

Ecomb-250R: Erbium Fiber Comb

Rack-mounted, ultra-low noise

IMRA America offers a high performance frequency comb for advanced metrology applications, such as optical clocks and comb spectroscopy. The rack-mounted comb integrates easily, especially where a portable system is premium. An all-erbium platform, the frequency comb comes with fiber-coupled outputs and provides ultra-low phase noise, timing jitter, and superior frequency stability.

Features

- 250 MHz repetition rate
- 1 MHz repetition rate tuning range
- High coherence 1050 - 2200 nm continuum
- PM fiber-coupled output
- Vibration and temperature insensitive
- Integrated f_{ceo} detection
- Compatible with IMRA ULC locking electronics
- Remote operation via ethernet

Available Extensions

- 2 W Er comb
- 5 W Tm comb
- High coherence visible continuum
- Clock wavelength outputs selectable from 530 - 1200 nm
- > 10 mW mid-IR comb
- Radiation-hardened design
- OEM versions



Ecomb systems Specifications	
Rep. rate	250 ± 0.5 MHz
Tuning range	> ± 1 MHz
Freq control bandwidth	>500 kHz
Free running f _{ceo} SN	>35 dB at 100 kHz resolution
IR supercontinuum output	950 – 2200 nm
Outputs via PM FC/APC-coupled Fiber	2.0 meter
Power per port	> 1 mW
high power option 1	> 450 mW (with separate table unit)
high power option 2	> 2.0 W (with separate table unit)
Center Wavelength per Port	1560 ± 20 nm
Spectral Width per Port	> 25 nm at -3 dB point
Monitor Port Power	> 0.1 mW
System Size	19", 3U rack-mountable, 22" long
Storage Temperature	-20 °C to +50 °C
Warm up time	< 2 hours
Operational temperature	20 ± 2.5 °C
Power Consumption	< 150 W
Interlock	via Limo connector
Laser On/Off	via PC

Product Features

- Up to 6 PM fiber-coupled outputs
- Tunable repetition rate via PC
- 50 - 250 MHz available
- > 300 kHz f_{ceo} control bandwidth



Front and back view of Ecomb-250R standard module



* Ecomb-system is currently not certified to the Laser Product Performance Standard from the U.S. FDA/Center for Devices and Radiological Health (CDRH). U.S. federal regulations require that lasers that are not certified to the CDRH standard be sold only to manufacturers of electronic products for use as components in such products.



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