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*Federation of National Manufacturers Association for
Luminaires and Electrotechnical Components for
Luminaires in the European Union*

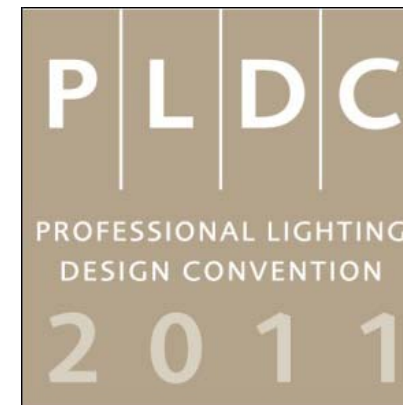


CELMA-ELC Guide *The importance of lighting*

**Joint PLDA –
European Lighting Industry Forum**

PLDC 2011, 19 October in Madrid

Peter Dehoff, CELMA (FEEI & ZVEI / Zumtobel)

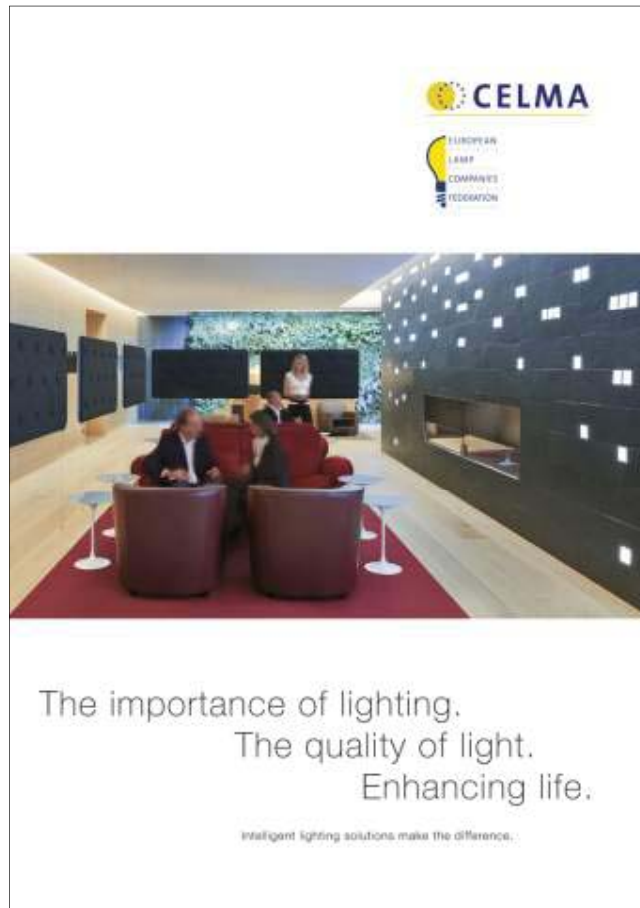




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Guide Title



- The importance of lighting
- The quality of light
- Enhancing life



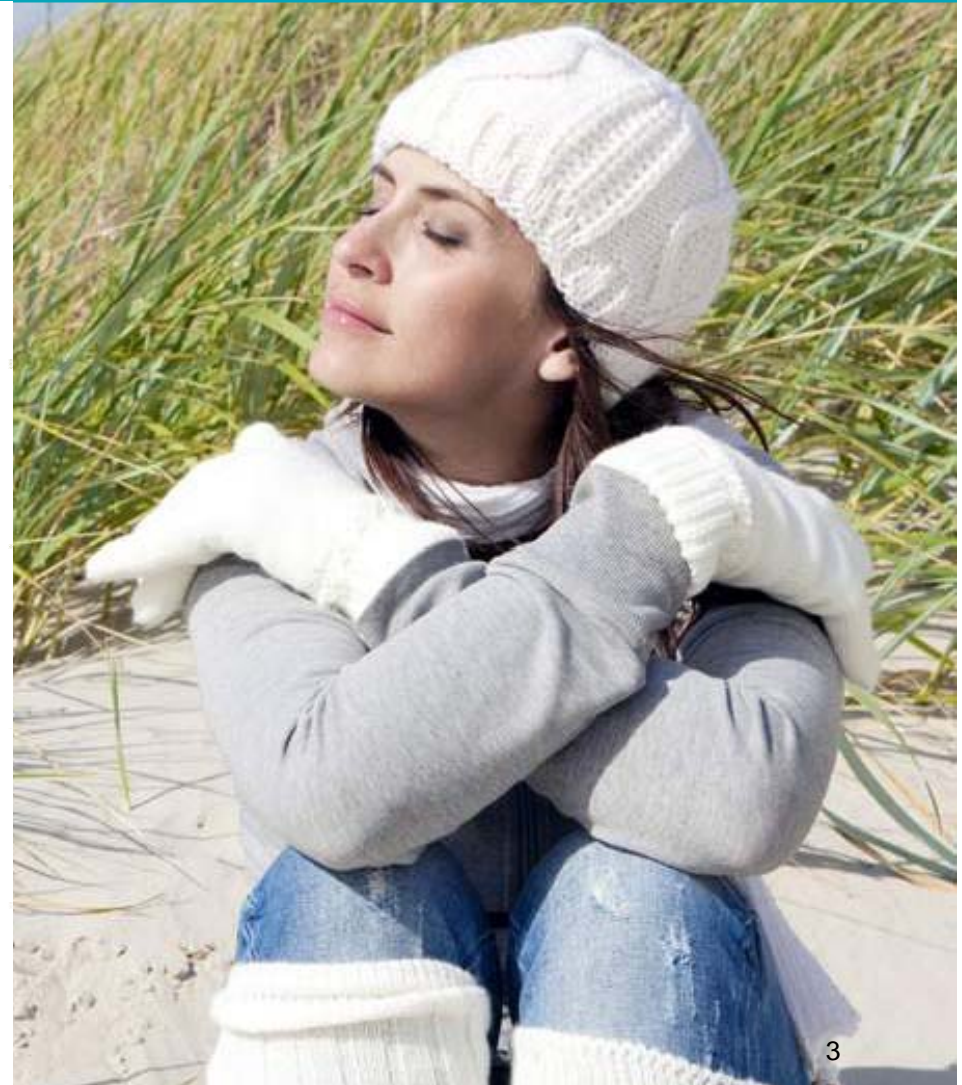
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Enjoy the benefits of good lighting

- **Lighting is essential for life**
- **Light affects our wellbeing**
- **Lighting is more precious than energy**
- **The eye is key sensor for mankind**





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Content

- **Introduction**
- **Who are CELMA and ELC**
- **The benefit of good lighting**
- **Lighting and energy**
- **Lighting and sustainability**
- **Better light for people and the environment**
- **Glossary**
- **Lighting standards**
- **Lighting legislation, guides and contacts**



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Home lighting



≈ 100% of population live in homes

Light – the way you want it

- Dimmable lights that offer flexibility in all rooms
- Efficient light sources like fluorescent and LED reduce power consumption
- Pleasing and efficient luminaires that offer proper atmosphere for every mood



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Road lighting

≈ 98% of people know their place by night

Tailored light for City & streets

- Lighting heightens the visual impact of architecture and grabs attention
- Well lit streets and parks improve safety and orientation
- Innovative luminaires and lighting management reduce the energy consumption





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Office lighting

≈ 15% of people work in offices

Optimizing performance

- Stimulating light level for the task, activity and the room
- Proper glare-free lighting and good modelling
- Motivating visual environment over working time





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Industrial lighting



≈ 8% of people employed in industry

Improving productivity

- Appropriate illuminance and uniformity at the visual task
- Supporting contrast and colour rendering
- Adjustable lighting for higher demands



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Education lighting



≈ 33% of population attend studies

Enhance concentration

- Proper illuminances on horizontal and vertical task areas
- Avoiding of disturbances from glare and poor contrast
- Change in colour temperature stimulates alertness



