



# LUMATEK GROW LIGHT STRATEGIES

**The Lumatek “LED Grow Light Strategies” is an extensive, in-depth and comprehensive document made by our experienced light planners and product development department, to ensure you are making the most out of your Lumatek set-up performance for every product and growth stage.**

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



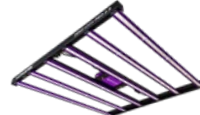
# GROW LIGHT STRATEGIES



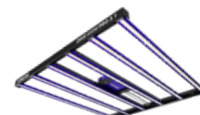
**ZEUS 1000W  
XTREME CO2**



**ZEUS 1000W PRO**



**ZEUS 600W PRO 3.1**



**ZEUS 600W PRO 2.9**



**ZEUS 465W PRO 2.9**

## INDOOR GROWING STAGES LED GROW LIGHT STRATEGIES

**SEEDLING**

**Light Quality**  
Full Spectrum

**Light Duration**  
24h ON / 0h OFF until cotyledons are open.  
18h ON / 6h OFF seedlings.

	ZEUS 1000W XTREME CO2		ZEUS 1000W PRO		ZEUS 600W PRO 3.1		ZEUS 600W PRO 2.9		ZEUS 465W PRO 2.9	
<b>Efficacy   PPF</b>	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 $\mu\text{mol}\cdot\text{s}^{-1}$	3.1 $\mu\text{mol}\cdot\text{J}^{-1}$	1990 $\mu\text{mol}\cdot\text{s}^{-1}$	2.9 $\mu\text{mol}\cdot\text{J}^{-1}$	1770 $\mu\text{mol}\cdot\text{s}^{-1}$	2.9 $\mu\text{mol}\cdot\text{J}^{-1}$	1353 $\mu\text{mol}\cdot\text{s}^{-1}$
<b>Footprint</b>	1.5 x 1.5 m *		1.5 x 2.0 m *		1.5 x 1.5 m *		1.4 x 1.4 m *		1.2 x 1.2 m *	
<b>Intensity (PPFD)</b>	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 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$
<b>Distance from canopy to light</b>	1.5 m	1.5 m	1.5 m	1.5 m	0.6 m	0.5 m	1 m	1 m	1 m	<0.3 m
<b>Dimming (Power Consumption)</b>	25% (256 W)	75% (769 W)	25% (256 W)	100% (1025 W)	25% (155 W)	75% (465 W)	25% (155 W)	100% (620 W)	25% (119 W)	75% (356 W)
<b>Supplemental CO<sub>2</sub> (ppm)</b>	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)

**CLONES**

**Light Quality**  
Full Spectrum

**Light Duration**  
18h ON / 6h OFF

<b>Intensity (PPFD)</b>	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 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$
<b>Distance from canopy to light</b>	1.5 m	1.5 m	1.5 m	1.5 m	1.5 m	0.5 m	0.8 m	1 m	1 m	<0.3 m
<b>Dimming (Power Consumption)</b>	25% (256 W)	100% (1025 W)	25% (256 W)	100% (1025 W)	25% (155 W)	75% (465 W)	25% (155 W)	100% (620 W)	25% (119 W)	75% (356 W)
<b>Supplemental CO<sub>2</sub> (ppm)</b>	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)

**MOTHERS**

**Light Quality**  
Full Spectrum

**Light Duration**  
18h ON / 6h OFF

<b>Intensity (PPFD)</b>	400-500 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	-	400-500 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	-	400-500 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	-	400-500 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	-	400-500 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	-
<b>Distance from canopy to light</b>	1 m	-	1 m	-	0.5 m	-	0.5 m	-	0.5 m	-
<b>Dimming (Power Consumption)</b>	50% (512 W)	-	75% (769 W)	-	50% (310 W)	-	75% (465 W)	-	75% (356 W)	-

**VEGETATIVE**

**Light Quality**  
Full Spectrum

**Light Duration**  
18h ON / 6h OFF

<b>Intensity (PPFD)</b>	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 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$
<b>Distance from canopy to light</b>	1 m	0.52 m	1 m	0.5 m	0.5 m	0.5 m	0.5 m	0.3 m	0.5 m	0.5 m
<b>Dimming (Power Consumption)</b>	50% (512 W)	75% (769 W)	50% (512 W)	100% (1025 W)	75% (465 W)	100% (620 W)	75% (465 W)	100% (620 W)	75% (356 W)	100% (475 W)
<b>Supplemental CO<sub>2</sub> (ppm)</b>	no	Yes ( $\pm$ 1100 ppm)	no	Yes ( $\pm$ 1100 ppm)	no	Yes ( $\pm$ 1100 ppm)	no	Yes ( $\pm$ 1100 ppm)	no	Yes ( $\pm$ 1100 ppm)

**FLOWERING**

**Light Quality**  
Full Spectrum

**Light Duration**  
12h ON / 12h OFF

<b>Intensity (PPFD)</b>	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 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$
<b>Distance from canopy to light</b>	1 m	0.3 m	0.6 m	0.3 m	0.5 m	<0.3 m	0.4 m	<0.3 m	0.5 m	<0.3 m
<b>Dimming (Power Consumption)</b>	100% (1025 W)	100% (1025 W)	75% (769 W)	100% (1025 W)	100% (620 W)	100% (620 W)	100% (620 W)	100% (620 W)	100% (475 W)	100% (475 W)
<b>Supplemental CO<sub>2</sub> (ppm)</b>	no	Yes ( $\pm$ 1900 ppm)	no	Yes ( $\pm$ 1300 ppm)	no	Yes ( $\pm$ 1300 ppm)	no	Yes ( $\pm$ 1300 ppm)	no	Yes ( $\pm$ 1200 ppm)

