



## IR Sphinx ATR product portfolio and technical specification

Spectrometer

IRSphinx ATR Lab



IRSphinx ATR Portable



IRSphinx ATR Industrial



| Article Number                     | 919101<br>-00  | 919100<br>-00 | 919201<br>-00                            | 919200<br>-00 | 917101<br>-00                            | 917100<br>-00 | 917201<br>-00                            | 917200<br>-00 | 918101<br>-00                            | 918100<br>-00 | 918201<br>-00                            | 918200<br>-00 |
|------------------------------------|--|---------------|--|---------------|--|---------------|--|---------------|--|---------------|--|---------------|
| Spectral range                     | 2.5–5.0 μm<br>4000–2000 cm <sup>-1</sup>               |               | 5.5–11.0 μm<br>1800–900 cm <sup>-1</sup> |               | 2.5–5.0 μm<br>4000–2000 cm <sup>-1</sup> |               | 5.5–11.0 μm<br>1800–900 cm <sup>-1</sup> |               | 2.5–5.0 μm<br>4000–2000 cm <sup>-1</sup> |               | 5.5–11.0 μm<br>1800–900 cm <sup>-1</sup> |               |
| ATR Crystal Material               | ZnS  | ZnSe          | ZnS                                      | ZnSe          | ZnS                                      | ZnSe          | ZnS                                      | ZnSe          | ZnS                                      | ZnSe          | ZnS                                      | ZnSe          |
| ATR Frame Material                 | Stainless steel  |               |  |               |  |               |  |               |  |               |  |               |
| Spectrometer Housing Material      | Anodized aluminium                                     |               |  |               |  |               |  |               |  |               |  |               |
| ATR Surface area                   | 17 x 27 mm   |               |  |               |  |               |  |               |  |               |  |               |
| Number of Sample Reflections       | 9  |               |  |               |  |               |  |               |  |               |  |               |
| Illumination Source                | Electrically modulated MEMS emitter                    |               |  |               |  |               |  |               |  |               |  |               |
| Source Lifetime                    | ~5000 Hrs of continuous measurement                    |               |  |               |  |               |  |               |  |               |  |               |
| Dispersing Element                 | Linear variable filter (LVF)                           |               |  |               |  |               |  |               |  |               |  |               |
| Detector                           | 128-pixel uncooled pyroelectric array                  |               |  |               |  |               |  |               |  |               |  |               |
| Pixel Size/Pitch                   | 60 x 500 μm / 100 μm                                   |               |  |               |  |               |  |               |  |               |  |               |
| Pixel to pixel wavelength interval | 43.3 nm  |               |  |               |  |               |  |               |  |               |  |               |
| Spectral Bandwidth (FWHM)          | ~2% of centre wavelength                               |               |  |               |  |               |  |               |  |               |  |               |
| Analogue to Digital Converter      | 16-bit   |               |  |               |  |               |  |               |  |               |  |               |
| Signal                             | Detector voltage > 1V @ 8 Hz and 1600 cm <sup>-1</sup> |               |  |               |  |               |  |               |  |               |  |               |
| Measurement time (typical)         | ~30 seconds (N=200)                                    |               |  |               |  |               |  |               |  |               |  |               |
| Operating Environment              | 0–50° C non-condensing                                 |               |  |               |  |               |  |               |  |               |  |               |
| Storage environment                | 0–60° C non-condensing                                 |               |  |               |  |               |  |               |  |               |  |               |
| Dimensions (L x W x H)             | 165 x 74 x 35 mm                                       |               |  |               |  |               |  |               |  |               |  |               |
| Protection Class                   | IP64   |               |  |               |  |               |  |               |  |               |  |               |
| Battery                            | -  |               |  |               | Lithium polymer (LiPo) 1300 mAh          |               |  |               | -  |               |  |               |
| Power Requirement                  | 5 Volt DC, 5 W   |               |  |               | 5 Volt DC, 5 W                           |               |  |               | 5 Volt DC, 10 W                          |               |  |               |
| Standalone Operation               | -  |               |  |               | -  |               |  |               | yes                                      |               |  |               |
| Thermal Stabilisation              | -  |               |  |               | -  |               |  |               | yes                                      |               |  |               |
| Interface                          | USB, Ethernet  |               |  |               | USB, Ethernet, Bluetooth                 |               |  |               | USB, Ethernet, CANopen                   |               |  |               |
| Weight                             | ~700 g   |               |  |               | ~710 g                                   |               |  |               | ~750 g                                   |               |  |               |