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Hospital lighting



≈ 20% of people treated in hospital

Feeling calm and comfortable

- Tailored illuminance for each treatment
- Relaxed atmosphere to calm the patients
- Balanced lighting levels day and night



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Sports lighting



≈ 60% of people follow sports

Healthy motivation & relaxing

- Orientation of luminaires and direction of light to allow proper sporting and TV broadcast
- Light level and colour appropriate also for fast sports
- Lighting atmosphere to motivate and to relax respectively



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Retail lighting

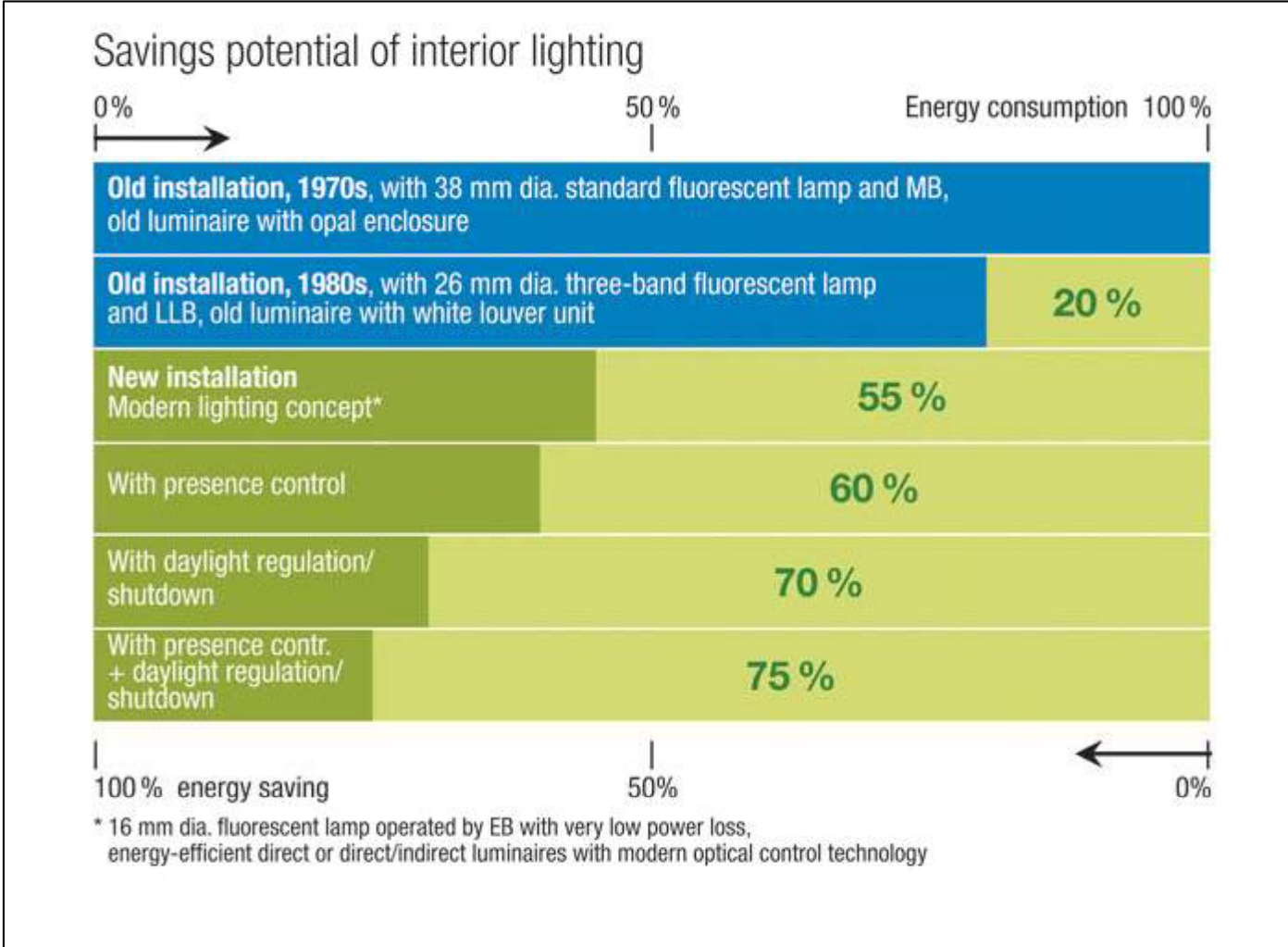


≈ 97% of people visit shops

Stimulating choice & pleasure

- Appropriate atmosphere for the type of shop and goods
- Light level, colour rendering, and direction of light to ease the choice
- Guidance through lighting

