



Principle	High power SMD-LED based spectral broadband light source to build your own spectral programmable illumination device
Light sources	41 SMD high power LEDs / separated in 20 color channels / Spectral range: 380 – 820 nm / Intensity controlled via 4000 steps per channel and 32 kHz PWM (switchable to 1000 steps with 128 kHz) / Typical LED spectra on request
Spectral measurement	Closed loop functionality with calibrated mini spectrometer via control SW (Spectral Range: 350 – 870 nm / Resolution: 2048 pixel / FWHM: 2.4nm)
Control system	Software-based control system via USB, C++ API available (with connected PC) Storage of up to 44 different illuminants, one sequence, and default light source, controllable via microswitch controller (without connected PC)
Approximate lifetime	10.000 hrs.
Included reference illuminants	D50, D55, D65, D75, A, B, C, E Planckian spectral curve by selected temperature (1900 - 18000 K) The iQ-LED technology is optimized for the best spectral match and allows CRI values up to 99, depending on illuminant and intensity
Illumination stability for most applications	+/- 1 % when stabilized (2 % after switching D illuminants while the first 5 seconds)
Response time (switch illuminant)	< 50 ms
Output data	Real-time measurement of the spectral trend, CCT, CRI, illumination, and radiant power, with closed loop link with micro-spectrometer
Maximum / Minimum illumination values	Depending on application/installation and illuminant (iQ-LED bundle comes as components WITHOUT any diffuser or sphere to mix the separated LED light channels) – For intensity examples, please see other Image Engineering iQ-LED products



Dimmable	Software-based dim function by presetting the intensity during a closed loop link with the micro-spectrometer or stored with different intensity illuminants on device
Warm up time	< 2 min. at an 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 / 100 W
Dimension	100 mm x 105 mm x 76 mm iQ-LED PCB incl. CAN-USB connector board
Weight	0.5 kg (Only iQ-LED V2 device)
Delivery includes	<p>Starter bundle version:</p> <p>1 x iQ-LED V2, 1 x CAN-USB connector board, 1 x micro switch controller board, USB cable, power supply, calibrated micro-spectrometer (detailed specs see EX2 VIS datasheet) with 1m metal coated fiber, control software</p> <p>Add on version:</p> <p>1 x iQ-LED V2, CAN cable, power supply</p>
Features	<ul style="list-style-type: none"> • Auto-generation of standard illuminants or externally measured spectra • Creation or adaptation of spectral trends via 20 LED channels • Save and load function of self-defined spectral arrangements or intensities • Storage of illuminants/sequences on device • Creation of test sequences • Real-time display of spectral measurement • Real-time calculation of CCT, CRI, curve fit and illumination level