairage :
**Définitions dans le projets de la Commission européenne
du 13 novembre 2017**
— Aide de travail par Christoph Mordziol, UBA —

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Vorbemerkungen ◇ Preliminary remarks ◇ Remarques préliminaires

Am 13. November 2017 hat die EU-Kommission Entwürfe für Regelungen bei Beleuchtungsprodukten vorgelegt: eine Regelung mit Anforderungen an die Produktgestaltung sowie eine mit Anforderungen an die Produktinformation ^[1]. Am 7. Dezember 2017 wurde über diese Entwürfe in einem Konsultationsforum diskutiert ^[2].

Mittlerweile – August 2018 – sind diese Entwürfe durch neue Entwürfe der EU-Kommission überholt ^[3].

In der vorliegenden Arbeitshilfe sind die Begriffsbestimmungen der Entwürfe vom November 2017 zusammengetragen und aufbereitet – zusammengetragen deshalb, weil sie in den beiden Entwürfen zu Produktgestaltung und –information auf insgesamt vier Texte verteilt vorliegen ^[1]:

- Produktgestaltung
 - Haupttext Artikel 2 und
 - Anhang II sowie
- Produktinformation
 - Haupttext Artikel 2 und
 - Anhang II.

On 13 November 2017, the EU Commission presented draft regulations for lighting products: one regulation with requirements on product design and another with requirements on product information ^[1]. On 7 December 2017, these drafts were discussed in a Consultation Forum ^[2].

Now, in August 2018, these draft are outdated after the Commission has presented new draft regulations ^[3].

The present working aid collated and prepares the definitions of the November 2017 drafts – “collates” because within the two draft regulations —product design and product information— the definitions are allocated to a total of four texts ^[1]:

- Product design
 - Main text, article 2 and
 - Annex II and
- Product information
 - Main text, article 2 and
 - Annex II.

¹ Zu den Bezugsquellen dieser Texte siehe Abschnitt A.1.1 (ab Seite 24). ◇ EN: The sources of supply of these texts can be found in section A.1.1 (page 24ff). ◇ FR: Les sources de référence pour cette textes se trouve dans chapitre A.1.1 (à partir de la page 24).

² Siehe hierzu die Quellenangabe im Abschnitt A.1.2 (ab Seite 25). ◇ EN: See the reference in section A.1.2 (page 25ff). ◇ FR: Voir la référence dans chapitre A.1.2 (à partir de la page 25).

³ Zu den Bezugsquellen dieser Texte siehe Abschnitt A.1.3 (ab Seite 26). ◇ EN: The sources of supply of these texts can be found in section A.1.3 (page 26ff). ◇ FR: Les sources de référence pour cette textes se trouve dans chapitre A.1.3 (à partir de la page 26).

DE	EN FR (première traduction)
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Im Abschnitt 1 des vorliegenden Textes sind die Begriffe nach Themen geordnet und die jeweiligen Begriffsbestimmungen wiedergegeben. Soweit die Entwürfe zu Produktgestaltung und –information beim Wortlaut voneinander abweichen, ist dies kenntlich gemacht.

In Abschnitt 2, ab Seite 20, sind die Begriffe alphabetisch geordnet und zu jedem ist angegeben, wo in den Entwurfstexten der EU-Kommission sowie im vorliegenden Text die zugehörige Begriffsbestimmung zu finden ist.

In section 1 of the present text, the terms are ordered by topic and the corresponding definitions are reproduced. As far as the draft regulations for product design and product information differ in wording, this is indicated.

In section 2, page 20ff, the terms are listed alphabetically and for each one it is indicated where the corresponding definitions can be found i) in the draft regulations of the EU Commission and ii) in the present text.

1 Begriffsbestimmungen ◇ Definitions ◇ Définitions

Die Begriffsbestimmungen in den Entwürfen zu Produktgestaltung und denen zu Produktinformation sind nicht in allen Fällen vollkommen identisch. Ein Grund dafür ist, daß der Regelungsentwurf zur Produktgestaltung auf Lichtquellen und Betriebsgeräte zielt, der Regelungsentwurf zur Produktinformation aber nur auf Lichtquellen.

Textteile, die nur in dem Regelungsentwurf zur Produktgestaltung enthalten sind, sind wie im folgenden Beispiel dargestellt, in schwarzer Schrift gesetzt und eingeklammert:

The definitions in the draft regulations on product design and product information are not completely identical in all cases. One reason for this is that the draft regulation on product design is aimed at light sources and control gear, but the draft regulation on product information is only for light sources. Parts of the text which can only be found in the draft regulation product design are in black writing and bracketed, as shown in the following example:

... connected to the light sources [and/or to the separate control gear]

