

GoldBox is a portable precious metal analyzer launched by PURERAY Instrument in 2026. It meets on-site testing needs in various scenarios because it is easy to carry. The portable analyzer can be widely used in the precious metal industry. It features a USA AMPTEK customized Fast-SDD detector, an embedded computer and a touch display screen. The spectrometer offers fast and non-destructive analysis of metal elements.



Features

- Analysis elements: K(No.19) ~U(No.92)
- Analyzed up to 30 elements at the same time.
- Coating warning
- Rhenium and tungsten detection warning
- Test Sample: metal/gemstone
- Analysis range: 0.010%~99.999%
- Precision: $\pm 0.01\%$ (9999 gold)
- Support the multi-point continuous test with high efficiency.
- Connect the scale for weight readings and calculate prices.
- Standard test duration: 15 seconds

Specifications

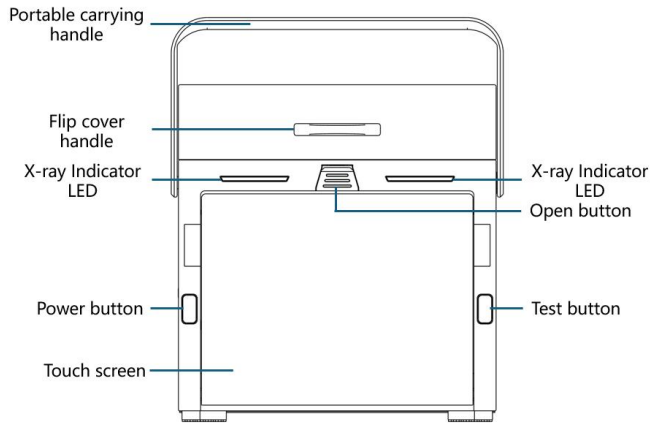
- Power supply: Battery-powered, USB Type-C PD charging
- Machine size: 277*172*337mm
- Test chamber size: 263*139*58mm
- Rated power: <30W
- Net weight: 6KG
- Noise: <55dB
- Operating environment:
 - Temperature: 15°C~31°C
 - Humidity: <70% (Noncondensing)

Core Components

- Detector: USA AMPTEK customized Fast-SDD
 - Detector area: 25mm²
 - Resolution: 125 $\pm$ 5eV
- Embedded computer: ARM 4-core A76+ ARM 4-core A55
- X-ray tube: 50KV/100uA/5W
 - Window material: beryllium
 - Target material: tungsten
 - Focus: $\Phi 1.0\text{mm}$
- Collimator: $\Phi 1.5\text{mm}$

