

EF4 | Thermal infrared: principles



NIVEAU : BASIC

Publics : Engineers or technicians wishing to master the principles of thermal infrared

Prérequis :

Responsable(s) pédagogique(s) : Isabelle Ribet - Experte Onera, enseignante à l'Institut d'Optique

Langue de la formation : French

Capacité maximum : 12

Prix : 1820€ HT - **Durée :** 4 days - 28 h

Objectifs

- ▶ Discover and understand the specificities of the infrared domain
- ▶ Know how to choose and use infrared equipments
- ▶ Understand the design and the characterisation of thermal infrared equipments

Thèmes abordés

Infrared radiometry

Detectors

Mechanical design

Design and characterisation of infrared equipments



EF4 | Thermal infrared: principles

Le programme

Infrared radiometry

- ▶ Radiometry basics, infrared applications
- ▶ Infrared properties of atmosphere and media
- ▶ Exercices

Detectors

- ▶ Main technologies and associated figure of merits

System-oriented mechanical conception

Design and characterisation of infrared equipments

- ▶ Design
- ▶ Scene characterisation
- ▶ Signal to noise ratio and optimisation
- ▶ Infrared sensors characterisation : NEI, NETD, MRTD

Labworks

- ▶ Infrared camera
- ▶ MTF measurements

Méthodologie et évaluation

Talks and exercices

Interactive demonstrations

Labworks