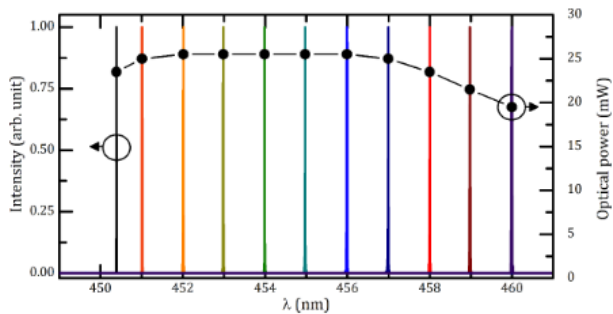
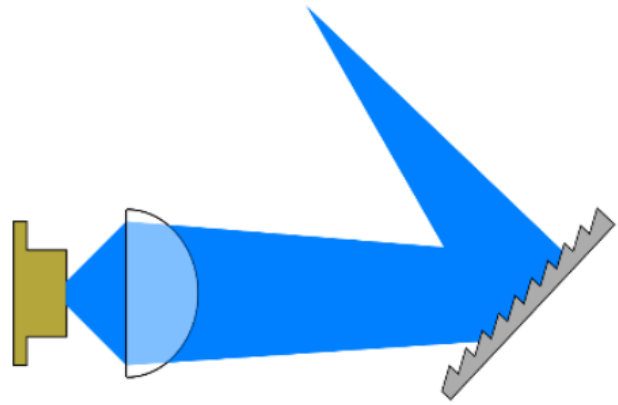


External Cavity Diode Lasers (ECDL) operating in UV-Visible part of the spectrum

Thanks to laser diodes properties they can be easily tuned in the external cavity like Littman or Litrow cavities.

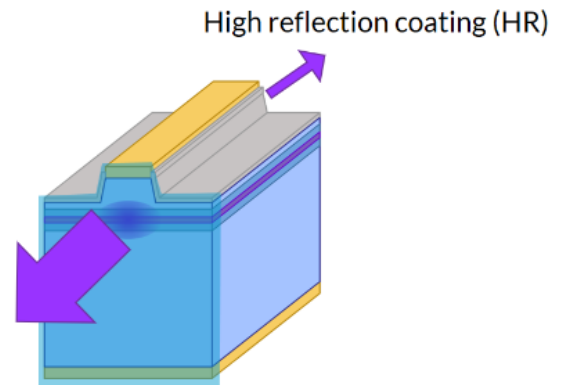


Optical power and spectra obtained for AR coated (on front facet) laser diode in Littman-Metcalf external cavity driven by $I = 250\text{mA}$. The investigated laser diode was freely tuned in an almost 10 nm wide range. Single mode emission with SMSR larger than 30 dB was obtained through the whole presented tuning range.

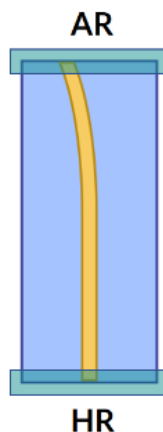
Properties of ECDL laser diodes

Our ECDL lasers are equipped with low reflectivity AR coatings on their front mirrors ($R < 1\%$).

Available coatings:
Standard : $R = 8-11\%$
Low : $R = 1\%$



Antireflection coating (AR)

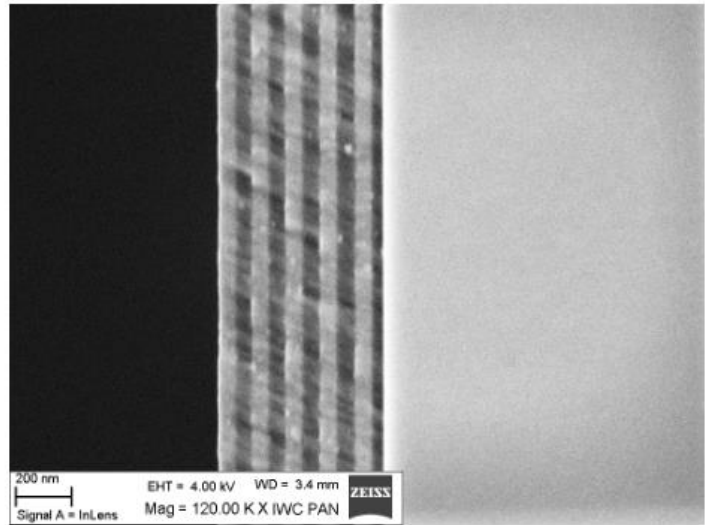


For best results we recommend laser diodes with cavity suppression provided by a combination of AR coatings and a **bent waveguide**

HR multilayer coating

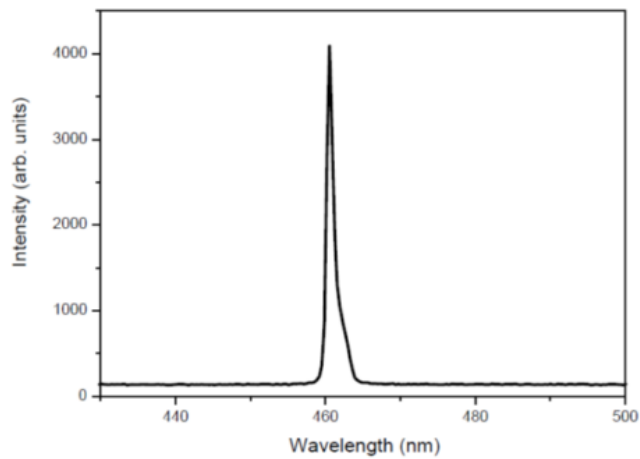
Effective reflectivity $R=10^{-5}$

Achievable mirror losses above 40 cm^{-1}



Linewidth for the external cavity diode lasers (an example)

Extended cavity 461nm GaN LD for Sr neutral



A 461nm GaN laser diode in a TO package for the Strontium (Sr) neutral cooling transition.

Linewidth measurement of an extended cavity 461nm GaN LD by Scott Watson University of Glasgow

