



OPTIMUM-I



Optimum-I is a portable desktop diamond verification instrument for loose and mounted stones designed to separate diamonds from synthetic diamonds and moissanite. Optimum-I is manually operated but gives an automatic test result.

The user calibrate the tester then place the loose stone on the stone-tray. Touch the 'START' button on the screen to start testing then place the probe tip onto the stone within the table facet area of the gemstone perpendicularly and Optimum-I will start testing and interpret the results automatically.

Optimum-I makes a measurement and displays one of the following results:

- ◇ Diamond
- ◇ CVD/HPHT
- ◇ Moissanite

Stone Testing Capabilities

Weight of stones:	0.015 ct - 10 ct
Size of stones:	1.5 mm - 13.5 mm
Colour of stones:	D-M
Shape of stones:	Round brilliant cuts & almost all fancy cuts
Diamond simulants:	Yes, moissanite not yet ASSURE Tested
Mounted stones:	Yes not yet ASSURE Tested

Instrument Capabilities

Automated feed:	No
Automated results:	Yes
Automated dispense:	No
Detect or Refer (synthetic diamonds)	Detect
Detect or Refer (diamond simulants)	Detect
Multiple stones at once:	No
Training required:	No review user manual

Instrument Performance

The below results demonstrate the performance of the OPTIMUM-I with the ASSURE Core Sample by a Novice Operator:

	Core Sample	Smalls Sample
Diamond False Positive Rate Optimal rate 0%	3.5%	
Diamond Referral Rate Optimal rate 0%	4.3%	
Diamond Accuracy Rate Optimal rate 100%	95.7%	
Speed Stones tested per hour	133	

The ASSURE Core Sample consists of 1,000 loose diamonds, 200 loose synthetic diamonds and 200 loose diamond simulants. The stones are 0.02ct to 0.20ct in D-J colour.

Instrument Specifications

 **5.7 cm (w) x 17.75 cm (d) x 3 cm (h)**

 **0.16 kg**

1,190 USD December 2020

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