

ONELIGHT SPECTRA (NEAR INFRARED) SPECIFICATIONS

PRODUCT DESCRIPTION

ANY SPECTRUM
ANY INTENSITY
ANY TIME

ONELIGHT



System Requirements

Standard Hardware

Standard Software

OneLight® Spectra is a spectrally programmable light engine for NIR range (600-1100nm) imaging needs. It can provide any desired mix of NIR wavelengths and can control the intensity at each wavelength independently. With ability to respond faster than most imaging systems, OneLight Spectra improves research performance as well as test and measurement. Using thousands of user-defined spectral profiles, OneLight Spectra eliminates the need for many costly light sources and filters; reducing the cost of components, eliminating repeated manual calibrations, improving time to market and time to publication for test results.

- ✓ Ideal for adding **NIR SPECTROSCOPY** to existing imaging systems
- ✓ Enables NIR spectral and **HYPERSPECTRAL IMAGING (HSI)**
- ✓ Enhanced **NIR CHARACTERIZATION** (QA, materials)

The OneLight Spectra NIR provides high-speed software control of output spectrum, intensity, exposure time and timing sequences. Liquid light guide connections are compatible with many existing optical adapters. The application software allows users to control the instrument functions via a computer equipped with a standard USB 2.0 interface and high speed synchronization to other equipment via opto-isolated TTL I/O. A software Application Programming Interface (API) can be used to program custom applications. Spectra can be created and loaded on the fly based on response from image sensors.

- Instantaneous dynamic control of color, exposure and intensity
- Increased dynamic range of measurement
- Increased measurement sensitivity
- Built-in optical feedback for monitoring and calibration
- Elimination of repeated calibrations
- Sequential loading of multiple spectra
- Easy connectivity to existing equipment (opto-isolated TTL I/O)
- Manufactured in ISO 9001:2000, AS9100B facility - FDA registered for medical devices

Windows XP or higher (32-bit mode only)

OneLight Spectra Light Engine (uses highly reliable 100,000 hour MTBF Texas Instruments DLP chip), power cord and USB cable.

SpectraGen Control software

[Video demo's at www.youtube.com/onelightcorp]

Documentation Included

OPTIONAL ACCESSORIES

Equipment

Software

PERFORMANCE

Output Intensity

Spectral Resolution

Spectral Range Options

Spectral Accuracy

Intensity Control Levels

Stray Light (Contrast)

Spectrum Rate

Exposure Time

Modulation Frequency

Operating Conditions

Electrical Requirements

Equipment Dimensions

Equipment Weight

Regulatory Compliance

Note- all specifications are believed to be accurate at time of printing, but specifications are subject to change as a result of design modifications or additional information

OneLight Spectra Installation & User Guide, Factory calibration with wavelength calibration and output intensity profile

Feedback spectrometer (needed for calibration or feedback control, if desired), replacement lamp cartridge, light guide, power meter, microscope adapters (see Accessories data sheet for details).

Software Development Kit (SDK)

LabVIEW SDK and Drivers

Functional Source code examples (sequencing, tuner, all functions, calibration)

250 mW full spectrum; 0.6 mW/nm typical, 1.2 mW/nm peak

(at output of 5mm light guide, 20 nm resolution, standard 500 nm grating)

20 nm [Slit A] standard, 30 nm [Slit B] optional

Antireflection coated for 600 – 1100 nm

(range depends on diffraction grating chosen – 500nm range shown below)

+/-1 nm when calibrated

Greater than 65,000 (in a 20nm band), Flicker < 1%

0.0012, (850 : 1)

Up to 7,000 spectra/second from computer (up to 3000 with no pre-loading)

Programmable to 140µs

Up to 3.5 kHz

Temperature 5-35°C Relative Humidity 20%-90%

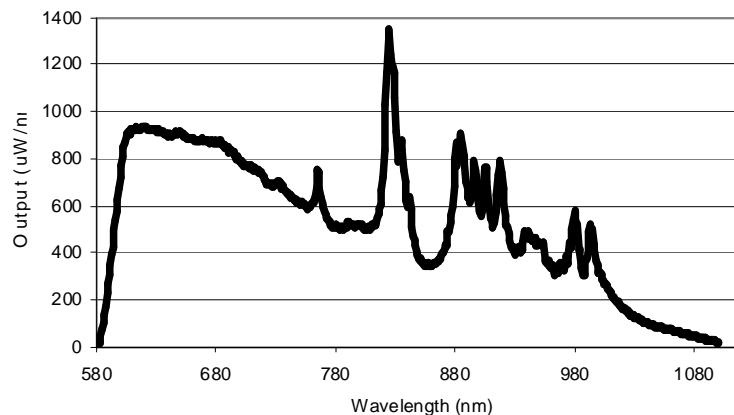
100-240 VAC, 50/60Hz, 700W

D43 x W24 x H39 cm (add 5cm to D for light guide connector nosepiece)

17 kg/ 37 lbs

CE Marked & Certified to EN 55011:2001, EN 61326-1:2006

OneLight Spectra NIR Output



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ONELIGHT
CONTROL MADE SIMPLE