DE	EN FR (première traduction)
<p>Ein anderer Teil der Abweichungen zwischen Produktgestaltung und -information ergibt sich daraus, daß Bezug auf jeweils andere Anhänge oder Textstellen genommen wird oder dadurch, daß unterschiedliche Bezeichnungen verwendet werden.</p> <p>Textteile, die nur in dem Regelungsentwurf zur Produkt<u>information</u> enthalten sind, sind wie im folgenden Beispiel dargestellt, in roter Schrift gesetzt und eingeklammert.</p> <p>Beispiele:</p>	<p>Another reason for differences in the wording for product design and product information arises from the fact that reference is made to different annexes or passages or to the use of different terms.</p> <p>Parts of the text which can only be found in the draft regulation product <u>information</u> are in red writing and bracketed, as shown in the following example:</p>
	<div data-bbox="199 824 1295 963" style="border: 1px solid black; padding: 5px;"> <p>... to [point 2 of Annex IV to Directive 2009/125/EC./Article 3(3) of Regulation 2017/1369].</p> <p>The light source [manufacturer/supplier] shall define the reference ...</p> <p>... that is intended to be carried around (by people) or to ...</p> </div>
<p>Unterschiede, die belanglos sind, wie zum Beispiel ...</p>	<p>Differences which are negligible (example) ...</p>
	<div data-bbox="199 1160 1292 1249" style="border: 1px solid black; padding: 5px;"> <p>'projected light-emitting surface area (A)' is the surface area in mm² (square millimetres) ...</p> <p>'projected light-emitting surface area'(A), in mm², is the surface area ...</p> </div>
<p>... sind im Text nicht weiter kenntlich gemacht.</p>	<p>... are not indicated in the text.</p>
<p>Es gibt auch Begriffsbestimmungen, die nur in einem der beiden Regelungsentwürfe zu finden sind. Diese sind hier im Abschnitt 1 nicht näher gekennzeichnet. Welche Begriffsbestimmung wo zu finden ist, zeigt die Tafel im Abschnitt 2.</p>	<p>There are definitions, too, which can be found in only one of the draft regulations. Here, in section 1, this is not specified. It is the table in section 2, which shows for each definition in which draft regulation it is included.</p>

1.1 Produkte und Elemente ◇ Products and elements ◇ Produits et éléments

'light source'

means an electrically operated product intended to emit and/or be possibly tuned to emit light with [all of] the following optical characteristics:

- (a) chromaticity coordinates x and y in the range
 $0,270 < x < 0,530$ and
 $-2,3172 x^2 + 2,3653 x - 0,2199 < y < -2,3172 x^2 + 2,3653 x - 0,1595$;
- (b) a luminous flux $< 1000 \text{ lm per mm}^2$ of projected light-emitting surface area as [defined/specified] in Annex II;
- (c) a luminous flux between 60 and 82 000 lumen;
- (d) a colour rendering index $\text{CRI} > 0 \text{ Ra}$;

using incandescence, fluorescence, high-intensity discharge, light emitting diodes or their combinations as lighting technology.

High-pressure sodium light [sources/emitters] (HPS, as defined in Annex II) that do not fulfil condition (1)(a) are anyway considered light sources in the sense of this Regulation.

If a containing product is itself a light source, the light source to be considered for the purpose of this Regulation is the smallest physical unit that can be readily removed from the containing product without permanent mechanical damage and that meets the definition for light source.

'control gear'

means one or more devices, possibly integrated in a light source, intended to prepare the mains electricity supply for the electric format required by one or more specific light sources within boundary conditions set by electric safety and electromagnetic compatibility. It may include transforming the supply and starting voltage, limiting operational and preheating current, preventing cold starting, correcting the power factor and/or reducing radio interference.

[The term does not include power supplies within the scope of Commission Regulation (EC) No 278/2009 ⁽⁴⁾. The term does also not include lighting control parts and non-lighting parts (as defined in Annex II), although such parts may be physically integrated with a control gear or marketed together as a single product. A Power over Ethernet (PoE) switch is not a control gear in the sense of this Regulation.]

⁴ OJ L93, 7.4.2009, p.3.

'separate control gear',

means a control gear that is not physically integrated with a light source and is placed on the market as a separate product or as a part of a containing product.

'containing product'

means a product containing one or more light sources [and/or separate control gears] in scope of this Regulation. [Manufacturers or importers/Suppliers] of containing products shall enable verification by market surveillance authorities of compliance of light source(s) [and/or control gear(s)] as set out in Annex [IV/**VI**].

'non-lighting parts'

means parts that are integrated in a light source [or in a separate control gear], or physically separate but marketed together with a light source [or separate control gear] as a single product, that are not necessary for the light source [to emit light at full-load, or for the separate control gear to supply the electric power that enables connected light source(s)] to emit light at full-load, and that are not 'lighting control parts'. Examples include, but are not limited to: speakers (audio), cameras, repeaters for communication signals to extend the range (e.g. WiFi), parts supporting grid balance (switching to own internal batteries when necessary), battery charging, visual notification of events (mail arriving, door bell ringing, alert), use of Light Fidelity (Li-Fi, a bidirectional, high-speed and fully networked wireless communication technology)

'mains' or 'mains voltage' or 'mains electricity supply' (MV)

means the electricity supply of 230 ($\pm 10\%$) Volt of alternating current at 50 Hz.

'data-connection parts'

means parts that perform one of the following functions:

- reception or transmission of wired or wireless data signals and the processing thereof (either used to control the light emission function or otherwise),
- sensing and processing of the sensed signals (either used to control the light emission function or otherwise),
- actuation by audio control (including voice control),
- a combination of these.

'lighting control parts'

means parts that are integrated in a light source [or in a separate control gear], or physically separated but marketed together with a light source [or separate control gear] as a single product, that are not strictly necessary for the light source to emit light at full-load, [or for the separate control gear to supply the electric power that enables light source(s) to emit light at full-load,] but that enable manual or automatic, direct or remote, control of luminous intensity, chromaticity, colour temperature, light spectrum and/or beam angle. Dimmers shall also be considered as lighting control parts.

The term also includes data-connection parts, but the term does not include [products/devices] within the scope of Commission Regulation (EC) No 1275/2008⁵.

