



# GROW LIGHT STRATEGIES

The Photontek "LED Grow Light Strategies" is an extensive, in-depth and comprehensive document made by our experienced product development and technical department, to ensure you are making the most out of your Photontek set-up performance per product and grow stage.

This detailed grow strategy blueprint was designed by Photontek for more experienced growers that aim for continuous process perfection and growth efficiency, as well for the hobby grower that is now starting. In both cases, to help growers grow with the best Led Grow Lights in the market. Photontek of course!

Indoor Growing Stages LED Grow Light Strategies <small>By PHOTONTEK</small>		XT 1000W CO2 LED		X 1000W PRO LED		X 600W PRO LED		X 465W PRO LED		SQ200W PRO LED		SQ300W PRO LED	
													
Efficacy   PPF		2.9 $\mu\text{mol}\cdot\text{J}^{-1}$	2925 $\mu\text{mol}\cdot\text{s}^{-1}$	2.9 $\mu\text{mol}\cdot\text{J}^{-1}$	2925 $\mu\text{mol}\cdot\text{s}^{-1}$	2.7 $\mu\text{mol}\cdot\text{J}^{-1}$	1620 $\mu\text{mol}\cdot\text{s}^{-1}$	2.7 $\mu\text{mol}\cdot\text{J}^{-1}$	1256 $\mu\text{mol}\cdot\text{s}^{-1}$	2.5 $\mu\text{mol}\cdot\text{J}^{-1}$	508 $\mu\text{mol}\cdot\text{s}^{-1}$	2.7 $\mu\text{mol}\cdot\text{J}^{-1}$	816 $\mu\text{mol}\cdot\text{s}^{-1}$
Footprint		5' x 5' <sup>(*)</sup>		5' x 6.6' <sup>(*)</sup>		4' x 4' <sup>(*)</sup>		3' x 3' <sup>(*)</sup>		up to 2.6' x 2.6' <sup>(*)</sup>		up to 3.3' x 3.3' <sup>(*)</sup>	
<b>Seedling</b>	Intensity (PPFD)	100-300 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	500-800 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	100-300 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	500-800 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	100-300 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	500-800 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	100-300 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	500-800 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	100-300 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	500-800 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	100-300 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	500-800 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$
Light Quality Full Spectrum	Distance canopy to the light	5'	5'	5'	5'	3.3'	1.6'	3.3'	1.6'	3.3'	12"	3.3'	1.6'
Light Duration 24 ON / 0 OFF until cotyledons are open.	Dimming (Power Consumption)	25% (256 W)	75% (769 W)	25% (256 W)	100% (1025 W)	25% (150 W)	100% (600 W)	25% (116W)	100% (465W)	50% (104 W)	100% (205 W)	50% (155 W)	100% (310 W)
18 ON / 6 OFF seedlings.	Supplemental CO <sub>2</sub> (ppm)	No	Yes ( $\pm$ 800 ppm)	No	Yes ( $\pm$ 800 ppm)	No	Yes ( $\pm$ 800 ppm)	No	Yes ( $\pm$ 800 ppm)	No	Yes ( $\pm$ 800 ppm)	No	Yes ( $\pm$ 800 ppm)
<b>Clones</b>	Intensity (PPFD)	75-150 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	500-800 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	75-150 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	500-800 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	75-150 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	500-800 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	75-150 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	500-800 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	75-150 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	500-800 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	75-150 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	500-800 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$
Light Quality Full Spectrum	Distance canopy to the light	5'	5'	5'	5'	2.6'	1.6'	3.3'	12"	3.3'	12"	3.3'	1.6'
Light Duration 18 ON / 6 OFF	Dimming (Power Consumption)	25% (256 W)	100% (1025 W)	25% (256 W)	100% (1025 W)	25% (150 W)	100% (600 W)	25% (116W)	100% (465 W)	50% (104 W)	100% (205 W)	25% (78 W)	100% (310 W)
	Supplemental CO <sub>2</sub> (ppm)	No	Yes ( $\pm$ 800 ppm)	No	Yes ( $\pm$ 800 ppm)	No	Yes ( $\pm$ 800 ppm)	No	Yes ( $\pm$ 800 ppm)	No	Yes ( $\pm$ 800 ppm)	No	Yes ( $\pm$ 800 ppm)
<b>Mother's</b>	Intensity (PPFD)	400-500 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	500-600 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	400-500 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	500-600 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	400-500 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	500-600 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	400-500 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	500-600 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	400-500 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	500-600 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	400-500 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	500-600 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$
Light Quality Full Spectrum	Distance canopy to the light	3.3'	1.6'	3.3'	1.6'	1.6'	1.6'	1.6'	1.6'	1.6'	1.6'	1.6'	1.6'
Light Duration 18 ON / 6 OFF	Dimming (Power Consumption)	50% (512 W)	50% (512 W)	75% (769 W)	75% (769 W)	75% (450 W)	100% (600 W)	75% (349 W)	100% (465 W)	75% (154 W)	100% (205 W)	50% (155 W)	100% (310 W)
<b>Vegetative</b>	Intensity (PPFD)	400-600 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	800-1000 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	400-600 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	800-1000 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	400-600 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	800-1000 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	400-600 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	800-1000 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	400-600 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	800-1000 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	400-600 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	800-1000 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$
Light Quality Full Spectrum	Distance canopy to the light	3.3'	1.7'	3.3'	1.6'	1.6'	12"	1.6'	12"	1.6'	6"	1.6'	6"
Light Duration 18 ON / 6 OFF	Dimming (Power Consumption)	50% (512 W)	75% (769 W)	75% (769 W)	100% (1025 W)	75% (450 W)	100% (600 W)	75% (349 W)	100% (465 W)	100% (205 W)	100% (205 W)	100% (310 W)	100% (310 W)
	Supplemental CO <sub>2</sub> (ppm)	No	Yes ( $\pm$ 1100 ppm)	No	Yes ( $\pm$ 1100 ppm)	No	Yes ( $\pm$ 1000 ppm)	No	Yes ( $\pm$ 1000 ppm)	No	Yes ( $\pm$ 1100 ppm)	No	Yes ( $\pm$ 1000 ppm)
<b>Flowering</b>	Intensity (PPFD)	800-1000 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	1000-1400 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	800-1000 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	1000-1400 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	800-1000 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	1000-1400 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	800-1000 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	1000-1400 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	800-1000 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	1000-1400 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	800-1000 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	1000-1400 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$
Light Quality Full Spectrum	Distance canopy to the light	3.3'	1'	2'	12"	16"	<12"	6"	6"	12"	4"	16"	<12"
Light Duration 12 ON / 12 OFF	Dimming (Power Consumption)	100% (1025 W)	100% (1025 W)	100% (1025 W)	100% (1025 W)	100% (600 W)	100% (600 W)	75% (349 W)	100% (465 W)	100% (205 W)	100% (205 W)	100% (310 W)	100% (310 W)
	Supplemental CO <sub>2</sub> (ppm)	No	Yes ( $\pm$ 1900 ppm)	No	Yes ( $\pm$ 1300 ppm)	No	Yes ( $\pm$ 1200 ppm)	No	Yes ( $\pm$ 1200 ppm)	No	Yes ( $\pm$ 1200 ppm)	No	Yes ( $\pm$ 1400 ppm)

(\*) For higher coverage areas and higher heights, supplemental CO<sub>2</sub> may not be necessary.

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