



EvoluChem Light Sources



Description:

The EvoluChem™ LED spotlights are designed specifically for photo-catalytic chemistry applications. They fit all of the EvoluChem™ PhotoRedox boxes and are designed to irradiate all samples with maximum efficiency. The LED chips are selected for specific wavelengths of 365 nm, 405 nm, 425 nm, 455 nm, 475 nm, 525 nm, 650 nm, 740 nm, and 6200K white.

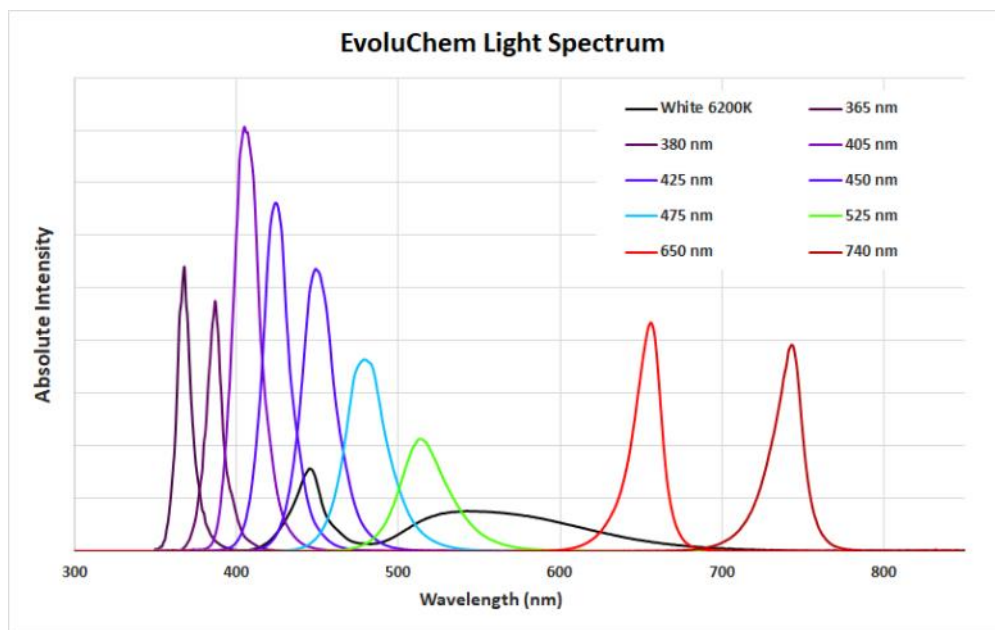
General Specifications

Power Consumption	18W or 30W Max
Input Voltage	100-240 VAC
Beam Angle	25°
Wavelength Options	365 nm, 380 nm, 405 nm, 425 nm 455 nm, 475 nm, 525 nm, 650 nm, 740 nm, 6200K white
LED chip	CREE, EPILED and LG

EvoluChem™ LED



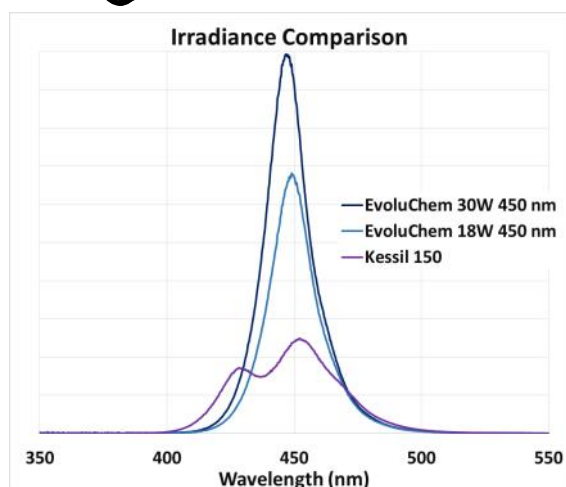
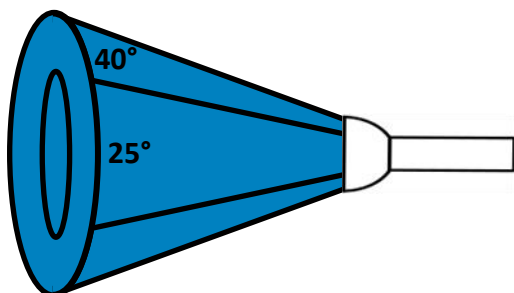
EvoluChem LED 18W





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Advantage of Focused Light Beam



Light Power vs Irradiance

Although the total power of LED light is important, it is essential to estimate the amount of light that actually goes on the sample. If the light is spread over a large area, the density of light (irradiance) on the sample will be little. Therefore we designed the EvoluChem™ LEDs to focus the light toward the samples. They have a light beam angle of 25° which allows to obtain better light efficiency than the Kessil light (40°).

With a more focused beam, the EvoluChem LED 18W on average have an irradiance which is 50% higher than a 34W

Light Sources	Electric Power (W)	Total Irradiance (mW/cm ²)
Kessil 150N	34W	22
EvoluChem 18W 450 nm	18W	34
EvoluChem 30W 450 nm	30W	55

Light Source	Wavelength	LED	Part Number	Relative Irradiance*
EvoluChem 18W 365 nm	365 nm	LG	HCK1012-01-011	9 mW/cm ²
EvoluChem 18W 380 nm	380 nm	LG	HCK1012-01-013	8 mW/cm ²
EvoluChem 18W 405 nm	405 nm	LG	HCK1012-01-010	28 mW/cm ²
EvoluChem 18W 425 nm	425 nm	EPILED	HCK1012-01-012	33 mW/cm ²
EvoluChem 18W 450 nm	450 nm	CREE XPE	HCK1012-01-002	34 mW/cm ²
EvoluChem 18W 475 nm	475 nm	CREE XPE	HCK1012-01-003	23 mW/cm ²
EvoluChem 18W 525 nm	525 nm	CREE XPE	HCK1012-01-004	10 mW/cm ²
EvoluChem 13W 650 nm	650 nm	EPILED	HCK1012-01-014	20 mW/cm ²
EvoluChem 13W 740 nm	740 nm	EPILED	HCK1012-01-015	20 mW/cm ²
EvoluChem 18W white	Cold White 6200K	CREE XTE	HCK1012-01-005	29 mW/cm ²
EvoluChem 30W 365 nm	365 nm	LG	HCK1012-01-006	25 mW/cm ²
EvoluChem 30W 450 nm	450 nm	CREE XPE	HCK1012-01-008	55 mW/cm ²



EvoluChem 450 nm LED 30W
HCK1012-01-008

*Average relative irradiance is measured in the PhotoRedox box.