'network'

means a communication infrastructure with a topology of links, an architecture, including the physical components, organisational principles, communication procedures and formats (protocols).

'Power-over-Ethernet switch' or 'PoE switch'

means equipment for power-supply and data-handling that is installed between the mains and office equipment and/or light sources for the purpose of data transfer and power supply.

'Non-clear envelope'

[for a HID light source means a/means a HID light source with a] non-transparent outer envelope or outer tube in which the light producing arc tube is not visible.

'Second envelope'

means a second outer envelope on a HID light source that is not required for the production of light, such as an external sleeve for preventing mercury and glass release into the environment in case of lamp breakage. In determining the presence of a second envelope, the HID arc tubes shall not count as an envelope.

⁵ OJ L 339, 18.12.2008, p. 45 and later amendments.

'anti-glare shield'

means a mechanical or optical reflective or non-reflective impervious baffle designed to block direct visible radiation emitted from the light emitter in a directional light source, in order to avoid temporary partial blindness (disability glare) if viewed directly by an observer. It does not include surface coating of the light emitter in the directional light source.

1.2 Sockel ◇ Sockets ◇ Culots

'G4', 'GY6.35' and 'G9'

means an electrical interface for a light source consisting of two small pins at distances of 4, 6.35 and 9 mm respectively, as defined in standards.

1.3 Lichtquellen, unterschieden nach der Art der Stromversorgung ◇ Light sources, differentiated following to the type of power supply ◇ Sources lumineuses différenciées selon la type d'alimentation électrique

'mains light source (MLS)'

means a light source that can be operated directly on the mains electricity supply. [Examples include incandescent light sources designed to operate directly on the mains, light sources with physically integrated control gear.]

Light sources that can operate both directly on the mains, and indirectly on the mains using a separate control gear, shall be considered to be mains light sources. [E.g. tubular LED light sources intended to replace linear FL, by-passing or keeping the existing FL control gear.]

'non-mains light source (NMLS)',

means a light source that is not a mains light source. These light sources require a separate control gear to operate on the mains but they are placed on the market without such control gear.

[Examples include extra-low-voltage light sources, light sources for operation on power-over-ethernet, and LED-, OLED-, HID- and FL- light sources placed on the market without control gear.]

'portable battery-operated [product]'

means a containing product that is not [permanently] fixed to [its surroundings/**the ambient**], that is intended to be carried around **(by people)** or to be frequently moved, whose position can be changed by a simple manual pick-and-place operation, and that operates only on direct current (DC) with a voltage of less than 24 V supplied from a source contained in the same product, without being connected directly or indirectly to the mains electricity supply.

'connected light source' (CLS)

means a light source including data-connection parts that are physically or functionally inseparable from the light emitting parts to maintain the 'reference control settings.' To maintain the reference control settings the data-connection parts cannot be disconnected, switched-off or their power consumption minimised.

The light source can have physically integrated data-connection parts in a single inseparable housing, or the light source can be combined with physically separate data-connection parts placed on the market as a single product.

'extra low voltage' (ELV)

means an electricity supply of less than 120 V direct current, as further defined in relevant standards.

1.4 **Lichtquellen, unterschieden nach der Art der Lichterzeugung** ◇ **Light sources, differentiated according to type of light generation** ◇ **Sources lumineuses différenciées selon la manière de production de la lumière**

'incandescence'

means a phenomenon where light is produced from heat, in light sources typically produced through a threadlike conductor ('filament') which is heated by the passage of an electric current.

'halogen light source' (HL)

means an incandescent light source with a threadlike conductor made from tungsten surrounded by gas containing halogens or halogen compounds.

'gas discharge'

means a phenomenon where light is produced, directly or indirectly, by an electric discharge through a gas, plasma, metal vapour or mixture of gases and vapours.

'high intensity discharge' (HID)

means an electric gas discharge in which the light- producing arc is stabilised by wall temperature and the arc has a bulb wall loading in excess of 3 Watts per square centimetre. For the purpose of this Regulation, HID light sources are limited to metal halide, high pressure sodium and mercury vapour types as defined in Annex II.

'high-pressure sodium light source' (HPS)

means a high intensity discharge light source in which the light is produced mainly by radiation from sodium vapour operating at a partial pressure of the order of 10 kilopascals. HPS light sources may have one ('single-ended') or two ('double-ended') connectors to their electricity supply.

'high-pressure mercury light source'

means a high intensity discharge light source in which the major portion of light is produced, directly or indirectly, by radiation from predominantly vaporized mercury operating at a partial pressure in excess of 100 kilopascals.

'metal halide light source' (MH)

means a high intensity discharge light source in which the light is produced by radiation from a mixture of metallic vapour, metal halides and the products of the dissociation of metal halides. MH light sources may have one ('single-ended') or two ('double-ended') connectors to their electricity supply. The material for the arc tube of MH light sources can be quartz (QMH) or ceramic (CMH).

'fluorescence' or 'fluorescent light source' (FL)

means the phenomenon or a light source using an electric gas discharge of the low-pressure mercury type in which most of the light is emitted by one or more layers of phosphors excited by the ultraviolet radiation from the discharge. Fluorescent light sources may have one ('single-capped') or two ('double-capped') connections ('caps') to their electricity supply. For the purposes of this Regulation, magnetic induction light sources are also considered as fluorescent light sources.

