

# SMART

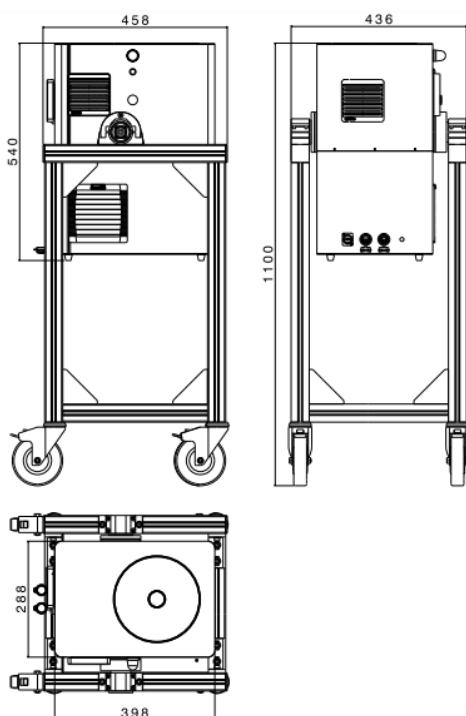
## SMall lidAr for enviRomenT

SMART is a monostatic elastic-Raman LIDAR, designed to monitor the atmosphere from 100m to 15km.

It operates in the UV region of the electromagnetic spectrum (at 355nm) and thanks to the depolarization channel, it also gives information about particulate shape.

It can be oriented from the vertical plane to the horizontal one giving the opportunity to localize pollutants' sources. It is the ideal system to carry out measurement campaigns in urban areas to monitor urban pollution, industrial emissions and all type of airborne particles.

Smart combines good accuracy, autonomy in remote use, portability and ease of operation.



### FEATURES:

Three detection channels:

- Elastic co-polarized
- Elastic cross-polarized
- Raman N<sub>2</sub> echo

Real time monitoring of:

- Atmospheric pollution
- Planetary Boundary Layer evolution
- Clouds dynamics

# Technical Specifications

## ACQUISITION

ACQUISITION DATA	(0.200-15) KM
ACQUISITION MODE	Photocounting
SPATIAL RESOLUTION	15 m
MINIMAL TEMPORAL RESOLUTION	30 s
ELEVATION	(0°-90°)
DATA TRANSFER	USB, Ethernet

## LASER SOURCE

LASER TYPE	DPPS, AIR COOLED
EMITTED WAVELENGTH	355 nm
OUTPUT POWER	340 mW
BEAM DIVERGENCE	< 0.3 mrad
LINEAR POLARIZATION	>1:100

## OPTICS

TELESCOPE CONFIGURATION	RITCHEY-CHRETIEN
PRIMARY MIRROR DIAMETER	200 mm
EFFECTIVE FOCAL LENGTH	500 mm
FILTER BANDWIDTH	0.5 nm OD>7
SYSTEM CONFIGURATION	monostatic

## ELECTRICAL SPECIFICATIONS

POWER SUPPLY	90-264V AC / 47-63HZ
EFFICIENCY FACTOR	VI
MAXIMUM CONSUMPTION	300 W

## MECHANICAL SPECIFICATIONS

SWIVELING SYSTEM	MANUAL
SIZE	290x400x500mm
WEIGHT	40 kg
IP FACTOR	IP43C

