Lambertian radiator
Completely diffuse light source, whose → luminous intensity distribution (with regard to the cosine law) is the shape of a sphere or a circle

LDC
Abbreviation for → light distribution curve

Leading edge dimming
Method of controlling the brightness, in which the power to the lamps is controlled by cutting out the leading edge of waves of alternating current

Lead-lag cicuit
Wiring of an inductive → fluorescent lamp in parallel with an over-compensated fluorescent lamp. The power factor of the overall circuit is effectively unity. Since both lamps are out-of-phase, there is less fluctuation of luminous intensity

Light control
The control of light using reflectors or lenses is used to develop luminaires with clearly defined optical qualities as instruments for effective lighting design. Different luminaire types allow lighting effects ranging from uniform lighting to the accentuation of specific areas to the projection of light patterns. Light control is extremely significant for → visual comfort. With the aid of light control the → luminance that can give rise to glare in the critical beam area can be reduced to an acceptable level

Light fastness
Is an indication of the degree by which a material wll be damaged by the effect of light. Light fastness applies primarily to changes in the colour of the material (colour fastness), but may also apply to the material itself

Light loss factor
Factor (usually 0.8), which is included in illuminance calculations, e.g. when using the utilisation factor method, to take into account the reduction in performance of a lighting installation due to the ageing of the lamps and the deterioration of the light output from the luminaires

Light output ratio
→ Luminaire light output ratio

Lighting control
Lighting control allows the lighting of a space to be adjusted to meet changing uses and environmental conditions. A light scene is created for each different use , i.e. a specific pattern of switching and dimming for each circuit. The light scene can be stored electronically and recalled at the touch of button

Line spectrum
→ Spectrum

LitG
→ Abbreviation for Lichttechnische Gesellschaft e.V. (German Lighting Engineering Society)

LLB
→ Abbreviation for low-loss → ballast

Louvred luminaire
Standard term used to describe rectangular luminaires designed for linear fluorescent lamps (modular luminaires), frequently equipped with specular, prismatic or anti-dazzle louvres

Low-pressure discharge lamp
→ Discharge lamp

Low-pressure sodium lamp
Low-pressure discharge lamp containing sodium vapour. The internal discharge tube is surrounded by an outer envelope that reflects infrared radiation to increase the lamp temperature. Low-pressure sodium lamps have excellent luminous efficacy. As they emit monochromatic, yellow light, it is not possible to recognise colours under the lighting provided by these lamps. Low-pressure sodium lamps require → ignitors and → ballasts

Low-voltage halogen lamp
Extremely compact → tungsten halogen lamps operated on low voltage (usually 6, 12, 24 V). Frequently also available with metal reflectors or → coolbeam reflectors

Lumen, lm
→ Luminous flux

Luminaire classification
System for the classification of luminaire qualities according to the luminous intensity distribution curve. In the classification of the luminous intensity of a luminaire through the allocation of a letter and digits, the letter indicates the luminaire category, i.e. defines whether a luminaire emits light upwards or downwards. The first digit after that describes the portion of direct luminous flux falling on the working plane in the lower half of the room, and the second digit indicates the corresponding value for the upper half of the room

Luminaire efficiency
Luminaire light output ratio

Luminaire light output ratio
Ratio of the luminous flux emitted by a luminaire to the luminous flux of the lamp. The luminaire light output ratio is related to the actual lamp lumens in the luminaire

Luminance
Represented by the symbol L (cd/m²)
Luminance describes the brightness of a luminous surface which either emits light through autoluminance (as a light source), → transmission or → reflection. The luminance is accordingly defined as the ratio of → luminous intensity to the area on a plane at right angles to the direction of beam

Luminance limiting curve
→ Luminance limiting method

Luminance limiting method
Method for evaluating the potential glare of a luminaire. The luminance of the luminaire with different beam spreads is entered in a diagram, in which the luminance curve must not exceed the luminance limit for the required glare limitation classification

Luminescence
General term for all luminous phenomena that are not produced by thermal radiators (photoluminescence, chemoluminescence, bioluminescence, electroluminescence, cathodoluminescence, thermal luminescence, triboluminescence)

Luminous colour
The colour of the light emitted by a lamp. The luminous colour can be identified by x, y coordinates as chromacity coordinates in the → standard colorimetric system, in the case of white luminous colours also as a colour temperature T_F. White luminous colours are roughly divided up into warm white (ww), neutral white (nw) and daylight white (dw). The same luminous colours may have different spectral distributions and correspondingly different → colour rendering

Luminous efficacy
Luminous efficacy describes the luminous flux of a lamp in relation to its power consumption, (lm/W)

Luminous flux
Represented by the symbol Φ (lm)
Luminous flux describes the total amount of light emitted by a light source. It is calculated from the spectral radiant power by the evaluation with the spectral sensitivity of the eye V (λ)

Luminous intensity
Represented by the symbol I (cd)
Luminous intensity is the amount of luminous flux radiating in a given direction (lm/sr). It describes the spatial distribution of the luminous flux

Luminous intensity distribution curve
The luminous intensity distribution curve, or light distribution curve, is the section through the three-dimensional graph which represents the distribution of the luminous intensity of a light source throughout a space. In the case of rotationally symmetrical light sources only one light distribution curve is required. Axially symmetrical light sources require two or more curves. The light distribution curve is generally given in the form of a polar coordinate diagram standardised to a luminous flux of 1000 lm. The polar coordinate diagram is not sufficiently accurate for narrow-beam luminaires, e.g. projectors. In this case it is usual to provide a Cartesian coordinate system

Lux, lx
→ Illuminance

Maintenance factor
Reciprocal value of the → light loss factor

Mesopic vision
Transitional stage between → photopic vision, i.e. daylight vision with the aid of → cones and scotopic vision, i.e. night vision with the aid of → rods. Colour perception and visual accuity have corresponding interim values. Mesopic vision covers the luminance range of 3 cd/m² to 0.01 cd/m²

Metal halide lamp
→ High-pressure discharge lamp where the envelope is filled with metal halides. In contrast to pure metals, halogen compounds melt at a considerably lower temperature. This means that metals that do not produce metal vapour when the lamp is in operation can also be used. The availability of a large variety of source materials means that metal vapour compounds can be produced which in turn produce high luminous efficacy during the discharge process, and good colour rendering

Mode of Protection
Classification of luminaires with regard to the degree of protection provided against physical contact and the ingress of foreign bodies or water

Modelling
Accentuation of three-dimensional forms and surface structures through direct light from point light sources. Can be explained by the term → shadow formation

Modular luminaires
General term used to describe rectangular luminaires designed to take tubular fluorescent lamps. As → louvred luminaires frequently equipped with specular, prismatic or anti-dazzle louvres

Monochromatic light
Light of one colour with a very narrow spectral range. Visual accuity increases under monochromatic light due to the fact that chromatic → aberration does not arise. Colour rendition is not possible

Multi-mirror
→ Coolbeam reflector

Neutral white, nw
→ Luminous colour

Night vision
→ Scotopic vision

Optical fibres, fibre optic system
Optical instrument for conveying light to required positions, including around corners and bends. Light is transported from one end of the light guide to the other by means of total internal reflection. Light guides are made of glass or plastic and may be solid core or hollow fibres