

1. Description

The S2D is a High performance compact unit equipped with due2lab CdZnTe planar and hemispherical detector products. The S2D has been designed in order to measure radiation in a wide range of energies; thanks to the easy system of detector connection it is possible to change the detector inside the S2D in less than 1 minute. By changing the detector polarization, the Front-end Unit can measure different CdZnTe detectors with optimal energy resolution in a wide energy range (10 keV - 1300 keV) at room temperature.

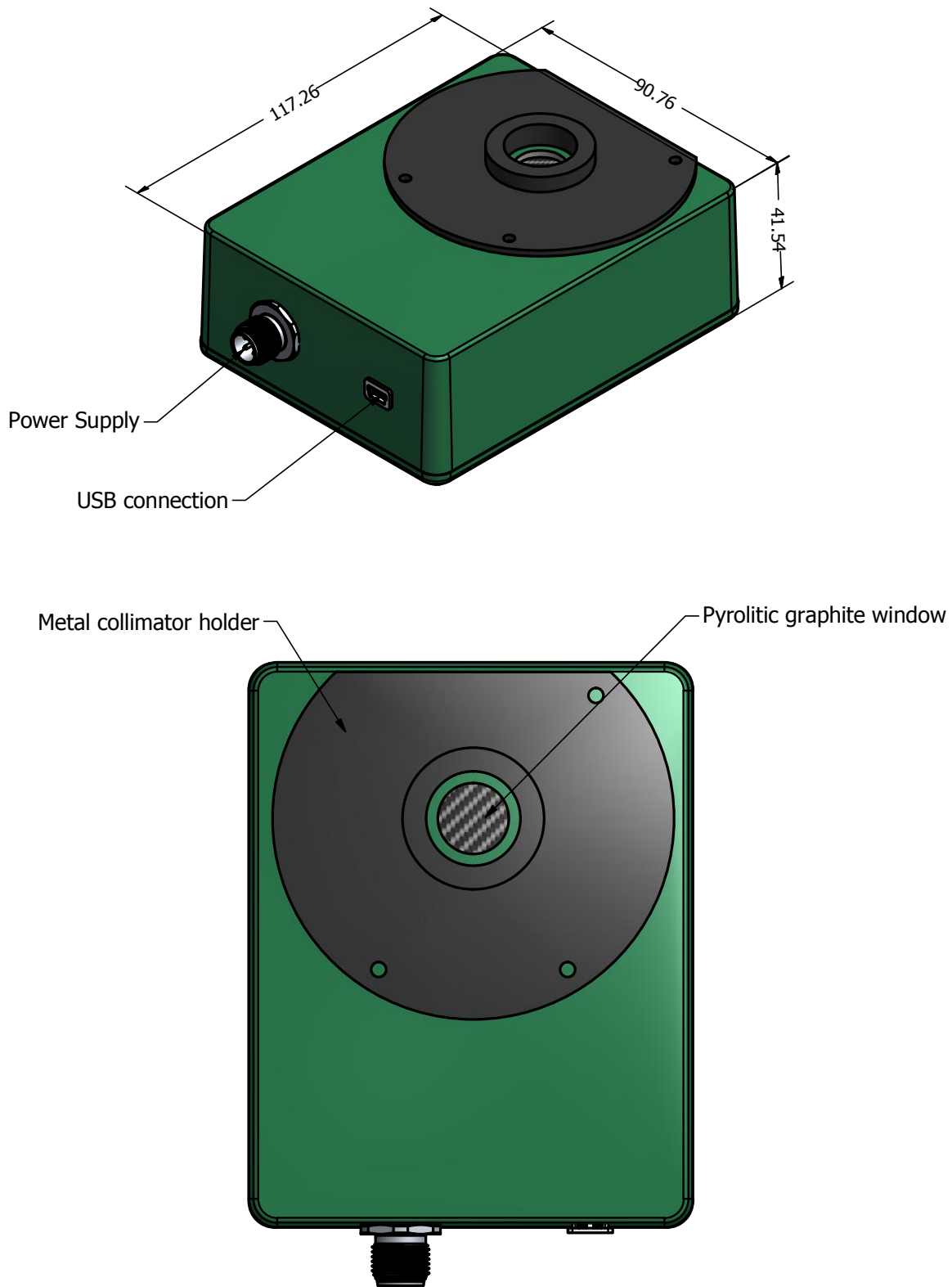
2. Applications

- Radiation Environment Monitoring
- Dose measurement
- Laboratory Tests
- Education

3. Typical Characteristics

- CdZnTe detector
- due2lab Charge Sensitive Preamplifier for CZT detector (low power consumption, fast rise time and low noise, < 150 electrons RMS at room temperature at industry level)
- DC to high voltage DC converters (low power consumption, low-ripple, low EMI/RFI, regulated output up to 2kV)
- aluminum IP54 enclosure with BNC output and tripolar plug for power supply
- HV monitor and regulator
- ultra-low noise super stable DIN rail due2lab $\pm 5V$ power supply
- due2lab MCA, USB connection and dedicated MatLab Library
- pyrolytic graphite window <0.1 mm thickness
- Easy detector replacement system
- (optional) Mechanical collar for system alignment
- (optional) Mechanical collimator holding system

4. Mechanical Drawings & Connectors



CdZnTe Front-end unit assembly dimensions

IMPORTANT NOTICE

The Front-end Unit has been designed and optimized for due2lab CdZnTe detectors. Due2lab is not responsible for the results obtained by plugging other detectors inside the due2lab Front-end Unit.