'magnetic induction light source'

means a light source using fluorescent technology, where energy is transferred to the gas discharge by means of an induced high-frequency magnetic field, instead of using electrodes placed

inside the gas discharge. The magnetic inductor can be external or internal to the shape of the discharge tube.

'inorganic light emitting diode' (LED)

means a technology in which light is produced from a solid state device embodying a p-n junction of inorganic material. The junction emits optical radiation when excited by an electric current.

'organic light emitting diode' (OLED)

means a technology in which light is produced from a solid state device embodying a p-n junction of organic material. The junction emits optical radiation when excited by an electric current.

1.5 Lichtquellen, unterschieden nach der Art der Strahlungsabgabe ◇

Light sources, differentiated according to type of light emissions ◇

Sources lumineuses différenciées selon la type d'émission de la lumière

'directional light source' (DLS)

means a light source having at least 80% of total luminous flux within a solid angle of π sr (corresponding to a cone with angle of 120°).

'non-directional light source' (NDLS)

means a light source that is not a directional light source.

'colour-tuneable light source' (CTLS)

means a connected light source (CLS) using LED- or OLED-technology, that can be set to emit light with a large variation of colours outside the range defined in article 2 (1)(a), but can also be set to emit white light inside the range defined in article 2 (1)(a) for which the light source is in scope of this Regulation.

The term does not include tuneable-white light sources that can only be set to emit light, with different colour temperatures, within the range defined in article 2 (1)(a).

The term also does not include dim-to-warm light sources, that shift their white light output to lower colour temperature when dimmed, simulating the behaviour of incandescent light sources.

'HL R7s'

is a mains-voltage, double capped, linear halogen light source with a cap-diameter of 7 mm.

'LFL T5-HE'

means a high-efficiency linear fluorescent T5 light source with driving current lower than 0.2 A.

'LFL T5-HO'

means a high-output linear fluorescent T5 light source with driving current higher than or equal to 0.2 A.

'LFL T8 2-foot', 'LFL T8 4-foot' or 'LFL T8 5-foot'

means a linear T8 fluorescent light source with a length of approximately 600 mm (2 feet), 1200 mm (4 feet) or 1500 mm (5 feet) respectively, as defined in standards.

'T2', 'T5', 'T8', 'T9' and 'T12'

means a tubular light source with diameter of approximately 7, 16, 26, 29 and 38 mm respectively, as defined in harmonised standards. The tube can be straight (linear) or bent (e.g. U-shaped, circular).

'compact fluorescent light source' (CFL)

means a single-capped fluorescent light source with a bent-tube construction designed to fit in small spaces. CFLs may be primarily spiral-shaped (i.e. curly forms) or primarily shaped as connected multiple parallel tubes, with or without a second bulb-like envelope. CFLs are available with (CFLi) or without (CFLni) physically integrated control gear.

1.6 Betrieb: Betriebszustände, Signale und Steuerung ◇ Operation: operating modes, signals and control ◇ Fonctionnement : états de fonctionnement, signaux et commande

'control signal'

means an analogue or digital signal transmitted to light source [or separate control gear] wirelessly or wired either via voltage modulation in separate control cables or via a modulated signal in the supply voltage.

'remotely initiated trigger'

means a signal that comes from outside the light source [or separate control gear] via a network.

'full-load' means:

- the condition of a light source, within the declared operating conditions, in which it [emits/is emitting] the maximum (undimmed) initial luminous flux, or
- the operating conditions and loads of the control gear under efficiency measurement as specified in the relevant standards.

'standby mode'

means the condition of a light source [or of a separate control gear], where it is connected to the power supply but the light sources are intentionally not emitting light, and the light source [or control gear] is awaiting a control signal to return to a state with light emission. Lighting-control parts enabling the standby function shall be in their control mode. Non-lighting parts shall be disconnected or switched off or their power consumption shall be minimized following manufacturer's instructions.

'control mode'

means the condition of lighting control parts where they are connected to the light source and [or to the separate control gear and] performing their functions in such a way that a lighting control signal can be internally generated or an external control signal can be received, by wire or wireless, and processed to lead to a change in the light emission of the light source [or to a corresponding desired change in the power supply by the separate control gear].

'networked standby mode'

means the condition of a connected light source (CLS) where it is connected to the power supply but the light source is intentionally not emitting light, and is awaiting a remotely initiated trigger to return to a state with light emission. Lighting-control parts shall be in their control mode and data-connection parts shall be in a state enabling the networked standby function. Non-lighting parts shall be disconnected or switched off or their power consumption shall be minimized following manufacturer's instructions.

'no-load mode'

means the condition of a separate control gear in which its input is connected to the mains power source and its output is disconnected from light sources, and, if applicable, from data-connection parts, lighting control parts and non-lighting parts. If these parts cannot be disconnected, they shall be switched off or their power consumption shall be minimized following the manufacturer's instructions.

'reference control settings'

means a control setting or a combination of control settings that is used to verify compliance of a light source with this Regulation. These settings are relevant for light sources that allow the end-user to control, manually or automatically, directly or remotely, the luminous intensity, colour, colour temperature, spectrum, and/or beam angle of the emitted light.

The reference control settings shall be those predefined by the (manufacturer/supplier) as factory default values, and encountered by the user at first installation (out-of-the-box values). If the installation procedure foresees an automatic software update during first installation, or if the user has the option to perform such an update, the resulting change in settings (if any) shall be taken into account.