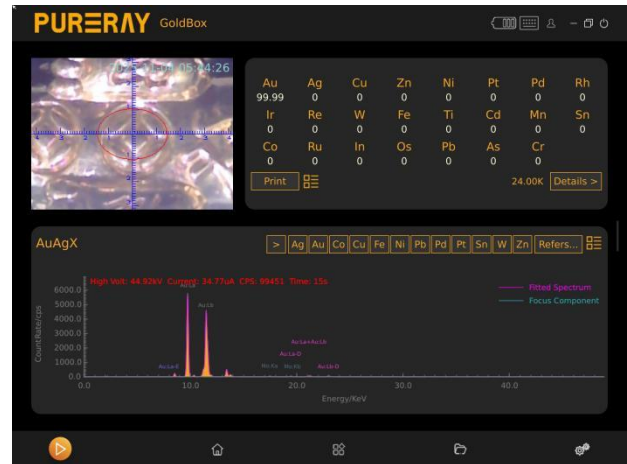
Hardware Interface

Front

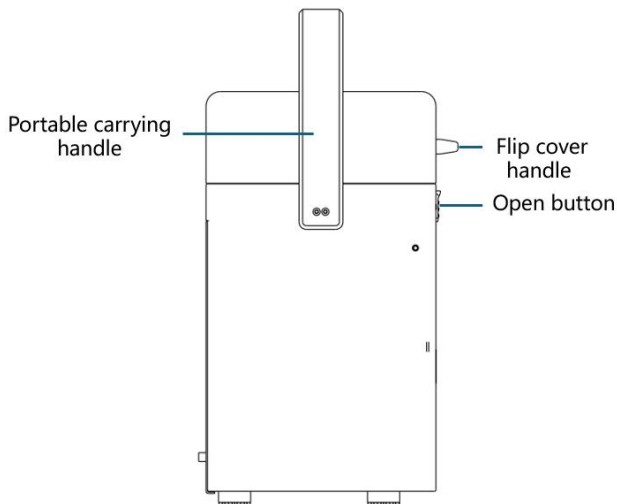


Test Case

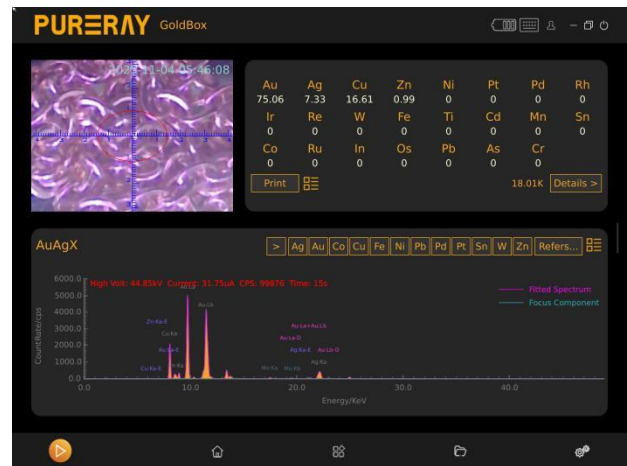
● 24K Gold



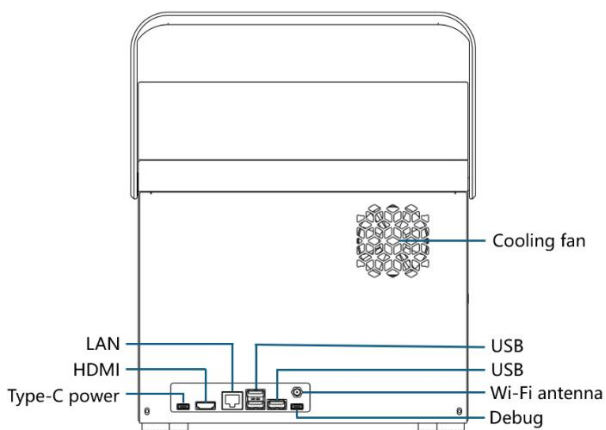
Right



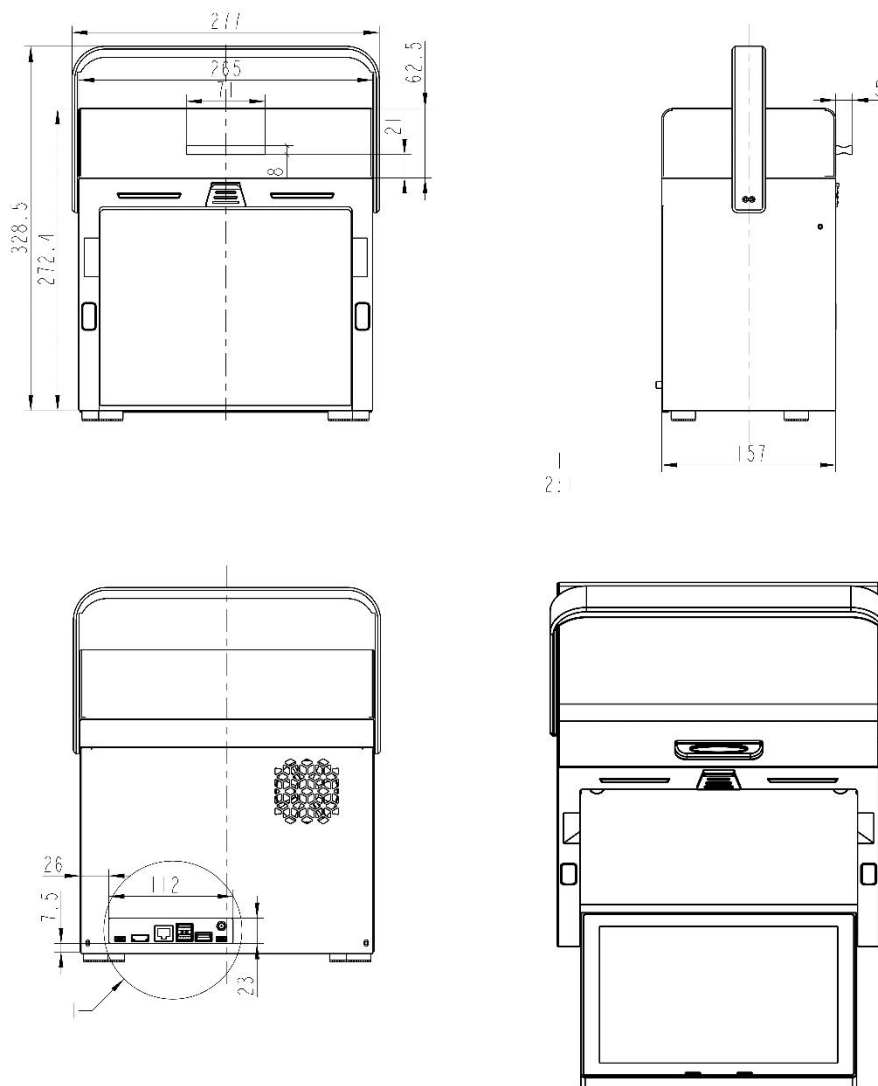
● 18K



Back



Product Dimension



Maintenance

- **GoldBox** should be placed in a dry environment at a normal temperature. If it will not be used for a long time, please unplug the power cable and cover the machine with a dust cover.
- If there is any visible dirt on the metal shell of the spectrometer, clean it with a diluted neutral detergent and a soft cloth, and then wipe off the moisture with a dry cloth. (Do not use alcohol for cleaning.)
- If the instrument has not been used for a long time, it is necessary to turn on the device to test any sample for 30 minutes once a week to keep the X-ray tube dry.

Cautions

- The X-ray remains active during testing and may still be excited briefly after the test is completed. If the sample chamber is opened during testing, the system will immediately stop X-ray generation. If the chamber is opened after testing, the system will cut off power to the X-ray tube to ensure safety.
- The testing film prevents dust from entering the interior of the instrument. Please replace the film if it becomes damaged or worn out.