# Sensegood Spectrophotometer – PocketSpectro –



www.sensegoodinstruments.com

## Specifications

## General specifications

| Spectral display range          | 400 – 700nm (on instrument display)   |
|---------------------------------|---|
| Field of view                   | 8mm diameter  |
| Spectral resolution             | 1 nm throughout the spectra   |
| Average measurement agreement   | 0.3 ∆E* CIELab typical  |
| Principle                       | Visible spectral reflectance measurement, contact as well as non-contact type                         |
| Illumination source             | Complementary compensating full spectrum long life LEDs, 98+ CRI                                      |
| Illumination source life        | About 20 years  |
| Measurement duration            | < 0.5 second  |
| Computer interface and software | Computer interface utility – SensegoodSmart<br>Interface: Wired communication using USB interface.    |
| Power supply                    | Direct from computer's USB port   |
| Power consumption               | Low power consumption: 0.5 Watts peak during measurement operation.                                   |
| Niche electronics               | Over voltage protection   |
| EMI                             | Extremely suppressed Electromagnetic Interference (EMI)<br>Strongest frequency component is 80dB down |
| Operating Humidity Range        | 0% to 85% (non-condensing)  |
| Operating Temperature Range     | 10°C to 40°C  |
| Storage Temperature Range       | -20°C to 60°C   |
| Color                           | Black   |
| Instrument dimensions           | 6 cm x 5.5 cm x 4 cm  |

### SensegoodSmart Utility features

Easy to setup, easy to use.

Once initialized, the utility does fully automated operation, it automatically detects the new measurement data, no commands/ no buttons to be clicked for fetching the data from the instrument. Separate sub-screens for spectral graph, color data table, color indices, and color difference and match percentage.

Measurements and the Reference data can be saved in the computer using the export facility in the software. The data can be converted to the image (.jpg) and pdf file and further can be printed, saved, or shared.

Supports data portability using export and import of .sego measurement data files.

User can input desired information like: company details, operating station, sample description, batch and lot number, sample supplier details. Such information becomes a part of generated files like .jpg, .pdf, .sego; and the information can be retrieved by anybody to whom this file is shared with. This helps in supervision, tracing and documentation.

Determine color difference between reference and the sample. Using this utility, multiple color references can be saved to the computer and later the desired reference values can be loaded into the instrument for comparing the color of a reference with the sample under test.

Indication of whether the sample is Lighter/Duller, Redder/Greener, and Yellower/Bluer than the reference.

Shows calculated Match%,  $\Delta E^*$ ,  $\Delta L^*$ ,  $\Delta a^*$ ,  $\Delta b^*$ 

It has Settable Alarm Limit (color tolerance).

Displays Match% value in green (Pass indication) if it is greater than the set Alarm Limit.

Displays Match% value in red (Fail indication) and plays audible alarm if it is less than the set Alarm Limit.

Color indices: Whiteness index CIE, Whiteness index Hunter, Whiteness index Stensby, Yellowness index (YI), Baking contrast unit (BCU), Tomato color index (TCI), Ripening index a\*/b\* and b\*/a\*, Citrus color index (CCI), Citrus number (CN), Citrus red index (CR), Agtron Commercial, Agtron Gourmet, Probat Colorette scale, ColorTrack scale

Color attributes: XYZ, Yxy, CIE L\*a\*b\*, CIE L\*C\*h0, CIE L\*u\*v\*, Hunter Lab, CCT - color temperature, peak wavelength, RGB, rgb, CMYK, Hex color code

Graphical representation of spectra for 400nm to 700nm with 1nm resolution

Software triggered Single Measurement

**Real Time Analysis** 

Create a database. Find a closest match from the database

Color based grading – user programmable color grades

Using SensegoodSmart utility one can export .csv data file containing spectral data from 380nm to 1100nm with 1nm resolution. Using any analytical tool like Matlab or similar, one can import .csv file and use it for further analysis. This feature is particularly developed for the researchers and university students.

We offer this utility with life time license which is further eligible for future software updates.

#### Sensegood Spectrophotometer is standardized

- Supports: Commission Internationale de l'éclairage (International Commission on Illumination) CIE1931, CIE1964 and CIE1976.
- Supports: Citrus scores and other color indices standardized by USDA (US Department of Agriculture) and USFDA (US Food and Drug Administration).
- Follows guidelines: Instrumental Color Measurement by American Association of Textile Chemists and Colorists (AATCC).
- Supports: Agtron number which is standardized by SCAA (Specialty Coffee Association of America).

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