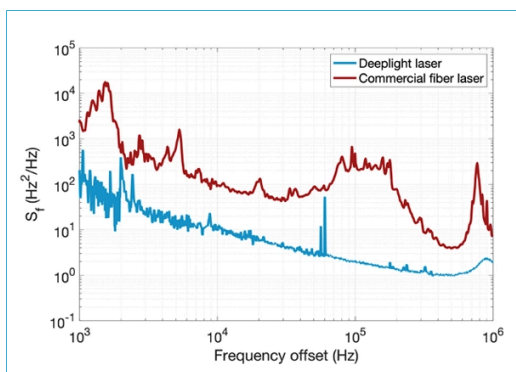
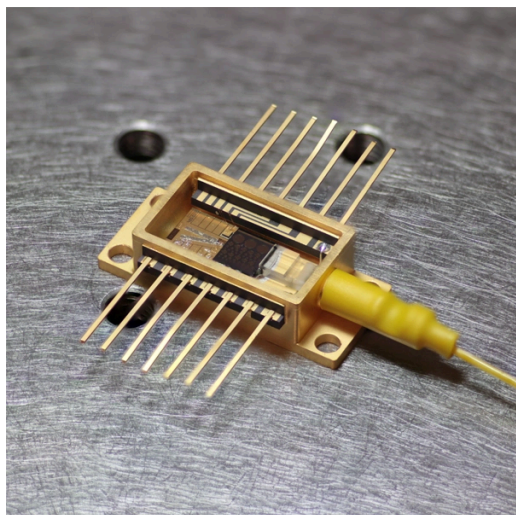


Narrow-linewidth and frequency-tunable lasers



1_Frequency noise plot

Deeplight's lasers achieve exceptionally narrow Hz-level linewidths based on a high-quality (Q) factor Whispering Gallery Mode (WGM) resonator. The combination of ultra-low linewidth and fast frequency modulation of our products, remains unparalleled and sits at the core of the conception of Deeplight itself.

Key features of Deeplight Narrow-linewidth and frequency tunable lasers

- Ultra-low intrinsic linewidth down to Hz-level.
- Fast frequency modulation based on piezoelectric materials over 100 MHz-1 GHz range.
- Packaged in a butterfly housing with output fiber.

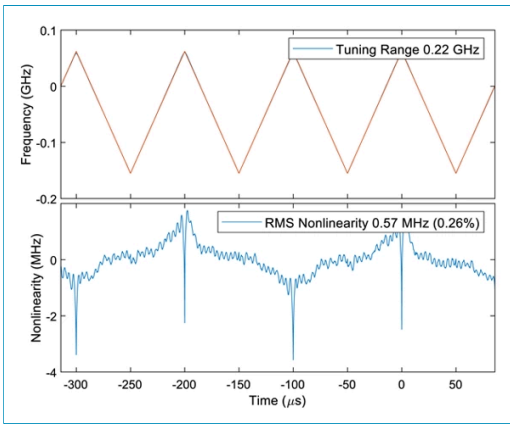
There are two sub-families of Narrow-linewidth and frequency tunable lasers called NL-1550 and UNL-1550. Here are the typical specifications for both models Fill table:

Models	NL-1550	UNL-1550
Wavelength [nm]	1520-1577	1520-1577
Output power [mW]	1-10	1-10
Fiber Type	PM	PM
Intrinsic linewidth [Hz]	< 20 (typ. 15)	< 10 (typ. 1.5)
Integrated linewidth (100 ms) [Hz]	< 5000	< 5000
PER [dB]	> 25	> 25
Frequency modulation bandwidth [MHz]	> 1	> 1
Frequency chirp nonlinearity [RMS]	< 0.5 %	< 0.5 %
Footprint WxLxH [mm3]	30 x 50 x 15	30 x 50 x 15

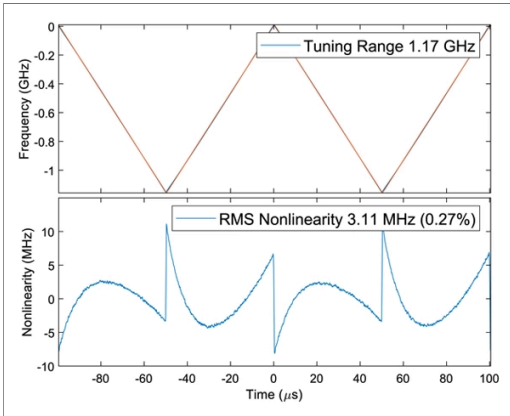
Further features are available on request, some additional features are:

- Different operating wavelength
- Different operating temperature
- Included control electronics for current and temperature
- Optical isolator
- Amplified output (maybe with SOA)

Examples of this and other features can be found in the customised solutions tab. Please feel free to contact us if your re-



2_Fast frequency modulation 1



3_Fast frequency modulation 2