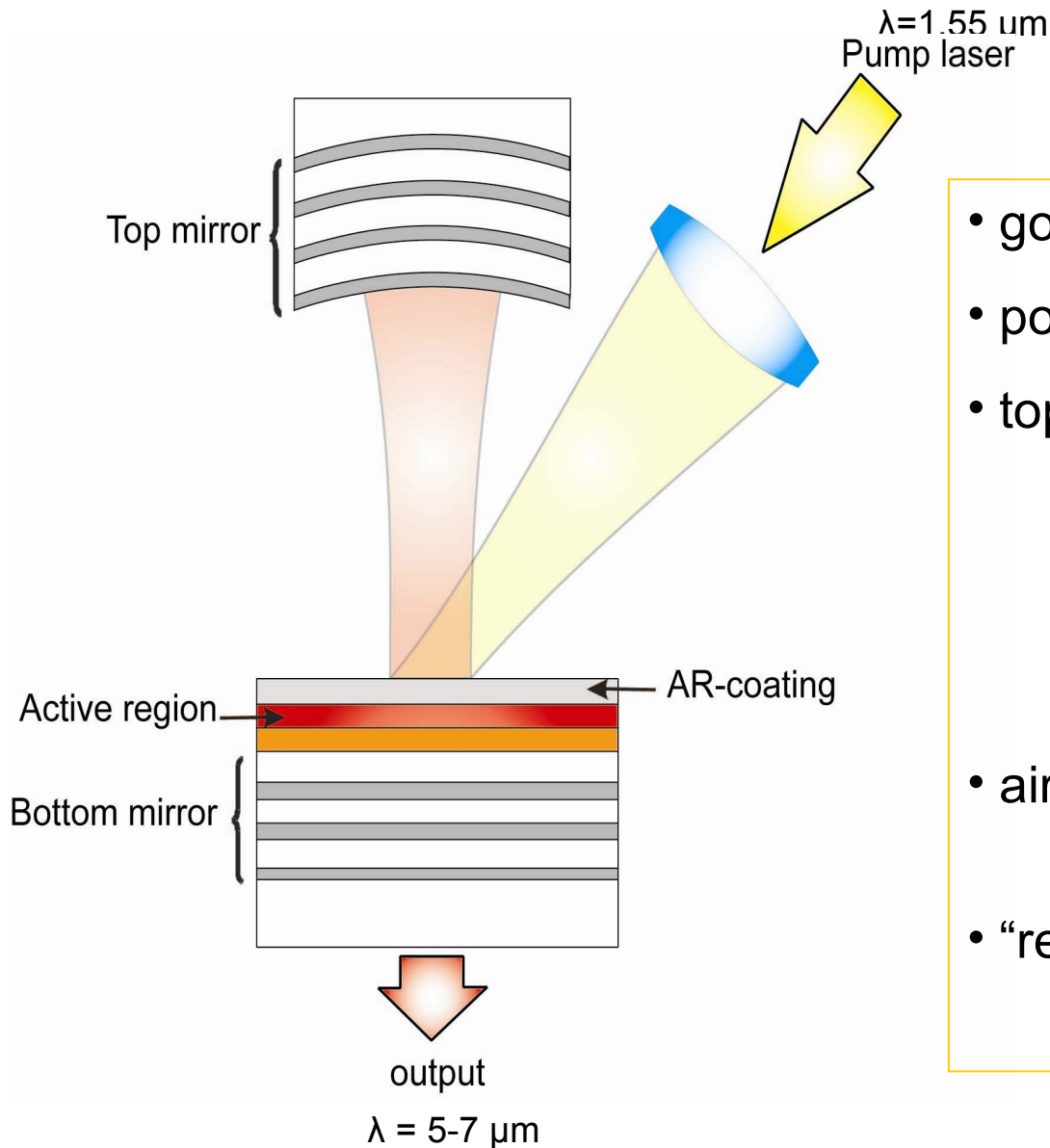


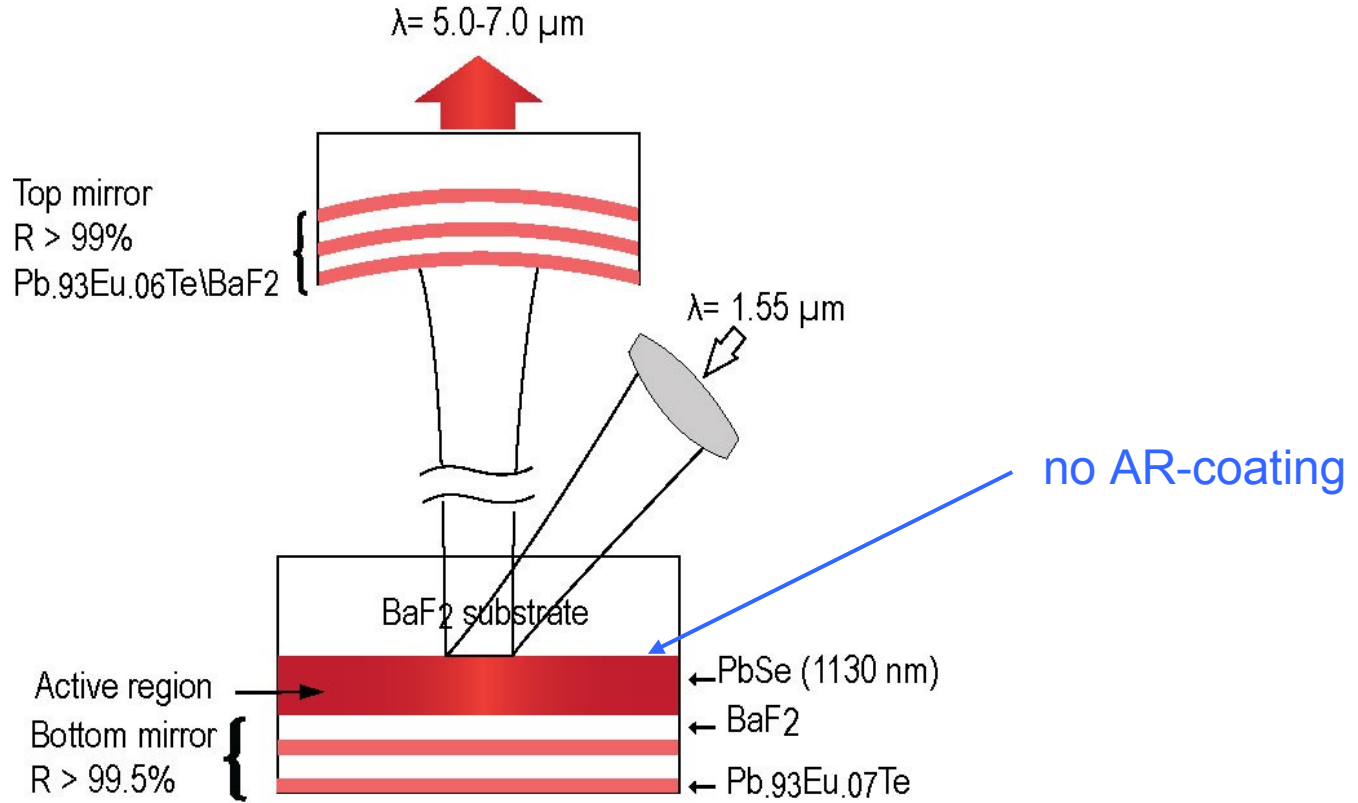
VECSEL: Vertical External Cavity Surface Emitting Laser