The light source (manufacturer/supplier) shall define the reference control settings such that:

- the light source is in scope of this Regulation according to Art.2(1) and none of the conditions for exemption of Annex I applies (if this is not possible, the light source is out-of-scope or exempted);
- the power consumption of lighting control parts and non-lighting parts is minimal (if these parts cannot be disconnected or switched-off);
- the full-load condition is obtained (maximum initial luminous flux given the other chosen settings);
- when the end-user opts to reset factory defaults, the reference control settings are obtained.

1.7 Strahlung und ihre Bewertung ◇ Light emission and its classification ◇ Emission lumineuse et sa classification

'light'

means electromagnetic radiation with a wavelength between 380 nm and 780 nm.

'luminous flux' or 'flux' (Φ),

expressed in lumen (lm), means the quantity derived from radiant flux (radiant power) by evaluating the electromagnetic radiation in accordance with the spectral sensitivity of the human eye. It refers to the total flux emitted by a light source in a solid angle of 4π steradians under conditions (e.g. current, voltage, temperature) specified in applicable standards. It refers to the initial flux for the undimmed light source after a short operating period, unless it is clearly specified that the flux in a dimmed condition or the flux after a given period of operation is intended.

'Luminous flux' without further specification is the total luminous flux in a 360° sphere. For light sources that can be tuned to emit different light spectra and/or different maximum light intensities, it refers to the flux in the 'reference control settings' as defined in Annex II.

'useful luminous flux' (Φ_{use}),

means the part of the luminous flux of a light source that is considered when determining its energy efficiency:

- For non-directional light sources it is the total flux emitted in a solid angle of 4π sr (corresponding to a 360° sphere).
- For directional light sources with beam angle $\geq 90^\circ$ it is the flux emitted in a solid angle of π sr (corresponding to a cone with angle of 120°).
- For directional light sources with beam angle $< 90^\circ$ it is the flux emitted in a solid angle of 0.586π sr (corresponding to a cone with angle of 90°).

'luminous intensity' (candela or cd)

means the quotient of the luminous flux leaving the source and propagated in the element of solid angle containing a given direction, by the element of solid angle.

'chromaticity'

means the property of a colour stimulus defined by its chromaticity coordinates (x and y).

'colour temperature' (T_c [K])

means the temperature of a Planckian (black body) radiator whose perceived colour most closely resembles that of a given stimulus at the same brightness and under specified viewing conditions.

'colour rendering index' (CRI),

expressed in R_a , means the effect of an illuminant on the colour appearance of objects by conscious or subconscious comparison with their colour appearance under the reference illuminant.

[For the purposes of this Regulation it refers to the mean of colour rendering indices for a set of 8 test colour samples as specified in standards (R_{a8}).]

'specific effective radiant ultraviolet power' (mW/klm)

means the effective power of the ultraviolet radiation of a light source weighted according to the spectral correction factors and related to its luminous flux.

'flicker'

means the perception of visual unsteadiness induced by a light stimulus the luminance or spectral distribution of which fluctuates with time, for a static observer in a static environment. The fluctuations can be periodic and non-periodic and may be induced by the light source itself, the power source or other influencing factors.

[The metric for flicker used in this Regulation is the 'Pst LM', where 'st' stands for short term and 'LM' for light flickermeter method, as defined in standards. A value Pst LM=1 means that the average observer has a 50% probability of detecting flicker.]

'Pst LM'

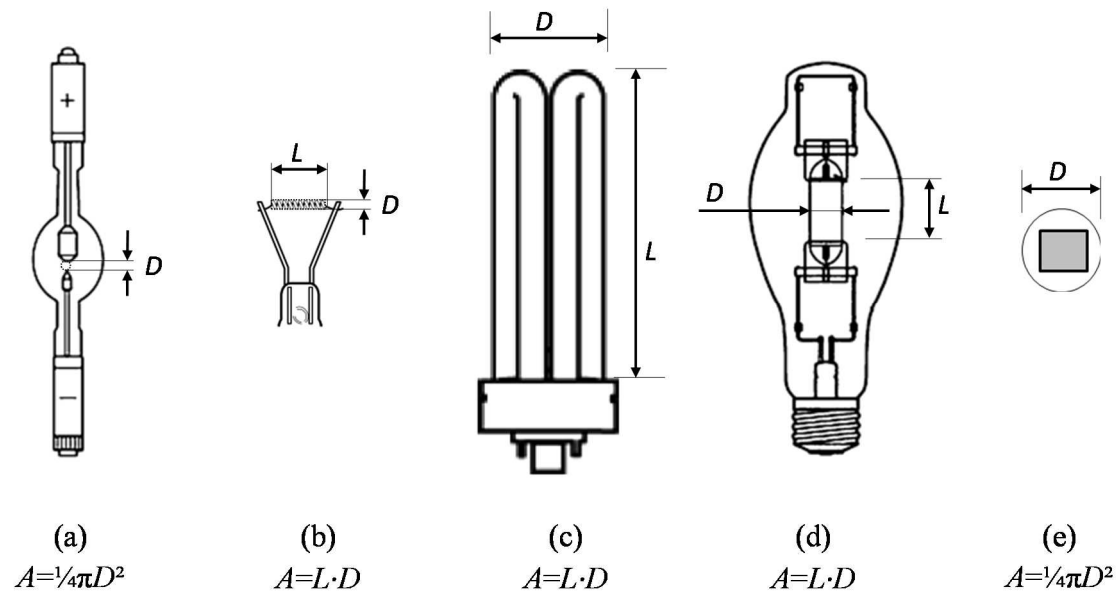
is the metric for flicker used in this Regulation where 'st' stands for short term and 'LM' for light flickermeter method, as defined in standards.

