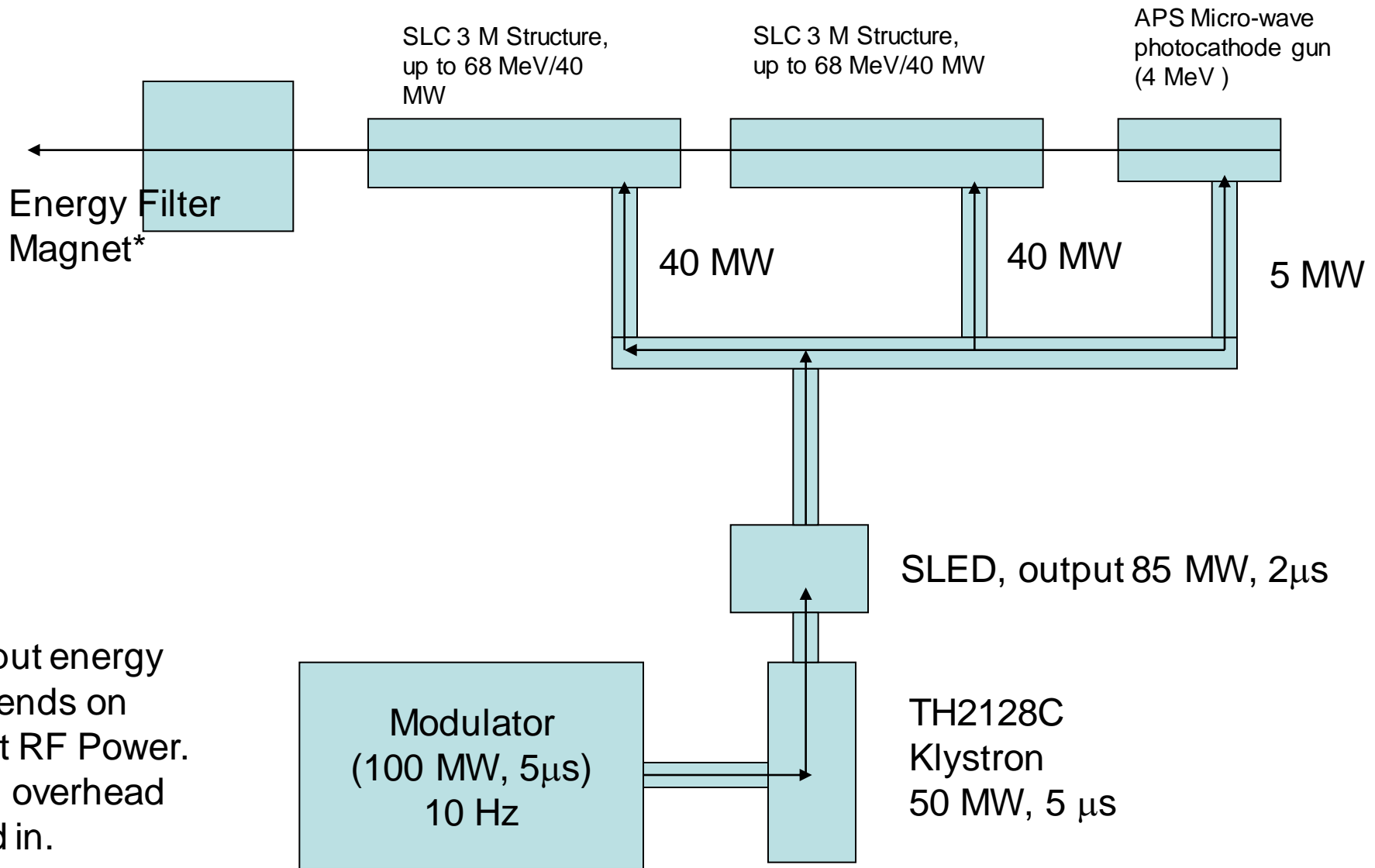


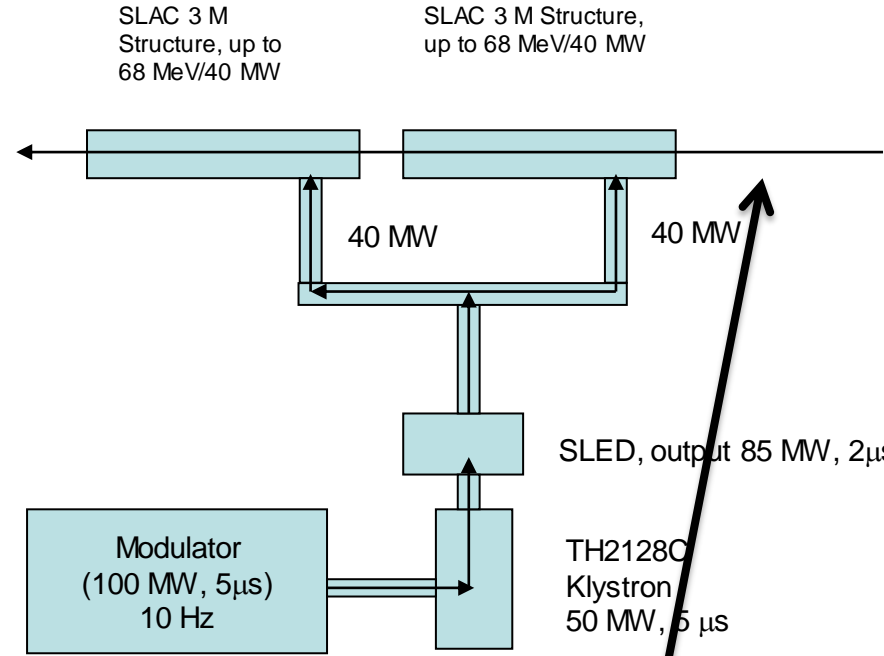
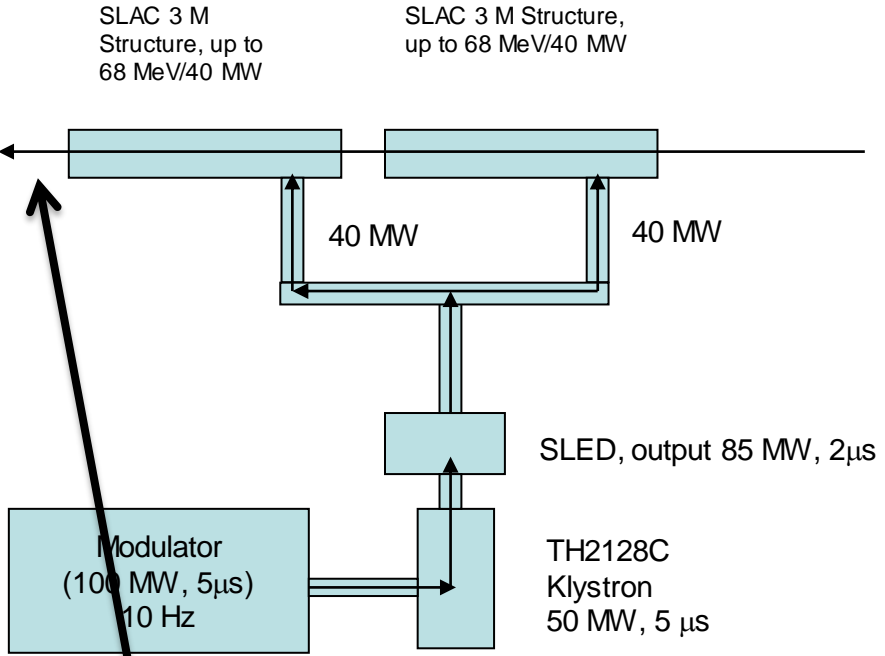
# A 500 MeV S-band Low Cost Electron Beam Source for ILC Keep Alive Source

Goal: 500 + MeV, 3 nC, ~ 1 mm  
on ILC Ti Target

# Injector/Pre-accelerator



Output energy  
Depends on  
input RF Power.  
40% overhead  
build in.



500 MeV +

375 + MeV --- 250 + MeV 100 MeV + from injector

# Cost (all commercial components)

- 8 Linac tanks, \$800 K (from IHEP, China)
- 4 SLC SLED, \$70x4 K (IHEP)
- APS style RF gun, \$100 K (Many places).
- Modulator, \$300x4 K (Home build, based on L-band cost at ANL, including constant charging supplies).
- Klystron, \$250x4 K (From Thales, accurate quote from the company).
- Waveguide components (phase shifters, splitters, \$60x4 K).
- Laser: \$ 200 K
- M&S: controls, power supplies and so on, \$200x4 K
  
- Total: Contingency: \$600 K
- Total \$5220 K
- Final cost maybe a little higher due to frequency of 2.6 GHz (nominal slac 2.856 GHz).