

SSEF 

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Manual for the SSEF Diamond Spotter and its illuminator



Layout

1. SSEF diamond spotter package
2. SSEF diamond spotter principle
3. SSEF diamond spotter description & specifications
4. SSEF illuminator description & specifications
5. Using the SSEF diamond spotter with its illuminator
6. Ordering SSEF diamond spotter and its illuminator

SSEF diamond spotter package

Power source
cable for SSEF
Illuminator



SSEF Diamond Spotter

SSEF Illuminator
(SWUV light source)



UV protection glasses



Special adaptor to test
diamonds in rings

SSEF 

SSEF diamond spotter principle

The SSEF diamond spotter together with its illuminator enables the separation of diamonds that are transparent at short wave ultraviolet light (SWUV) from diamonds that are not transparent to SWUV.

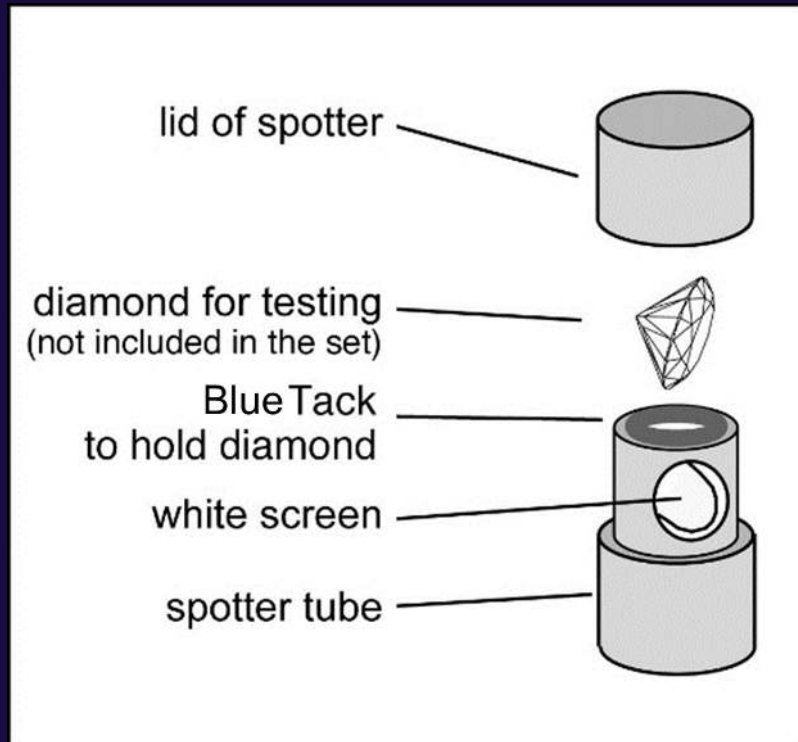
SWUV transparent diamonds are either:

- type II diamonds (type IIa and type IIb) or
- pure type IaB diamonds (containing only B aggregates).

When they are colourless, these two types of diamonds might be HPHT treated, hence the importance of separating SWUV transparent diamonds from other diamonds.

Infrared spectrometry is a more expensive method, used in gemmological laboratories to determine the type of diamonds, but the SSEF diamond spotter enables a critical separation at low cost.

SSEF diamond spotter description & specifications



The white screen is covered with a fragile powder that has the property to glow green when illuminated by SWUV light.



Note: Touching or scratching the white screen will affect the spotter efficiency.

SSEF diamond spotter description & specifications



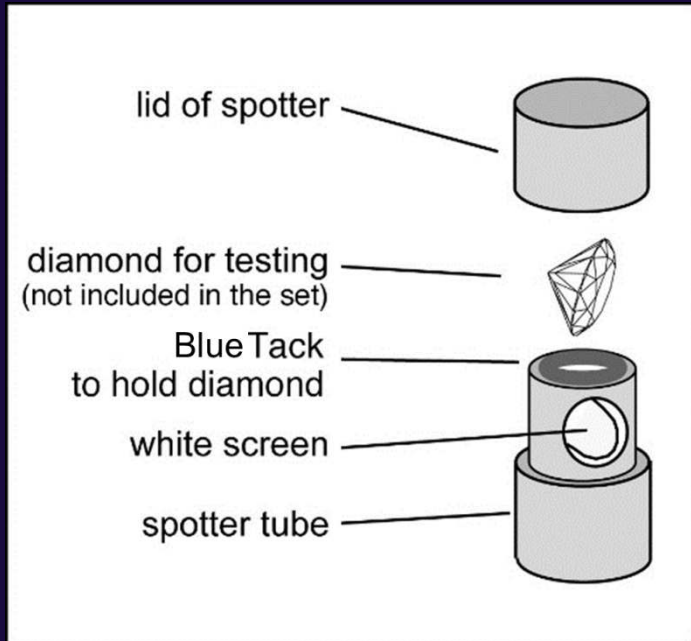
Before switching on the illuminator, make sure you and any person close by the illuminator are wearing UV protective goggles (delivered together with the illuminator).

We suggest you use the spotter in dark surroundings.



The illuminator provides SWUV light which is harmful to the human eye. Do not look at the light provided by the illuminator!

Using the SSEF diamond spotter with its illuminator



Place the diamond as shown on the diagram above, so that the SWUV light enters the diamond from a pavilion main and exits the diamond from an opposite crown main facet.

Using the blue tack, make sure that SWUV is directed to the diamond and does not reach the white screen directly.



Using the SSEF diamond spotter with its illuminator

Switching on the illuminator, will emit SWUV light (user shall wear protective goggles).
There are now two possible results:

	Result 1	Result 2
Observation of the screen	No green spot is observed on the screen (the screen remains white).	A green spot is visible on the screen of the spotter.
Interpretation	The diamond absorbs SWUV light.	The diamond is transparent to SWUV light.
Further understanding	The diamond is either of type Ib, type IaAB. Thus its colour is natural.	The diamond is either of type II or type IaB and thus is either of natural colour or HPHT treated. Further tests are required to determine whether the colour of this diamond is natural or not.

Ordering the SSEF diamond spotter and its illuminator

- SSEF Type II diamond spotter™
- SSEF diamond illuminator™
- and ultraviolet protective glasses (for free)

are available

in the USA:
GemstonePress

for orders & information:
Fax. +1-802 457 4004
e-mail: sbear@gemstonepress.com
Internet: www.gemstonepress.com

rest of the world:
SEEF Swiss Gemmological Institute

for orders & information:
fax. +41-61-262 06 41
e-mail: admin@ssef.ch
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