'projected light-emitting surface area (A)'

is the surface area in mm^2 (square millimetres) of the view in an orthographic projection of the light-emitting surface from the direction with the highest light intensity, where the light-emitting surface area is the surface area of the light source that emits light with the declared optical characteristics, such as the approximately spherical surface of an arc (a), cylindrical surface of a filament coil (b) or a gas discharge lamp (c, d), flat or semi-spherical envelope of a light-emitting diode (e).

For light sources with [a] non-clear envelope or with anti-glare shield, the light-emitting surface area is the entire area through which light [leaves/is leaving] the light source.

For light sources containing more than one light emitter, the smallest gross volume enveloping all emitters shall be taken as the light-emitting surface.



'beam angle'

of a directional light source means the angle between two imaginary lines in a plane through the optical beam axis, such that these lines pass through the centre of the front face of the light source and through points at which the luminous intensity is 50 % of the centre beam intensity, where the centre beam intensity is the value of luminous intensity measured on the optical beam axis.

- For light sources that have different beam angles in different planes, the largest beam angle shall be considered.
- For light sources with user-controllable beam angle, the beam angle corresponding to the 'reference control setting' shall be considered.

1.8 Stromverbrauch und –effizienz ◇ Electricity consumption and energy efficiency ◇ Consommation électrique et efficacité énergétique

'on-mode power' (P_{on}),

expressed in Watt, is the electric power consumption of a light source in full-load with all lighting control parts and non-lighting parts disconnected. If these parts cannot be disconnected they shall be switched off or their power consumption shall be minimised following manufacturer's instructions.

In case of a non-mains light source (NMLS) that requires a separate control gear to operate, P_{on} can be measured directly on the input to the light source, or P_{on} is determined using a control gear with known efficiency, whose electric power consumption is subsequently subtracted from the measured mains power input value.

'standby power' (P_{sb}),

expressed in Watts, is the electric power consumption of a light source [or of a separate control gear] in standby mode.

'networked standby power' (P_{net}),

expressed in Watts, is the electric power consumption of a connected light source in networked standby mode.

'no-load power' (P_{no}),

expressed in Watts, is the electric power consumption of a separate control gear in no-load mode.

'control gear efficiency'

is the output power divided by the input power of a separate control gear in conditions defined in measurement standards, with any lighting control parts and non-lighting parts disconnected, switched off or set to minimum power consumption according to manufacturer's instructions.

'displacement factor' ($\cos \varphi_1$)'

means the cosine of the phase angle φ_1 between the fundamental harmonic of the mains supply voltage and the fundamental harmonic of the mains current. It is used for mains light sources using LED- or OLED-technology.

The displacement factor is measured at full-load, for the reference control settings where applicable, with any lighting control parts in control mode and non-lighting parts disconnected, switched off or set to minimum power consumption according to manufacturer's instructions.

1.9 Lebensdauer ◇ Lifetime ◇ Durée de vie

'colour consistency'

means the maximum deviation of the initial (after a short period of time), spatially averaged chromaticity coordinates (x and y) of a single light source from the chromaticity centre point (cx and cy) declared by the manufacturer or the importer, expressed as the size (in steps) of the MacAdam ellipse formed around the chromaticity centre point (cx and cy).

'functionality after accelerated endurance testing'

means the functionality of a LED or OLED light source or of a separate control gear for LED or OLED light sources after accelerated endurance testing as defined in Annex V.

'lifetime'

for LED and OLED light sources means the time in hours between the start of their use and the moment when 50% of a population of light sources have either abruptly failed (no light output anymore) or their light output has gradually degraded to a value below 70% of the initial luminous flux. This is also referred to as the $M_{70}F_{50}$ lifetime.

'lumen maintenance factor' (LMF)

means the ratio of the luminous flux emitted by a light source at a given time in its life to the initial luminous flux.

'survival factor' (SF)

means the defined fraction of the total number of light sources that continue to operate at a given time under defined conditions and switching frequency.

1.10 Sonstiges ◇ Others ◇ Autres

'declared value'

for a parameter means the value given by the manufacturer or importer in the technical documentation pursuant to [point 2 of Annex IV to Directive 2009/125/EC./Article 3(3) of Regulation 2017/1369].

'equivalent model'

means a model with the same relevant technical and performance characteristics as another model placed on the market under a different commercial code.

'point of sale means'

a physical location where the product is displayed or offered for sale, hire or hire-purchase to the end-user.

'end-user'

means a natural person buying or expected to buy a product for purposes which are outside his trade, business, craft or profession.

'final owner'

means the entity owning a product during the use phase of its life cycle, or any other entity acting on its behalf.

2 Nachschlageregister ◇ Lookup register ◇ Registre de recherche

Die folgende Tafel enthält ein alphabetisch geordnetes Verzeichnis der Begriffe mit Angaben dazu, wo die zugehörigen Begriffsbestimmungen zu finden sind:

- in den Entwurfstexten der EU-Kommission und
- im vorliegenden Text.

The following table contains an alphabetical list of terms with information on where to find the corresponding definitions:

- in the draft texts of the EU Commission and
- in the present text.