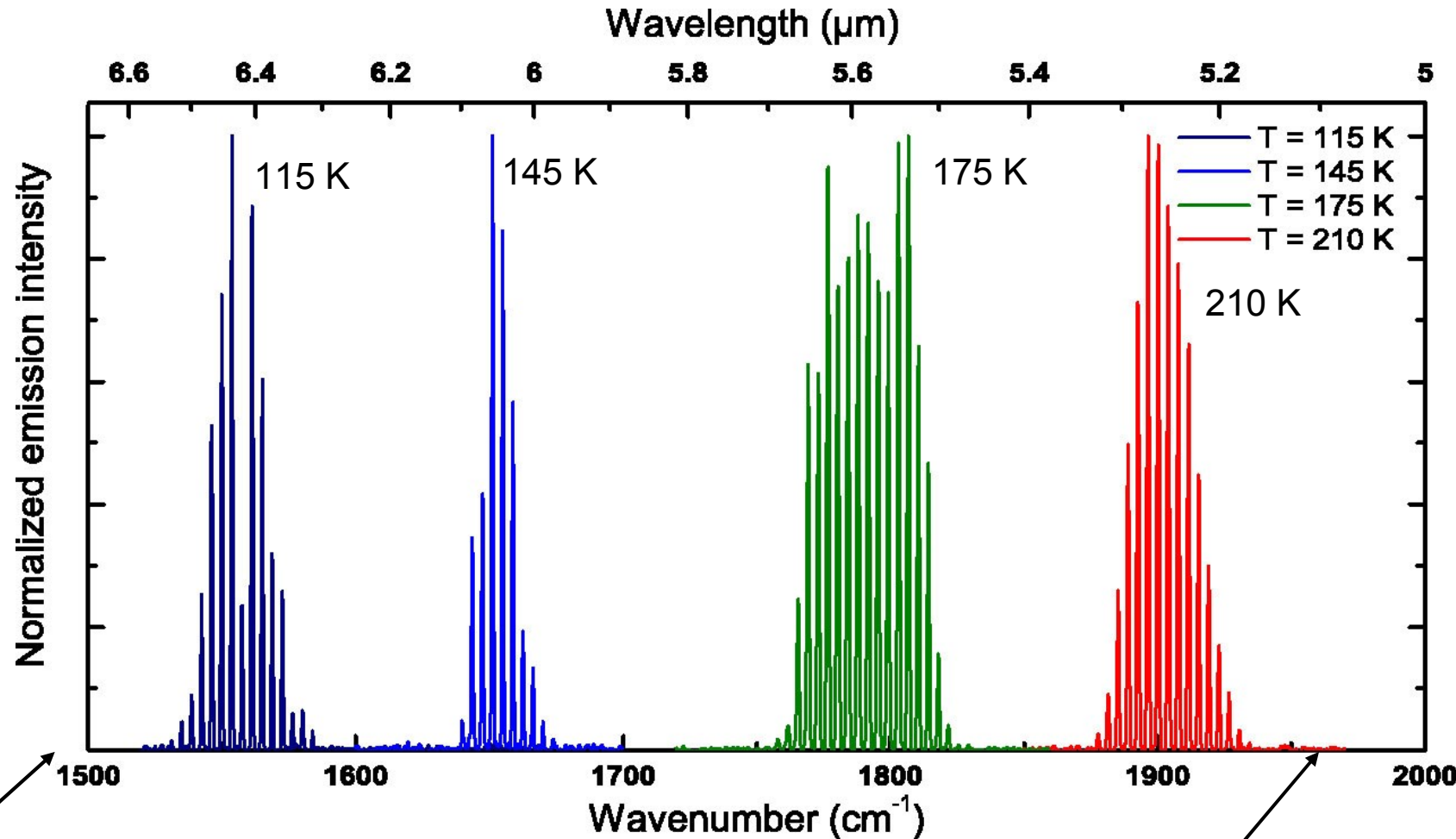
- good beam quality
- power scalable
- top mirror Radius
and cavity length
→ beam diameter
- air gap in the cavity
- “resonance” and/or AR-coating

