

ModuLight

Programmable lightsource



- Photo-electric devices
- Solar cells
- Absorption
- Biotechnology

The ModuLight: add-on light module for Ivium Potentiostats

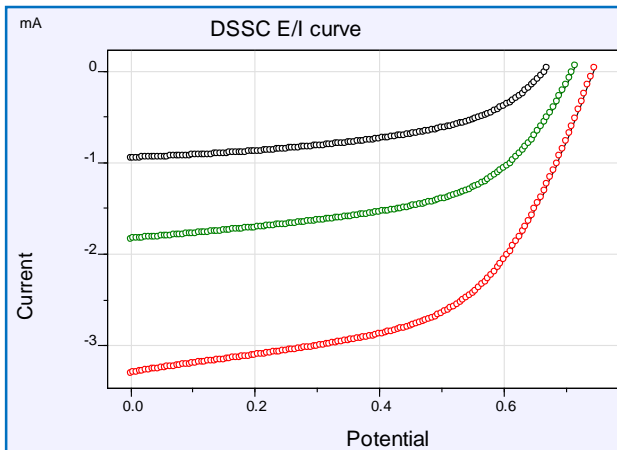
- Especially designed for solar cell research
- Intensity modulation: 10 μ Hz – 2 MHz
- 7 LEDs in each ModuLight, choose any one at a time

*LED Specifications @ 100% Nominal Current
Specifications and configuration subject to change*

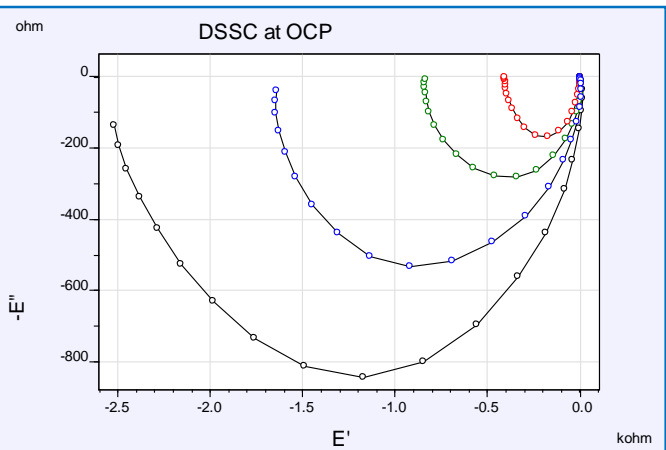
Mode	Color	Wavelength [nm]	Power	Digital Code
1	Cool White	5500 K	250lm	IIO
2	Blue	460	40lm	IOI
3	Green	523	200lm	IOO
4	Amber	590	105lm	OII
5	Red	623	160lm	OIO
6	Deep Red	660	900mW	OOI
7	Far Red	740	705lm	OOO
	Cool White	6500K	250lm	Optional
	Violet	405	1400mW	Optional
	UV	365	1470mW	Optional
	IR	940	1150mW	Optional
	IR	850	800mW	Optional
	Dental Blue	460	1100mW	Optional

Solar cell testing

E/I curves at various light intensities:
 o 15 lm, o 30 lm, o 60 lm



IMVS photo-electric-impedance at OCP, at various light intensities: o 15 lm, o 18 lm, o 23 lm, o 30 lm



Screenshot of the solar cell modelling circuit, using the 60 lm intensity curve: 0

Specifications

Light intensity	Can be modulated with the FRA-output of the Ivium potentiostat; Range: 10µHz to 2 MHz
Bias resolution	16 bit, 0.0015%
Wavelength	Programmable in seven steps: 460-740 nm (standard model)
Bandwidth	> 2 MHz
Light aperture	Circular; d=34mm; area = 9.08cm ²

Power requirements	External adapter: 100-240 V, 45-65 Hz at DC connector: 5 V, 1A
Size	w x d x h = 12 x 13 x 2.5 cm
Weight	0.5 kg
Interfacing/connectivity	HD37, connects to the potentiostat peripheral port
Use	Only i.c.w. Ivium potentiostats

