

# Abacus Laser LiTra S/S+ Module



- Wind lidar transceiver modules for short to medium range wind measurements
- LiTra S standard module and LiTra S+ with enhanced power
- Includes a reference laser, a pulsed fibre amplifier, the transmission and receiving optics and the heterodyne detection
- Internal control electronics stabilizes the laser
- Output is an analogue signal from the balanced detector
- For data acquisition, a separate unit is required (available e.g. from Licel)

**Delivery time:** 4 to 8 months after order, depending on the configuration and availability of components.



# Abacus Laser LiTra S/S+ Module

| Lidar performance specifications:                   | S   | S+        |
|---|---|-----------|
| Typical maximum lidar range horizontal <sup>1</sup> | 6 – 10 km   | 8 – 14 km |
| Typical lidar range vertical                        | within planetary boundary layer, higher if aerosols present |           |
| Pulse repetition frequency (PRF)                    | adjustable 8 – 50 kHz, limited only by $P_{avg}$            |           |
| Pulse length (FWHM)                                 | standard 160 – 640 ns, more on request                      |           |

| Laser specifications:         | S                      | S+          |
|-------------------------------|------------------------|-------------|
| Pulse peak power              | ~60 W                  | ~120 W      |
| Pulse energy for 640 ns pulse | ~40 $\mu$ J            | ~80 $\mu$ J |
| Max. average power            | ~600 mW                | ~1 W        |
| Aperture                      | 71 mm (48 mm optional) |             |
| Wavelength                    | ~1550 nm               |             |

| Environmental specifications: | S                                  | S+    |
|-------------------------------|------------------------------------|-------|
| Typical power consumption     | ~30 W                              | ~50 W |
| Power requirements            | 12 V DC, 5 to 7 A                  |       |
| Temperature range case        | 10 – 30 °C, more on request        |       |
| Size                          | 39.5 x 27.8 x 12.7 cm <sup>3</sup> |       |
| Weight                        | 14 kg                              |       |
| Eye safety                    | Laser class 1M                     |       |

All specifications at 640 ns pulse length, 10 kHz and 1 s averaging, unless otherwise stated.

**General:** It is not permitted to use the Abacus Laser LiTra Modules for military applications.

<sup>1</sup> The lidar range depends on weather conditions, pulse length and averaging time.

