

ELPL VS-2 180W, 16 BAND, LED GROW LIGHT



The EconoLux ELPL VS-2, 180W, 16 band LED grow light is our entry level LED, variable spectrum, Plant/Grow light. It produces 602 PAR/PPFD* at a distance of 30 cm (1 ft) - that's 3.34 PPFD/Watt!

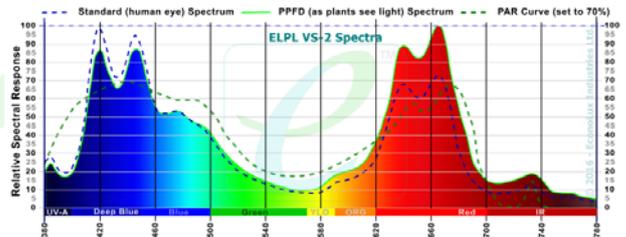
It features a relatively close match to the PAR curve (the light spectrum that plants need to maximize growth), with a slightly red-heavy spectrum, making it ideal for general purpose growing, or for flowering/fruiting plant growing. It has 2 dimmers that control blue and red light which allows you to adjust the spectrum for the germination/vegetative phase of growth, or for the flowering/fruiting growth phase.

Give your plants the right spectrum they need for best growth and maximum crop yield!

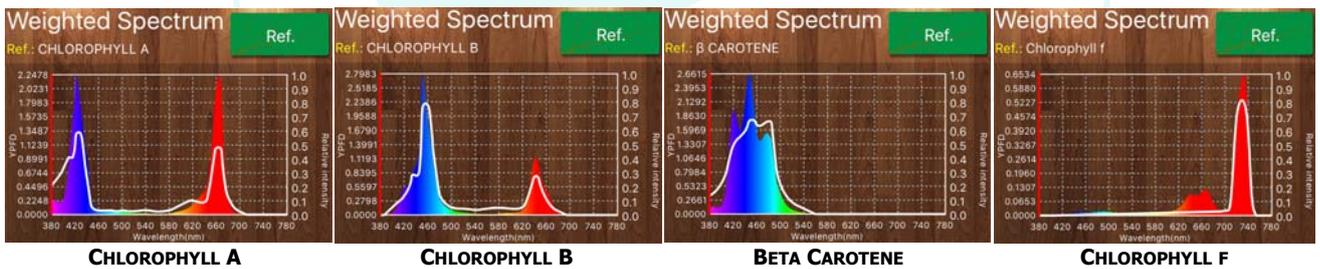
ELPL VS-2 180W, 16 BAND, LED GROW LIGHT - FEATURES

Spectrum:

The ELPL VS-2 has a reasonably close match to the PAR curve - the spectrum of light that plants need to thrive. The chart on the right (see larger version on next page) shows the VS-2 standard spectrum as the human eyes sees it (dashed blue line), and the PAR curve (dashed green line) set to 70%; overlaid onto the VS-2 PPFD* spectrum (the light that plants use) with both dimmers set to 100%.



The graphs below (from our plant/grow light spectrometer), measuring in PPFD (PAR)*, shows comparisons of the ELPL VS-2 spectrum to standard curves for Chlorophyll, and Beta Carotene, the light absorbing compounds in plants responsible for growth. The VS-2's match to these curves is very close.



Dimmers: The ELPL VS-2 is equipped with two dimmers for independent control of the brightness of the Blue and Red light. This allows you to give your plants the spectrum they need to maximize plant growth and crop yield.

Bands/Wavelengths: The ELPL VS-2 uses 14 different bands (wavelengths) of high efficiency 3 Watt LEDs, plus white, plus our proprietary Broadband-Red (B-R) LED chips; 16 bands (wavelengths) in total, to ensure the best spectrum. Twice as many bands as used in most typical high end LED grow lights.



Optics: Each of the 60 LEDs in the ELPL VS-2 is equipped with a lens, with 90 degree beam-spread. These lenses insure that the maximum light is projected onto your plants.



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AC Power: The VS-2 can operate on 100V to 250V, 50/60 Hz AC power, making it suitable for use in almost any country. The AC power input socket has an integrated RFI/EMI filter to reduce problems from “dirty” power. The VS-2 uses a standard IEC computer type connector, making it easy to obtain power cables locally. In addition, the VS-2 has an IEC power output socket so that you can daisy chain fixtures together.

