



GemPen®



GemPen® is a handheld diamond verification instrument for loose and mounted stones, designed to separate diamonds from synthetic diamonds. It is suitable for field gemmologists, diamond buyers, wholesalers, and retailers.

The user manually places stones in a case that function as a darkroom. After GemPen® is turned on and directed towards a gemstone, a fluorescing effect will occur. By manually analysing this effect, with guidance from the GemPen® Diamond Map and online GemPen®, the user can determine if the stone is a natural diamond or a synthetic diamond.

Stone Testing Capabilities

Weight of stones:	All
Size of stones:	All
Colour of stones:	D-M
Shape of stones:	All
Diamond simulants:	No
Mounted stones:	Yes not yet ASSURE Tested

Instrument Capabilities

Automated feed:	No
Automated results:	No
Automated dispense:	No
Detect or Refer (synthetic diamonds)	Detect
Detect or Refer (diamond simulants)	N/A
Multiple stones at once:	Yes
Training required:	Yes through an online education platform

Instrument Performance

The results demonstrate the performance of the GemPen® tested by an expert operator:

	Core Sample	Smalls Sample
Diamond False Positive Rate <i>Optimal rate 0%</i>	15.1%	4.7%
Diamond Referral Rate <i>Optimal rate 0%</i>	N/A	N/A
Diamond Accuracy Rate <i>Optimal rate 100%</i>	98.7%	99.5%
Speed <i>Stones tested per hour</i>	813	813

Instrument Specifications

24 cm (l) x 3.6 cm (w) x 3.2 cm (h)

0.4 kg

2,300 USD April 2019

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