

BEAM 6x Wind Sciences

1000 m range vertical wind profiler pulsed Doppler LiDAR



MAIN FEATURES

- IEC calibrated by independent third party
- Fully user configurable with direct access to raw data
- Best data availability from 40 to 1000m
- Light and compact HALO design
- High reliability with Lumibird laser inside
- Turbulence intensity: more accurate data thanks to 6x beam configuration

MAIN APPLICATIONS

- **METEOROLOGY**
- **WAKE STUDIES**
- **URBAN POLLUTION SENSING**
- **WIND PROPULSION**
- **VERTIPORT SAFETY**

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The **BEAM 6x** Wind sciences is a self-contained, turnkey vertical wind profiler pulsed Doppler LiDAR system designed specifically for meteorology studies and urban pollution sensing. These rugged units are easy to install and operate in all weather conditions. The hardware configuration gives an easy access to very pure raw data for post treatment and analysis. This LiDAR benefits from Lumibird's >25 years of laser design and manufacturing expertise and Halo Photonics' powerful data processing algorithm.

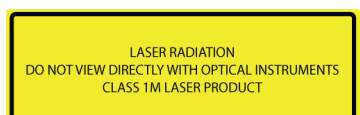
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BEAM 6x Wind sciences



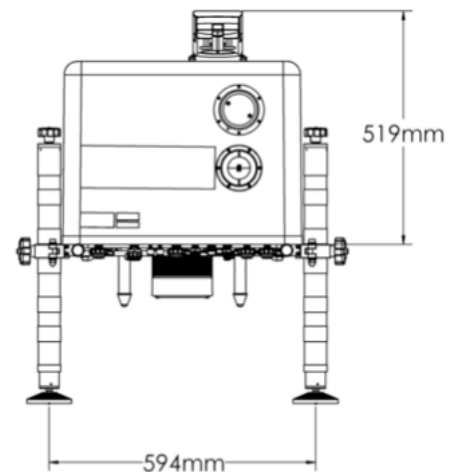
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Measurement performance	Value	Notes
Beam geometry	5 inclined beams at 30 ° and 1 vertical beam	Switch every second from one beam to the next one.
Measurement range	40 to 1000 m	
Data sampling rate	Std 1 Hz	10000 accumulated back-scattered signal per second
Range gates (with overlapping)	Up to 380 gates	User defined
Reconstructed wind speed range	0 to 38 m/s	
Reconstructed wind direction range	0 – 360 °	
Speed accuracy	< 0.1 m/s	IEC61400-12-1
Speed uncertainty	< 0.1 m/s	IEC61400-12-1
Direction accuracy	2 °	

Environmental specifications	Value	Notes
Operating temperature	-20 to +45 °C	
Operating humidity	0 to 95 %	Non condensing
Rain protection	Inclined surface, blower	
Snow protection	Inclined surface, blower	

Utility	Value	Notes
System dimensions	840 x 740 x 870 mm3	Height x width x depth
Weight	< 60 kg	
Direct input power supply	24 VDC +/- 10 %	
AC/DC power supply input	100-240 VAC (50/60 Hz)	
Power consumption	< 150 W (-5 to 35°C) < 400 W (-20 to 45°C)	
Housing classification	IP67	
Laser safety compliance	Class 1M	IEC60825-1:2014

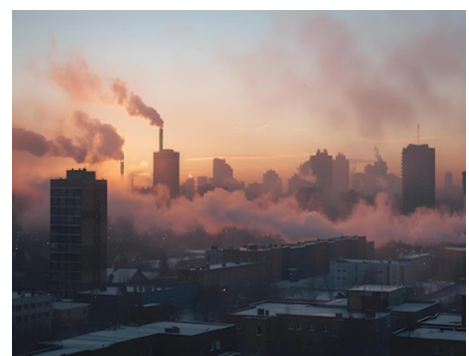
Data Output	Value	Notes
Output data	User defined typ 1 s/10 min •Time stamp •Horizontal and vertical wind speed •Standard deviation •Direction •CNR •GPS coordinates •Turbulence intensity	
Data storage	Up to 1 To	
Data file format	Raw (.VAD), reconstructed and 10 minutes data (.TXT)	Optional NetCDF
Communication	LAN, USB	
Time synchronization	GPS	



Wake effect studies



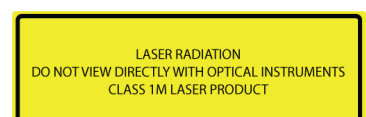
Anemometer calibration



Urban pollution sensing



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