

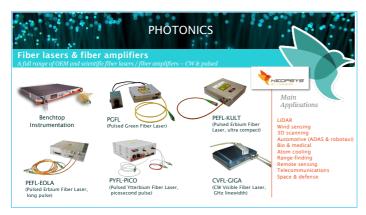
Tesi presso Lumibird Photonics Docente di contatto: Elena Botta e-mail: <u>elena.botta@unito.it</u>

I corsi di *Fisica dello Stato solido* e *Fisica dei Laser* sono da considerarsi propedeutici agli argomenti della tesi

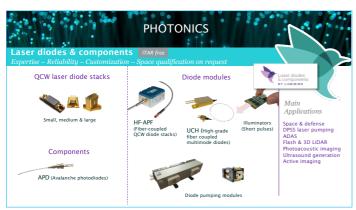
















MSc Thesis proposal on the development of highbrightness laser diodes

The proposed MSc thesis concerns the development of high-brightness laser diodes for optical pumping or direct-laser applications. High brightness is achieved by optimizing both the emitted optical power and the optical beam quality, defined with the M² or BPP (Beam Product Parameter) values.

During the thesis, laser diodes prototypes designed and fabricated will be experimentally investigated and next-generation prototypes will be optimized and developed through device modelling based on experimental results.

Simulations are mainly based on the beam propagation method while experimental characterizations are mainly based on the LIV, M^2 , near field and far field measurements. The MSc thesis is expected to last nine months, full time, at Lumibird Photonics Italia in Torino.

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