

EXALOS 1550nm Swept Sources

Applications

- Fiber Bragg Grating (FBG) interrogation
- Optical coherence tomography
- Component testing

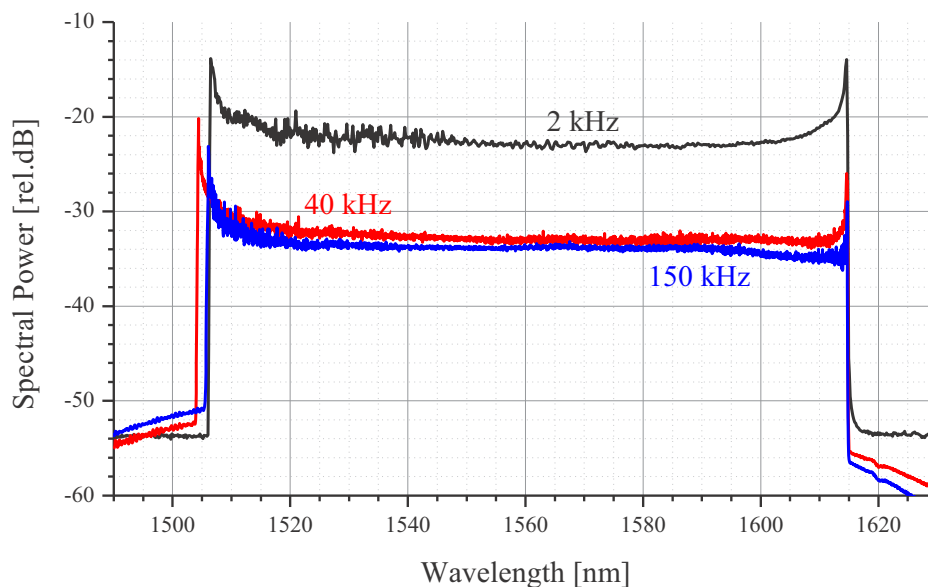
Product Features

- Compact OEM module in 3.5" HDD format
- Wide selection of sweep rates (from 2 kHz to 50 kHz or up to 150 kHz)
- Wide sweep range (up to 200 nm)
- Long coherence lengths (up to 10 mm)
- High output power (up to 20 mW)
- Analog electrical k-clock output
- Various mounting options

Description

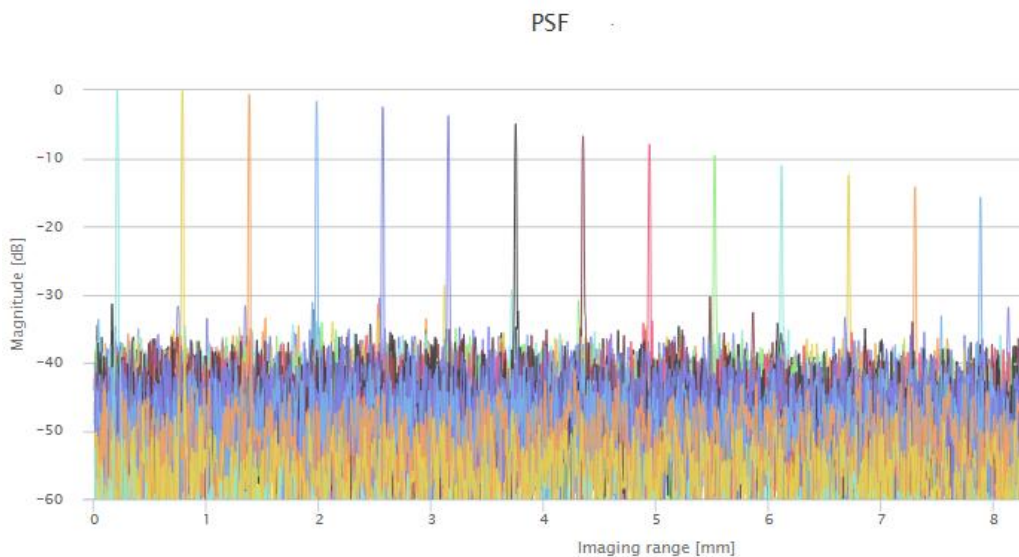
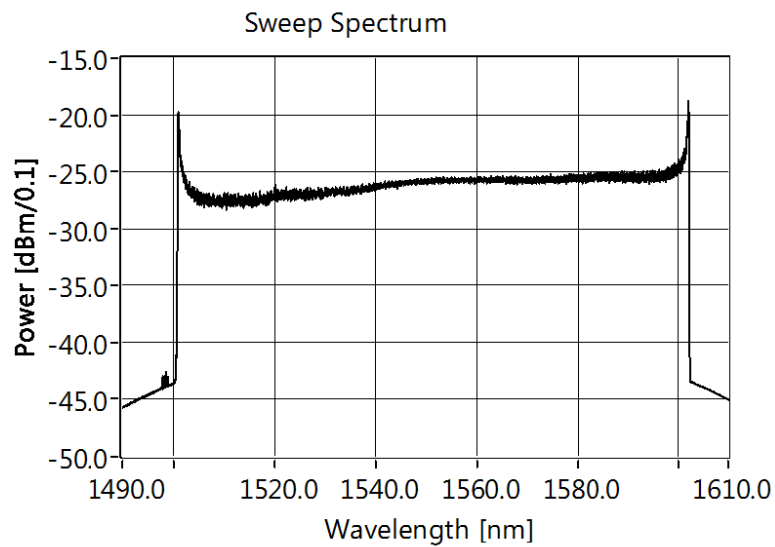
EXALOS swept lasers at 1550 nm provide a wide sweep range of up to 200 nm covering at least the range from 1510 to 1610 nm. The free-space LEGO[®]-like external laser cavity architecture allows for rapid prototyping and for a high degree of custom swept sources in order to address a wide range of applications.

An existing standard product at 1550 nm is a 2-kHz swept source that can be offered in an ultra-compact 3.5" HDD form factor. Other sweep rates and output characteristics are available upon request.



Optical sweep spectra of 1550nm swept sources at various sweep rates

| 1550nm ESM @ 2kHz | | | | |
|--|--------------|------|------|------|
| Swept Source Parameters | Min | Typ | Max | Unit |
| Center Wavelength | 1530 | 1550 | 1570 | nm |
| Sweep Range [-10dB] | 100 | 110 | | nm |
| A-scan frequency | 1.9 | 2.0 | 2.1 | kHz |
| Coherence length (in air) ¹ | 6 | 7 | | mm |
| 6-dB Amplitude Fall-off | 3 | 4 | | mm |
| Average output power ² | 12 | 15 | 18 | mW |
| Product Code | ESM340019-00 | | | |



Notes:

- 1 The coherence length is the optical path difference (OPD) at which the amplitude of the optical fringe signal drops to 50% of its initial value for OPD=0 mm. Typically the so-called *image depth* is half the coherence length value.
- 2 Under sweep operation. For a sweep duty cycle of 100%.