SC4 | LED: performance, applications, lighting



LEVEL: BASIC

Audience: Anyone wishing to learn about LEDs and their applications

Prerequisites: Basic knowledge in electrokinetics (currents, Ohm law, generators, receptors, electrical power) Nature of light (spectrum, photons, physiological basis of color perception) Basic properties of material media (refraction, absorption)

Pedagogical manager(s): Henri Benisty - Enseignant-chercheur à l'Institut d'Optique

Language of the training: French

Maximum capacity: 12

Price: 1100€ HT - **Duration:** 2 days - 14 h

Objectives

- Evaluate the performance of a LED lighting system
- Dimension a LED lighting system
- Design, implement and optimize an installation using LEDs

Next sessions

- 07 october 2019 au 08 october 2019 - Palaiseau

Addressed topics

Photometry
- Photometric quantities
- Basics of colorimetry

LEDs today
- LEDs technology
- LEDs Performance

LEDs Lighting Systems
- Power and optics for LEDs

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The program

LEDs photometry
- Bases of photometry
- Bases of colorimetry
- Photometric Measurements
- Visual and overall efficiency
- Eye Safety

LEDs today
- Reminder on semiconductors (nitrides and others)
- Principle emitting diodes
- LED, white LED Spectra
- Thermal behavior of LEDs

Labwork
- Flux Measurements, luminance, LED indicator and spectra

Methodology and assessment

Lectures
Labwork on instruments

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