

Clocklaser

ECDL (downstairs)

The laser consists of a MOPA in littman-configuration. The diode runs at 80 mA (7-10 mW seed-power) and the TA at typically 800 mA (output power ~ 100 mW) The laser frequency can be controlled by a piezo and jumps cyclicly with linear length change. An intra-ECDL-etalon is used to course-adjust the frequency and jump-ranges. **Do not** use the laser-diode current to change the frequency.

Typical power values

- Laser diode: 7-10 mW @ 80 mA
- TA: 100 mW @ 800 mA
- Power infront of fiber going upstairs: 30 mW
- Power for the double-pass AOMs: ~ 10 mW
- Power infront of the clock-resonators: 100 μ W



Werte checken

Tapered amplifier (upstairs)

Typical power values

- Seedpower: min 10 mW
- Outputpower: ~ 800 mW @ 2.2 A
- Max outpupower related to the datasheet: 1.5 W @ 3 A

The system was build by Sina Malobabic and is described in her diplomathesis.

- EYP-TPA-0915-01500-3006-CMT03-0000

SHG

Typical power values

- Outputower: ~ 120 mW
- Power transfered through the fiber: 20 mW
- Power behind the lattice mirror: $\sim 7 - 8$ mW

SHG Photodiode is saturated for full TA power.

- SHG beamprofil has some additional *spots* on one side
- SHG beam direction of the blue beam changes with the TA power → Adjust at maximal power.

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