Erklärungen zur folgenden Tafel:

Explanations to the following table:

PG Regelungsentwurf zur Produktgestaltung ◇ EN: Draft Regulation on product design ◇ FR: *Projet de règlement de la conception des produits*

PI Regelungsentwurf zur Produktinformation ◇ EN: Draft Regulation on product information ◇ FR: *Projet de règlement sur l'information relative aux produits*

H Haupttext ◇ EN: Main Text ◇ FR: *Texte principal*

Ah Anhang ◇ EN: Annex ◇ FR: *Annexe*

BB ↗ Zur Begriffsbestimmung siehe im vorliegenden Text den Abschnitt ... ◇ EN: For the definition, see in the text at hand section ... ◇ FR: *Pour la définition, voir la section ... dans le présent document*

→ Siehe in der Liste unter der folgenden Bezeichnung ◇ EN: See in the list under the following term. ◇ FR : Voir dans la liste sous le nom suivant.

Bezeichnungen ◇ EN: Terms ◇ FR: Termes	PG		PI		BB ↗
	H	Ah	H	Ah	
anti-glare shield		40		35	1.1
beam angle		12		12	1.7
chromaticity	7		6		1.7
colour consistency		48		40	1.9
colour rendering index	9		8		1.7
colour temperature		47		39	1.7
colour-tuneable light source		8		8	1.5

Bezeichnungen ◇ EN: Terms ◇ FR: Termes	PG		PI		BB ↑
	H	Ah	H	Ah	
compact fluorescent light source		29		27	1.5
connected light source		6		6	1.4
containing product	4		3		1.1
control gear	2		2		1.1
control gear efficiency		41		—	1.8
control mode		17		16	1.6
control signal		18		17	1.6
data-connection parts		7		7	1.1
declared value		44		37	1.10
directional light source		4		4	1.5
displacement factor		49		41	1.8
end-user		54	17		1.10
equivalent model		53		45	1.10
extra low voltage		3		—	1.4
final owner		—	18		1.10
flicker	18			36	1.7
fluorescence or fluorescent light source	14		13		1.3
flux → <i>luminous flux</i>					
full-load		13		13	1.6
functionality after accelerated endurance testing		42		—	1.9
G4, GY6.35 and G9		35		—	1.2
<i>G9 → G4, GY6.35 and G9</i>					
<i>GY6.35 → G4, GY6.35 and G9</i>					
gas discharge	12		11		1.3
halogen light source	11		10		1.3
high intensity discharge.	13		12		1.3
high-pressure mercury light source		26		24	1.3
high-pressure sodium light source		27		25	1.3
HL R7s		36		31	1.5

Bezeichnungen ◇ EN: Terms ◇ FR: Termes	PG		PI		BB ↑
	H	Ah	H	Ah	
incandescence	10		9		1.3
inorganic light emitting diode	15		14		1.3
LFL T5-HE		31		29	1.5
LFL T5-HO		32		30	1.5
LFL T8 2-foot, LFL T8 4-foot or LFL T8 5-foot		33		—	1.5
LFL T8 4-foot → <i>LFL T8 2-foot, ...</i>					
LFL T8 5-foot → <i>LFL T8 2-foot, ...</i>					
lifetime		52		44	1.9
light	5		4		1.7
light source	1		1		1.1
lighting control parts		9		9	1.1
lumen maintenance factor		50		42	1.9
luminous flux or flux	8		7		1.7
luminous intensity		46		38	1.7
magnetic induction light source		34		—	1.3
mains → <i>mains electricity supply</i>					
mains electricity supply	6		5		1.1
mains light source		1		1	1.4
mains voltage → <i>mains electricity supply</i>					
metal halide light source		28		26	1.3
network		20		19	1.1
networked standby mode		16		15	1.6
networked standby power		24		22	1.8
no-load mode		14			1.6
no-load power		22			1.8
non-clear envelope		39		34	1.5
non-directional light source		5		5	1.5
non-lighting parts		10		10	1.1
non-mains light source		2		2	1.4

Bezeichnungen ◇ EN: Terms ◇ FR: Termes	PG		PI		BB ↗
	H	Ah	H	Ah	
on-mode power		21		20	1.8
organic light emitting diode	16		15		1.3
PoE switch → <i>Power-over-Ethernet switch</i>					
point of sale		—	16		1.10
portable battery-operated product		37		32	1.4
Power-over-Ethernet switch	17			—	1.1
projected light-emitting surface area A		55		46	1.7
Pst LM		43		—	1.7
reference control settings		25		23	1.6
remotely initiated trigger		19		18	1.6
second envelope		38		33	1.1
separate control gear	3			—	1.1
specific effective radiant ultraviolet power		45		45	1.7
standby mode		15		14	1.6
standby power		23		21	1.8
survival factor		51		43	1.9
T2, T5, T8, T9 and T12		30		28	1.5
T5 → T2, ...		30		28	1.5
T8 → T2, ...		30		28	1.5
T9 → T2, ...		30		28	1.5
T12 → T2, ...		30		28	1.5
useful luminous flux		11		11	1.7

A Anhang ◇ **Annex** ◇ **Annexe**

A.1 Bezugsquellen für Dokumente, auf die im vorliegenden Text verwiesen wird ◇ **Sources of supply for documents referred to in the text at hand** ◇ **Sources de référence pour les documents auxquels il est fait référence dans le présent texte**

A.1.1 Entwürfe der EU-Kommission vom 13. November 2017 ◇ **EU Commission's drafts of 13 November 2017** ◇ **Projets de la Commission européenne du 13 novembre 2017**

