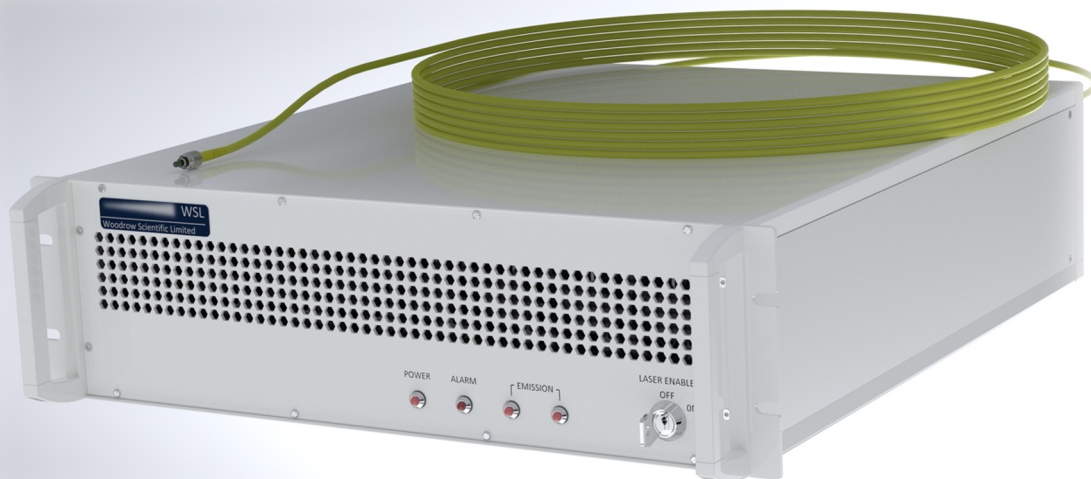


EDF-UL-10

Flexible C-Band / L-Band EDFA



Product Features

- C-Band or L-Band System
- Average Power > 10W
- Laser with integrated seed
- Amplifier of external seed
- CCSDS and SDA Compatible Modulation
- Long Delivery Cable
- Air Cooled
- Customisation Possible

Applications

- Free-space communication
- Beacon and Uplink capable
- 15xxnm laser amplification
- Quantum communications
- Remote Sensing

High Power, Flexible C-Band or L-Band EDFA

The EDF-UL is a novel Erbium-Doped Fiber Amplifier, specially developed to enable free-space optical communications, with ability to deliver modulation, on-demand, at high average output powers.

The EDF-UL has built-in seed laser, enabling performance as a BEACON or Uplink (up to 10Mbps) with external electronic modulation.

Depending on the selected seed wavelength, the amplifier can be modulated compatible with either the CCSDS or SDA standards for extensive interoperability.

The EDF-UL also has an optical-input port, enabling performance as an amplifier of high-data rate seeds, with ability to impact amplitude modulation for tracking / BEACON-mode of operation.

The product platform lends itself to a high-degree of customisation to meet the specific demands of individual Optical Ground Stations.

EDF-UL-10 Product Platform

Model	EDF-UL-10-C	EDF-UL-10-L
OPTICAL SPECIFICATIONS		
Internal Seed Wavelength	1532-1537nm 1550-1570nm	1588 – 1592nm
Wavelength Tunability ¹	+/-2nm	
Output linewidth	<+/- 25GHz	
Average Power	10 Watts	
Tracking Mode / BEACON Frequency ²	CW to 10MHz	
Tracking Mode Waveform ³	Sinusoidal or Rectangular Built-in Functions	
Tracking Mode Modulation Depth	0 – 100%	
UPLINK Mode Data Rate (OOK) ⁴	Up to 10Mbps using integrated seed	
UPLINK Mode Data Rate (OOK) ⁵	Limited by the external MODEM and Transmitter	
Minimum seed power from external transmitter	2mW	
Laser Beam Quality (M ²)	<1.1	
Power Control	0-100%	
Power Stability	<2%	
FIBER DELIVERY		
Standard Cable Length ⁶	10m	10m
Output termination	FC/PC Divergent Beam to Couple to Collimator or Collimated	
Output Isolation	Yes	
ELECTRICAL, MECHANICAL & INTERFACES		
Supply Voltage	110-250 VAC	
Power Consumption	<250 Watts	
Control Interfaces	USB, RS232, Parallel I/O	
Cooling	Air	
Dimensions (w x d x h)	3U Height 19” Rack Mounted 482.5 x 500 x 133 mm	
Weight	<20kg	

- 1- For greater range of wavelength tunability, please contact Woodrow Scientific
- 2,3- BEACON/Tracking frequency, shape and depth of modulation selected by software
- 4- System contains built-in diode and drivers that can be modulated via external electrical OOK signal up to 20Mbps
- 5- Internal seed can be by-passed with a high-speed telecoms transmitter via the built-in optical port
- 6- Longer cable lengths may be possible depending on requirements

Woodrow Scientific has a continuous technology development programme to ensure our products operate at the highest performance and quality levels. As a result, the specifications in this document are subject to change without notice



The EDF-UL Platform operates at an “Eye-safe” wavelength. “Eye-safe” operation means that the eye-damage threshold is higher than for other wavelengths (for example 1064nm Ytterbium doped fiber lasers). Woodrow Scientific recommend that appropriate eye wear should be worn, and laser-safety procedures followed at all times.



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