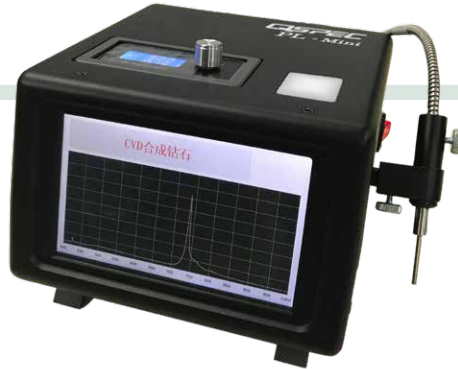




## PL-MINI



PL-MINI is a desktop diamond verification instrument for loose and mounted diamonds, designed to separate natural diamonds, synthetic diamonds and diamond simulants. PL-MINI is manually operated and requires the user to interpret the test results.

PL-MINI use photoluminescence spectroscopy technology where the instrument collects the luminescence spectrum of the stones after they have been excited by laser. The operator makes a qualitative analysis of the instrument readings to determine the nature and type of each stone. Here are examples of the conclusions based on the analysis.

- ◇ Natural Type Ib yellow diamonds
- ◇ Natural type Ia diamonds
- ◇ Natural type IIa diamonds
- ◇ HPHT synthetic diamonds
- ◇ CVD synthetic diamonds

### Stone Testing Capabilities

Weight of stones:	<b>All</b>
Size of stones:	<b>All</b>
Colour of stones:	<b>D-J</b>
Shape of stones:	<b>All</b>
Diamond simulants:	<b>Yes</b>
Mounted stones:	<b>Yes</b> not yet ASSURE Tested

### Instrument Capabilities

Automated feed:	<b>No</b>
Automated results:	<b>No</b>
Automated dispense:	<b>No</b>
Detect or Refer (synthetic diamonds)	<b>Detect</b>
Detect or Refer (diamond simulants)	<b>Refer</b>
Multiple stones at once:	<b>No</b>
Training required:	<b>Yes</b>

### Instrument Performance

The below results demonstrate the performance of the PL-MINI when tested by an Expert Operator:

	Core Sample	Smalls Sample
<b>Diamond False Positive Rate</b> <i>Optimal rate 0%</i>	<b>1.0%</b>	<b>0.5%</b>
<b>Diamond Referral Rate</b> <i>Optimal rate 0%</i>	<b>9.1%</b>	<b>4.1%</b>
<b>Diamond Accuracy Rate</b> <i>Optimal rate 100%</i>	<b>80%</b>	<b>77.9%</b>
<b>Speed</b> <i>Stones tested per hour</i>	<b>517</b>	<b>517</b>

### Instrument Specifications

**18 cm (w) x 15 cm (h) x 9 cm (h)**

**1.3 kg**

**7,500 USD** January 2021

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