

SC4 | LED: performance, applications, lighting



NIVEAU : BASIC

Publics : Anyone wishing to learn about LEDs and their applications

Prérequis : 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)

Responsable(s) pédagogique(s) : Henri Benisty - Enseignant-chercheur à l'Institut d'Optique

Langue de la formation : French

Capacité maximum : 12

Prix : 1100€ HT - **Durée :** 2 days - 14 h

Objectifs

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

Dates et lieu des prochaines sessions

- ▶ 07 october 2019 au 08 october 2019 - Palaiseau

Thèmes abordés

Photometry

- ▶ Photometric quantities
- ▶ Basics of colorimetry

LEDs today

- ▶ LEDs technology
- ▶ LEDs Performance

LEDs Lighting Systems

- ▶ Power and optics for LEDs



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Le programme

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

Méthodologie et évaluation

Lectures

Labwork on instruments