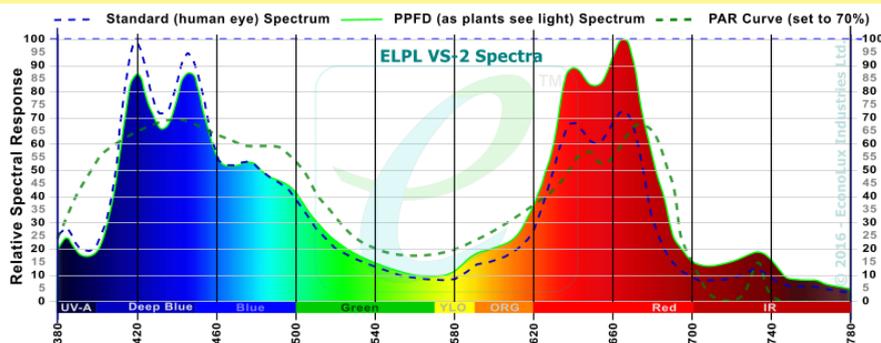
Hanging Points: The VS-2 is equipped with 4 heavy-duty hanging points on the back for suspending the light over your plants. We provide 4 cables with clips, for use with the hanging points.



Sensor: The Vs-2 is equipped with an internal sensor that turns off the LEDs if their temperature exceeds 70 degrees C (158F), to protect your fixture against damage.

ELPL VS-2 180W LED GROW LIGHT - TECHNICAL SPECIFICATIONS

SPECTRUM: The chart on the right shows the VS-2 standard spectrum (as the human eyes sees it - dashed blue line), and the PAR curve (dashed green line) set to 70%, overlaid onto the VS-2's PPF^{*} spectrum (light the plants use for growth), with both of the dimmers set to 100% (Blue & Red dimmers on full).



Parameter	Value	Notes
Nominal Wattage:	180 Watts	0.76A @ 220 VAC - PF = 0.95
AC Power Input:	100 ~ 250 VAC, 50/60 Hz	“Universal” Type power supply/Driver
Controls:	On/Off Switch; 2 dimmers	Master On/Off switch; Blue dimmer and Red dimmer
Lifespan (Hours):	50,000 ~ 55,000 Hours	2 year limited warranty
Bands / Wavelengths:	16 Bands	White, UV-A, Deep Blue, Blue, Green, Yellow, Orange, Red, Proprietary Broadband Red, and IR
Lumen Output:	2,583.3 Lumens	Measured with a CIE calibrated (standard) light meter
Average PAR/PPFD*:	602.8 $\mu\text{mol}/\text{m}^2/\text{s}^\#$	1,011.9 @ 15cm (6"); 602.8 @ 30cm (12") using a PPF [*] meter
Useful Light Output:	85%	Percentage of light useful for plant cultivation
Blue/Red Ratio (adjustable):	B6 : R10 (at 100%)	Blue/Red output ratio depends on dimmer settings
Certifications:	CE RoHS	CE, & RoHS certified LED drivers
Accessories:	Hanging cables with clips	4 pieces, 33cm long, aircraft-wire hanging cables w/ clips
Usage Location:	Indoor use ONLY	NOT waterproof or water resistant (fan vents on top)
Cooling:	Fan cooled	2 fans on the top; internal over-temp cut-off sensor at 70C
Dimensions:	50 cm X 26 cm X 9 cm	(19.6" X 10.2" X 3.5"); Package 61cm X 29.5cm X 15cm

Note: PAR/PPFD* output will vary according to the settings of the Blue and Red dimmers - The measurements shown above are for both dimmers set to full output (Blue = 100%; Red = 100%)

* PPF^{*}: Lighting for plants is different from lighting for humans. Light energy for humans is measured in lumens, with light falling onto a surface measured as illuminance with units of lux (lumens per square meter) or footcandles (lumens per square foot). Light energy for plants, on the other hand, is measured as **photosynthetic active radiation (PAR)**, with light falling onto a surface measured as **photosynthetic photon flux density (PPFD)**. - http://docs.agi32.com/AGI32/Content/adding_calculation_points/PPFD_Concepts.htm

NOTICE: Specifications & dimensions subject to change due to continuous product improvements