Lighting and Energy – Interior



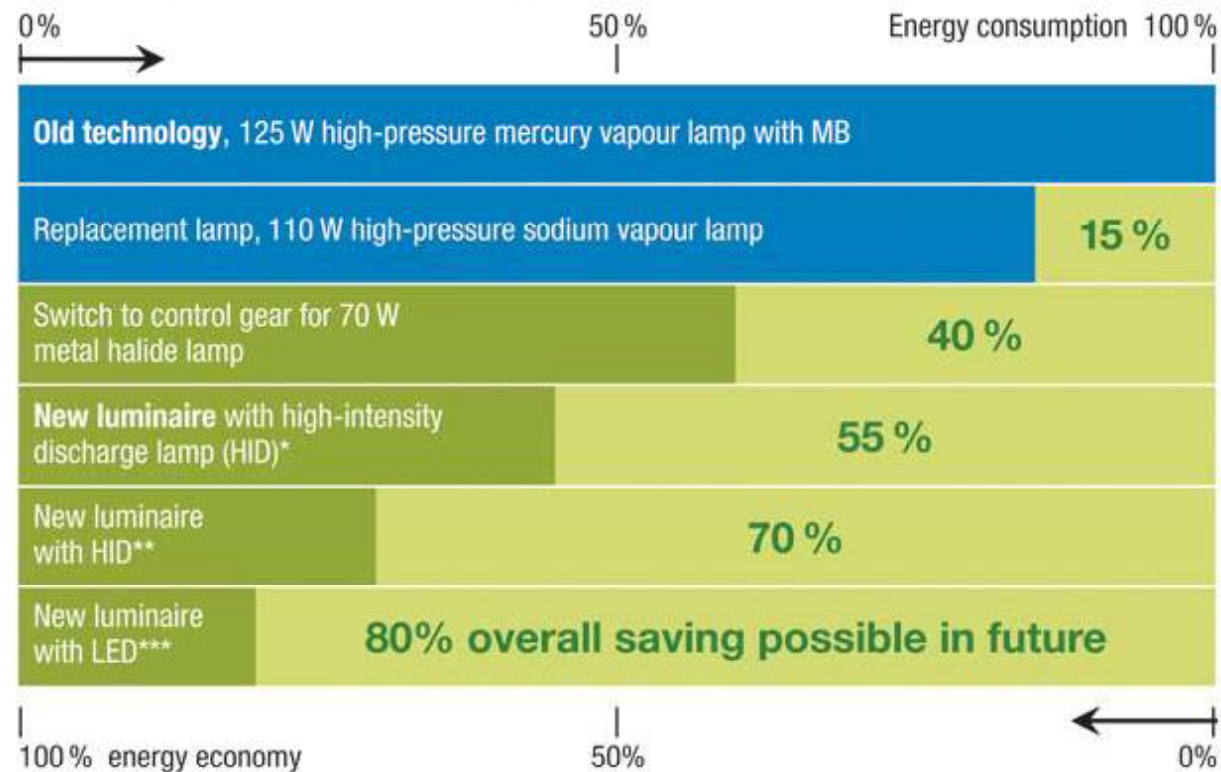


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Lighting and Energy – Outdoor

Savings potential of exterior lighting



- * High-pressure sodium vapour lamp or metal halide lamp
- ** High-pressure sodium vapour lamp or metal halide lamp, with control system and 50% output for 2,000 hrs
- *** With control system and 50% output for 2,000 hrs