Begründung ◇ **EN:** Explanatory memorandum ◇ **FR :** Mémoire explicatif

http://www.eup-network.de/fileadmin/user_upload/Lichtquellen_EK_2017_11_13_Begrueundung.pdf

Entwurf für Anforderungen an die Produktgestaltung ◇ **EN:** Draft for product design ◇ **FR :** Projet d'exigences de la conception des produits

DE: Haupttext ◇ **EN:** main text ◇ **FR :** Texte principal

http://www.eup-network.de/fileadmin/user_upload/Lichtquellen_EK_2017_11_13_UgP_Haupttext.pdf

DE: Anhang ◇ **EN:** Annex ◇ **FR :** Annexe

http://www.eup-network.de/fileadmin/user_upload/Lichtquellen_EK_2017_11_13_UgP_Anhang.pdf

Entwurf für Anforderungen an die Produktinformation ◇ **EN:** Draft for product information ◇ **FR :** Projet d'exigences en matière d'information sur le produit

DE: Haupttext ◇ **EN:** main text ◇ **FR :** Texte principal

http://www.eup-network.de/fileadmin/user_upload/Lichtquellen_EK_2017_11_13_EnVK_Haupttext.pdf

DE: Anhang ◇ **EN:** Annex ◇ **FR :** Annexe

http://www.eup-network.de/fileadmin/user_upload/Lichtquellen_EK_2017_11_13_EnVK_Anhang.pdf

A.1.2 Konsultationsforum am 7. Dezember 2017 ◇ **Consultations Forum on 7 December 2017** ◇ **Forum consultative du 7 decembre 2017**

A.1.2.1 Diskussion ◇ **Discussion** ◇ **Discussion**

DE: Protokoll

EN: Protocol

FR : Protocole

https://www.eup-network.de/fileadmin/user_upload/Lichtquellen_Konsultationsforum_12_2017_Protokoll_EK.pdf

DE: Schwerpunkte der Diskussion; Notizen von Christoph Mordziol, UBA

EN: Focuses of the discussion; notes by Christoph Mordziol, UBA

FR : Thèmes principaux de la discussion; notes de Christoph Mordziol, UBA

https://www.eup-network.de/fileadmin/user_upload/Lichtquellen_Konsultationsforum_12_2017_Notizen_UBA.pdf

A.1.2.2 Vorträge und Hintergrundinformationen ◇ **Presentations and background information** ◇ **Exposés et informations de fond**

DE: Vortrag von Herrn Leo Wierda, Van Holsteijn en Kemna

EN: Presentation by Mr. Leo Wierda, Van Holsteijn en Kemna

FR : Exposé de M. Leo Wierda, Van Holsteijn en Kemna

https://www.eup-network.de/fileadmin/user_upload/Lichtquellen_Konsultationsforum_12_2017_Vortrag_Wierda.pdf

DE: Vortrag von Frau Orsola Mautone, EU-Kommission

EN: Presentation by Mrs. Orsola Mautone, EU Commission

FR : Exposé de Mme. Orsola Mautone, Commission européenne

https://www.eup-network.de/fileadmin/user_upload/Lichtquellen_Konsultationsforum_12_2017_Vortrag_Mautone.pdf

DE: Vortrag von Frau Ourania Georgoutsakou, Lighting Europe

EN: Presentation by Mrs. Ourania Georgoutsakou, Lighting Europe

FR : Exposé de Mme. Ourania Georgoutsakou, Lighting Europe

https://www.eup-network.de/fileadmin/user_upload/Lichtquellen_Konsultationsforum_12_2017_Vortrag_Georgoutsakou.pdf

DE: Vortrag von Herrn Michael Scholand, CLASP (der Vortrag konnte aus Zeitgründen nicht mehr gehalten werden)

EN: Presentation by Mr. Michael Scholand, CLASP (due to lack of time, the presentation could not been held)

FR : Exposé de M. Michael Scholand, CLASP (faute de temps l'exposé n'a pas été donné)

https://www.eup-network.de/fileadmin/user_upload/Lichtquellen_Konsultationsforum_12_2017_Vortrag_Scholand.pdf

A.1.3 Entwürfe der EU-Kommission vom 3. Juli 2018 ◇ **EU Commission's drafts of 3 July 2018** ◇ **Projets de la Commission européenne du 3 juillet 2018**

Entwurf für Anforderungen an die Produktgestaltung ◇ **EN:** Draft for product design ◇ **FR :** Projet d'exigences de la conception des produits

DE: Haupttext ◇ **EN:** main text ◇ **FR :** Texte principal

https://www.eup-network.de/fileadmin/user_upload/Lichtquellen_EK_2018_07_03_PG_Haupttext.pdf

DE: Anhang ◇ **EN:** Annex ◇ **FR :** Annexe

https://www.eup-network.de/fileadmin/user_upload/Lichtquellen_EK_2018_07_03_PG_Anhang.pdf

Entwurf für Anforderungen an die Produktinformation ◇ **EN:** Draft for product information ◇ **FR :** Projet d'exigences en matière d'information sur le produit

DE: Haupttext ◇ **EN:** main text ◇ **FR :** Texte principal

https://www.eup-network.de/fileadmin/user_upload/Lichtquellen_EK_2018_07_03_PI_Haupttext.pdf

DE: Anhang ◇ **EN:** Annex ◇ **FR :** Annexe

https://www.eup-network.de/fileadmin/user_upload/Lichtquellen_EK_2018_07_03_PI_Anhang.pdf

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