PbSe VECSEL on BaF₂

$$E_g(\text{PbSe}) < E_g(\text{PbTe})$$



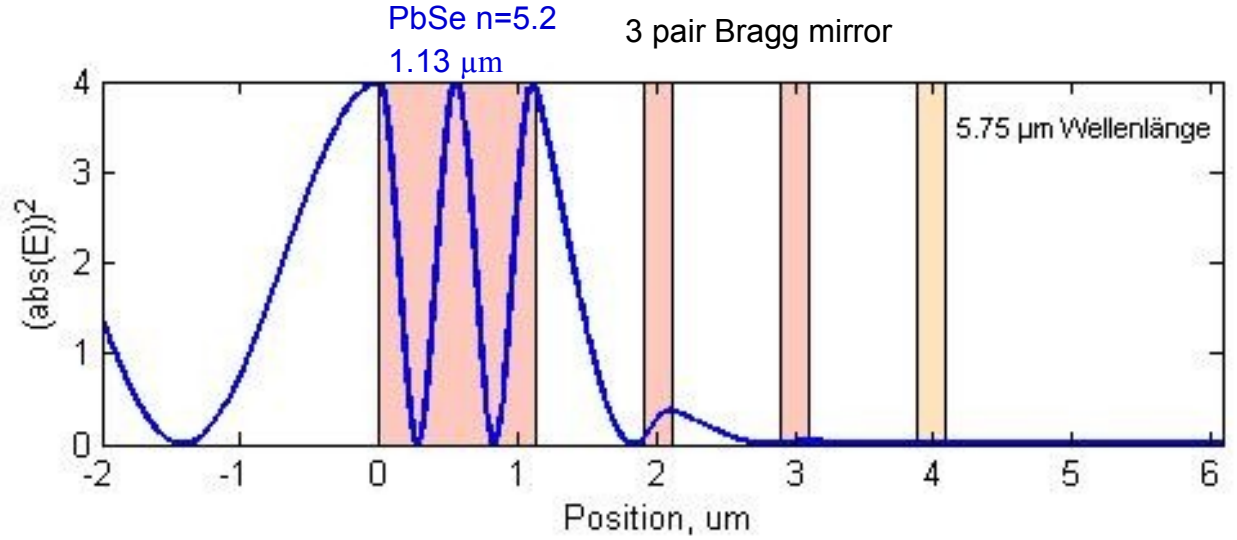
PbSe VECSEL on BaF₂



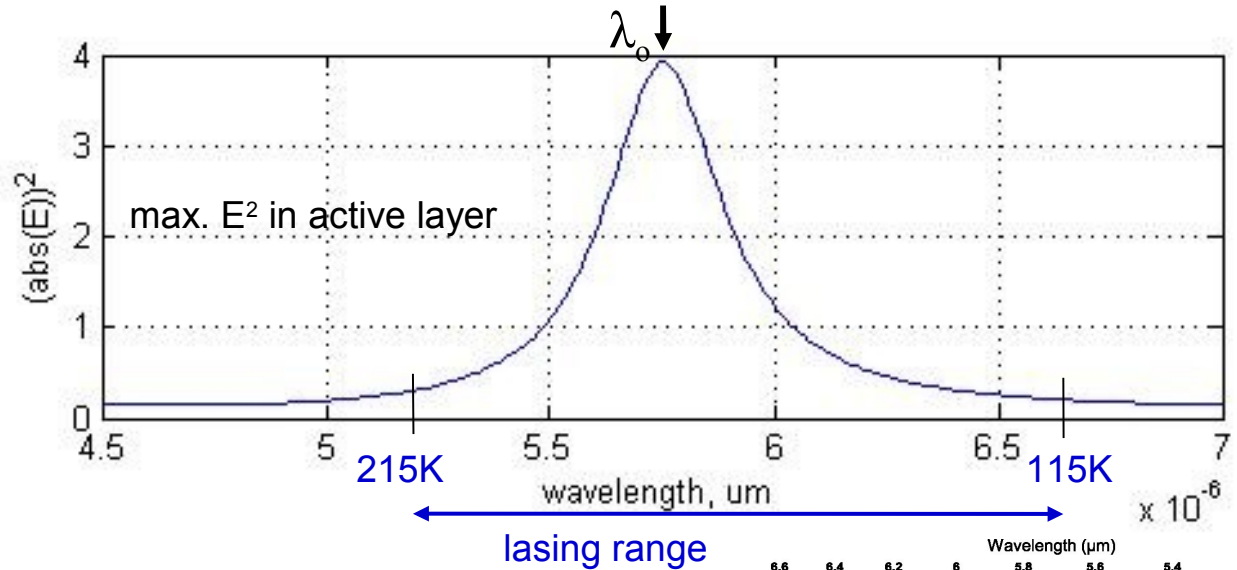
no lasing below 110 K

no lasing above 215 K

PbSe at 175K,
 design wavelength
 $\lambda_o = 5.75 \mu\text{m}$



resonance, no AR:
 λ_o thick active layer



narrow spectral range

highest max. E^2



lowest threshold