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Light and Sustainability



- Save energy
- Conserve raw materials
- Optimize design



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Better light – for people and environment

- **Visual environment**
- **Obtrusive light reduction**
- **Emergency lighting**

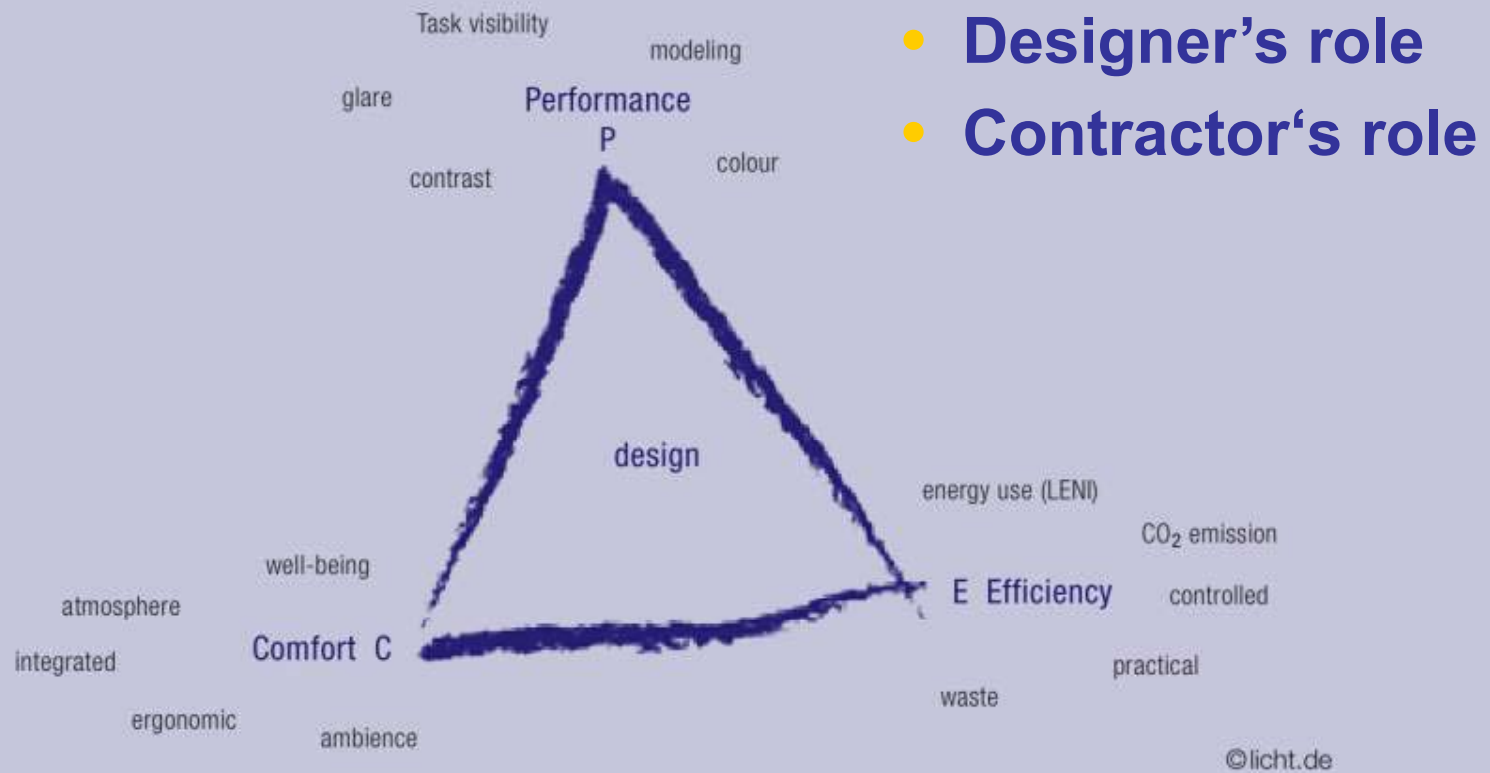




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Creating lighting solutions





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Glossary



- **What is light?**
- **Lighting terminology**
- **Impact on Human Beings**



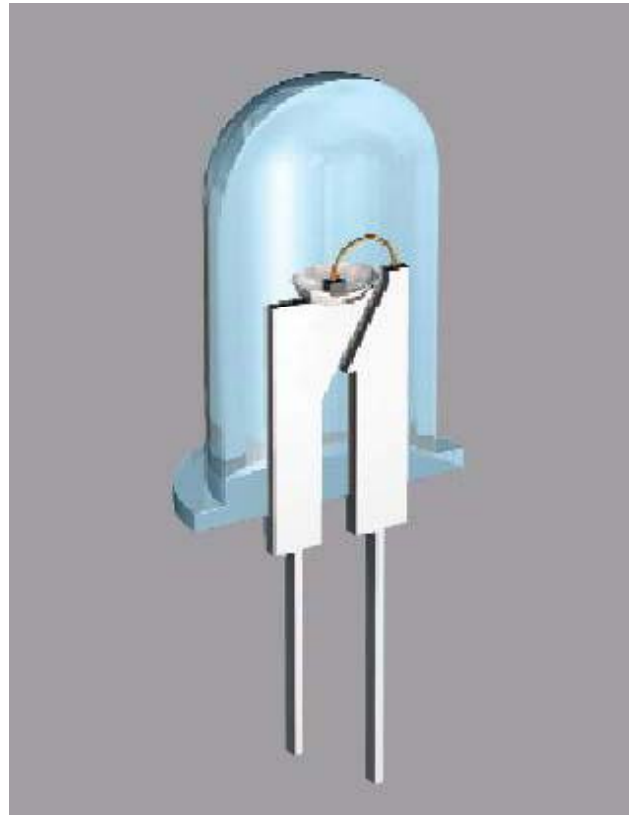
