GemSpec

Gem Spectroscopy Solution

Application Areas

It helps to identify gemstones based on their spectral pattern and to analyze chromophores causing certain colours. It is probably the most important low cost diamond testing tool as it is capable to detect the Cape lines (98% of natural diamonds are Type Ia), the GR-1 band of irradiated diamonds, the Si center often seen in CVD grown diamonds (in many cases without LN cooling), possible HPHT treatments, whether green jadeite is naturally coloured or spinel is synthetic or heat treated and much more.

The unique gem light holder is mounted directly onto the spectrometer allowing fast real-time spectral analysis and bulk testing of both rough and faceted gemstones. It also has a built-in diffraction order sorting filter for elimination of second order effects when used with UV and laser excitation sources (PL spectroscopy, photoluminescence = fluorescence, phosphorescence). The Gem Spectrometer replaces the traditional hand-held spectroscope avoiding potential eye damage under strong halogen light.

Teksan Co.

Light Spectroscopy Instruments

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TEKSAN
Detect Precisely

Features and Specifications

- **Weight:** 520 grams
- **Dimensions:** 170 mm x 84 mm x 59 mm
- **Detector:** Toshiba TCD1304DG linear array – **Pixels:** 3648 Pixel size: 8 um x 200 um
- **Range:** 300 – 1000 nm (optimized for VIS-NIR 400 – 950 nm range)
- **Signal-to-noise ratio improved: 500:1,** 16 bit A/D resolution; fast onboard averaging
- Diffraction order sorting filter for elimination of second order effects (PL spectroscopy)
- **NEW:** upgrade-able motherboard with "Point & Shoot" software version 3.x and integrated spectral library of over 250 gem references of Gemstones, Diamonds and PL405 spectra (search function experimental).
- **Wavelength and Optical resolution:** 300-1000 nm **< 1 nm**
- **Exposure time:** 2.5 ms-10 s CCD reading time: 14 ms Data transfer speed: 200 ms / 100 ms (2 points binding)
- **Fiber optic connector:** SMA 905 to 0.22 numerical aperture single-strand optical fiber
- **Power consumption:** 200mA @ 5V from computer interface: USB 2.0, HID 2.0 (USB cable included)
- **Operational system:** Windows XP/Vista/Windows 7/8/10 (32/64 bit) – no additional software installation required.

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SERVICES AVAILABLE

Technical Support

Installation and Setup

Maintenance

Application Support

Hardware Support

Guaranteed Warranty

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