

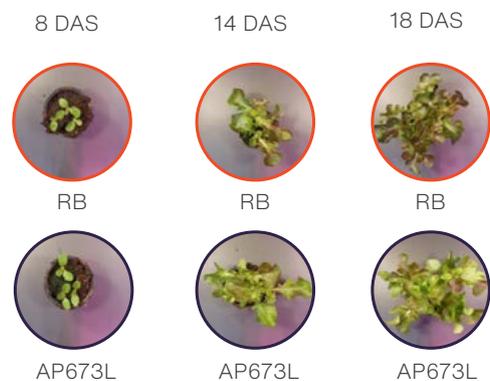
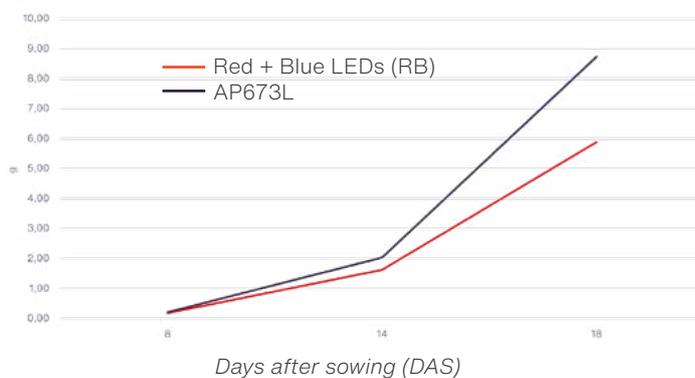
LEDs for
**Vertical
Farming**

More Plant Biomass

In a trial on lettuce, Valoya's AP673L spectrum produced 48% more yield than the competitor's LED product.

This is because AP673L has been optimized to boost the vegetative phase of plant growth and to delay flowering.

Fresh weight of Baby Leaf Lettuce $200\mu\text{mol}/\text{m}^2/\text{s}-1$



All Valoya spectra contain a wide range of wavelengths, like sunlight, thus feeding more plant receptors than red-blue LEDs or any traditional lighting technology such as HPS or fluorescent would.

Delayed Flowering and Rapid Biomass Build-Up

Due to the spectrum's unique Red:Far Red ratio, flowering is delayed, allowing the plant to focus all its energy into fast biomass development.

For a vertical farmer, being able to harvest even one day sooner might result in the leading position in the market.

Vegetative Growth Spectrum

We have tested more than 60 spectra in over 500 trials thus far to be able to understand and optimize light so it feeds plants with exactly the wavelengths they need.

The result is a nutrient and flavor dense plant produced with a minimal amount of power, creating savings for the grower and minimizing the impact on the environment.

An independent scientific study* has shown that Valoya's AP673L spectrum results in the highest build-up of phenolic compounds i.e. flavor and nutrients.

**Artificial LED lighting enhances growth characteristics and total phenolic content of Ocimum basilicum, but variably affects transplant success (Bantis et al. 2016).*



Minimal heat produced & projected upwards



Light uniformity already at 10 cm above canopy



High CRI light - enables visual inspection of plants

The luminaires have been carefully designed to ensure every light photon is directed toward the plant and not wasted.

The spectrum remains the same even when the luminaire is centimeters away from the plant thus avoiding stretching and overall uneven growth.

We create free-of-charge light plans for our clients and advise them on luminaire count and positioning. Some of the luminaires are chainable thus reducing the cables needed and enabling the farmer to focus on what matters the most, the plant itself.



“We looked at about 6-8 light manufacturers and we found throughout all of the testing, whether it was the yield, flavor or the support and the service, every single time we chose Valoya”

Steven Dring, Growing Underground

A Greater Flavor And Nutrient Build-Up

Virtually No Heat

Uniform Plants

∴ Pictures:
Left page -
GROWx Farm
in Amsterdam.

Right page and
cover
- Growing
Underground
Farm in London.

L-Series (T8 Tubes)

- Lengths (m): 1,2 and 1,5
- Lengths (inches): 47.2 and 59
- Up to 2,1 $\mu\text{mol/W}$
- Up to IP64 (dust and humidity resistant)



C-Series

- Lengths (m): 1,2, 1,5 and 1,8
- Lengths (inches): 46.3, 58 and 69.9
- Dimmable
- Up to 1,8 $\mu\text{mol/W}$
- IP66 (dust and humidity resistant)



For detailed product information, please see our Product Brochure.



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Distributors

You can get Valoya products through one of 30 global distributors. The complete distributor list is available at:
www.valoya.com/contact