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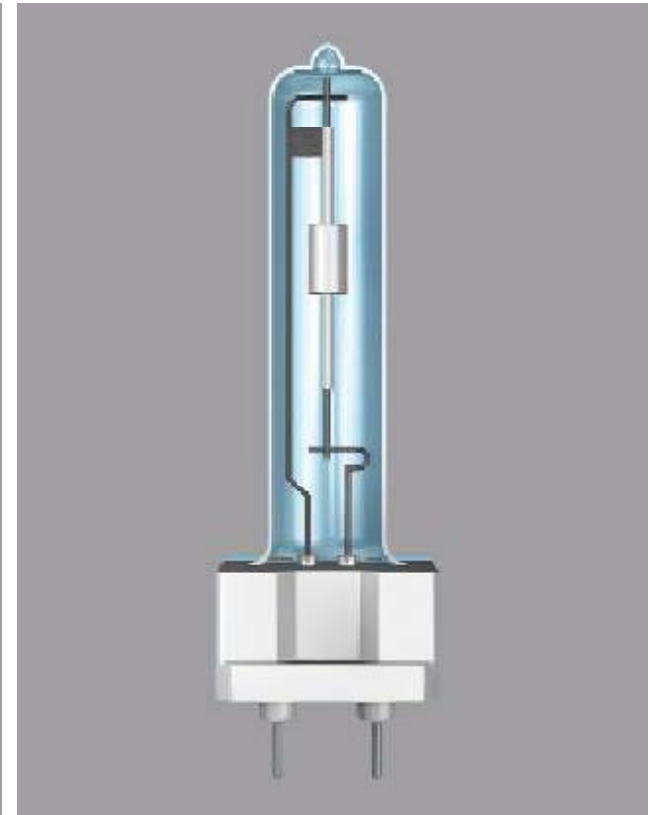
Electric light sources



Incandescent lamps



LEDs



Discharged lamps



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Lighting standards



Lighting application standards

Lighting product standards

- Lamps, controlgear, luminaire and systems



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Where to find the Guide?

The CELMA-ELC Guide is available on the websites of:

- **CELMA (www.celma.org)**
- **ELC (www.elcfed.org)**



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Thank you for your attention!

