Datasheet iQ-LED

www.image-engineering.de

Principle	LED based spectral broad band light source
Light sources	80 LEDs, separated in two white channels (~5000K, ~3500K) and 20 color channels (Spectral range: 400 – 820 nm) intensity of each channel controllable in 1000 steps via 32 khz PWM
Spectral measurement	closed loop functionality with calibrated mini spectrometer via control SW (Spectral Range: 350 – 870 nm / Resolution: 2048 pixel)
Control System	Software based control system via USB, C++ API available
Approximately lifetime	10.000h
Included standard illuminants	D50, D55, D65, D75, B, C, A Planckian spectral curve by selected temperature (1900 K up to 18.000 K) The iQ-LED technology is optimized for best spectral match and allows CRI values up to 99, depending on illuminant and intensity.
Illumination stability for most applications*	+/- 2%
Response time (switch illuminant)	< 50 ms
Output data	Real time measurement of spectral trend, CCT, CRI, Illumination and radiant power, while closed loop link with micro spectrometer
Maximum / Minimum illumination values	depending on application and illuminant
Dimmable	Software based dim function by presetting intensity (lux / watt), while closed loop link with micro spectrometer
Warm up time	< 2 min. at optimal ambient temperature
Operating ambient temperature range	Optimal: 22° to 26° degrees Celsius / Maximum: 18° to 28° degrees Celsius
Computer requirements	PC with Windows 7 operating system (or higher) / USB port

Power supply	12 V
Dimension	10 cm x 10 cm x 6 cm iQ-LED PCB incl. CAN-USB connector board
Weight	0.4 kg
Delivery includes	Starter bundle version: 1 x iQ-LED, power supply, 1 x CAN-USB connector board, USB cable, power supply, calibrated micro spectrometer, control software Add on version: 1 x iQ-LED, CAN cable, power supply
Features	Auto generation of external measured spectra, creation or adaptation of spectral trends via 22 software controlled LED channels, save and load function of self-defined spectral arrangements or intensities, creation of test sequences, C++ API available

* measured for all predefined standard illuminants at optimal ambient temperature