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

# GROW LIGHT STRATEGIES



INDOOR GROWING STAGES LED GROW LIGHT STRATEGIES <small>BY LUMATEK</small>	AT3300W PRO	AT200W PRO	VF120W	VF90W	100W FULL-SPECTRUM INDIVIDUAL SUPPLEMENTAL LIGHT LED BAR	LUMATEK 30W UV LED BAR <small>(TO APPLY AT THE FINAL FLOWERING STAGE.)</small>	LUMATEK 50W FAR/RED LED BAR <small>(TO APPLY AT VEGETATIVE AND THE EARLY DAYS OF FLOWERING STAGES.)</small>
<b>SEEDLING</b> Light Quality: Full Spectrum Light Duration: 24h ON / 0h OFF until cotyledons are open. 18h ON / 6h OFF seedlings.	Efficacy   PPF: 2.7 $\mu\text{mol}\cdot\text{J}^{-1}$   816 $\mu\text{mol}\cdot\text{s}^{-1}$ Footprint: Up to 1 x 1 m <sup>2</sup> Intensity (PPFD): 100-300 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$   500-800 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ Distance from canopy to light: 1 m   0.5 m Dimming (Power Consumption): 50% (155 W)   100% (310 W) Supplemental CO <sub>2</sub> (ppm): no   Yes ( $\pm$ 800 ppm)	Efficacy   PPF: 2.5 $\mu\text{mol}\cdot\text{J}^{-1}$   508 $\mu\text{mol}\cdot\text{s}^{-1}$ Footprint: Up to 0.8 x 0.8 m <sup>2</sup> Intensity (PPFD): 100-300 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$   500-800 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ Distance from canopy to light: 1 m   0.3 m Dimming (Power Consumption): 50% (104 W)   100% (208 W) Supplemental CO <sub>2</sub> (ppm): no   Yes ( $\pm$ 800 ppm)	Efficacy   PPF: 2.4 $\mu\text{mol}\cdot\text{J}^{-1}$   308 $\mu\text{mol}\cdot\text{s}^{-1}$ Footprint: 1.2 x 0.6 m <sup>2</sup> Intensity (PPFD): 100-300 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$   500-800 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ Distance from canopy to light: 0.5 m   <0.1 m Dimming (Power Consumption): 100% (130 W)   100% (130 W) Supplemental CO <sub>2</sub> (ppm): no   Yes ( $\pm$ 600 ppm)	Efficacy   PPF: 2.4 $\mu\text{mol}\cdot\text{J}^{-1}$   244 $\mu\text{mol}\cdot\text{s}^{-1}$ Footprint: 1.2 x 0.6 m <sup>2</sup> Intensity (PPFD): 100-300 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$   500-800 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ Distance from canopy to light: 0.5 m   <0.1 m Dimming (Power Consumption): 100% (90 W)   100% (90 W) Supplemental CO <sub>2</sub> (ppm): no   Yes ( $\pm$ 600 ppm)	Efficacy   PPF: 2.9 $\mu\text{mol}\cdot\text{J}^{-1}$   295 $\mu\text{mol}\cdot\text{s}^{-1}$ Footprint: 1.2 x 0.25 m <sup>2</sup> Intensity (PPFD): 100-300 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$   500-800 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ Distance from canopy to light: 0.5 m   0.3 m Dimming (Power Consumption): 100% (103 W)   100% (103 W) Supplemental CO <sub>2</sub> (ppm): no   Yes ( $\pm$ 800 ppm)	-   - Minimum 2 units in grow areas above 1.2 x 1.2 m.	-   - Minimum 2 units in grow areas above 1.2 x 1.2 m.
<b>CLONES</b> Light Quality: Full Spectrum Light Duration: 18h ON / 6h OFF	Intensity (PPFD): 75-150 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$   500-800 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ Distance from canopy to light: 1 m   0.5 m Dimming (Power Consumption): 25% (78 W)   100% (310 W) Supplemental CO <sub>2</sub> (ppm): no   Yes ( $\pm$ 800 ppm)	Intensity (PPFD): 75-150 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$   500-800 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ Distance from canopy to light: 1 m   0.3 m Dimming (Power Consumption): 25% (52 W)   100% (208 W) Supplemental CO <sub>2</sub> (ppm): no   Yes ( $\pm$ 800 ppm)	Intensity (PPFD): 75-150 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$   500-800 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ Distance from canopy to light: 0.3 m   <0.1 m Dimming (Power Consumption): 50% (65 W)   100% (130 W) Supplemental CO <sub>2</sub> (ppm): no   Yes ( $\pm$ 600 ppm)	Intensity (PPFD): 75-150 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$   500-800 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ Distance from canopy to light: 0.3 m   <0.1 m Dimming (Power Consumption): 100% (90 W)   100% (90 W) Supplemental CO <sub>2</sub> (ppm): no   Yes ( $\pm$ 600 ppm)	Intensity (PPFD): 75-150 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$   500-800 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ Distance from canopy to light: 0.5 m   0.3 m Dimming (Power Consumption): 50% (51 W)   100% (103 W) Supplemental CO <sub>2</sub> (ppm): no   Yes ( $\pm$ 800 ppm)	-   -	-   -
<b>MOTHERS</b> Light Quality: Full Spectrum Light Duration: 18h ON / 6h OFF	Intensity (PPFD): 400-500 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$   - Distance from canopy to light: 0.5 m   - Dimming (Power Consumption): 50% (155 W)   -	Intensity (PPFD): 400-500 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$   - Distance from canopy to light: 0.3 m   - Dimming (Power Consumption): 50% (104 W)   -	-   -	-   -	-   -	-   -	-   -
<b>VEGETATIVE</b> Light Quality: Full Spectrum Light Duration: 18h ON / 6h OFF	Intensity (PPFD): 400-600 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$   800-1000 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ Distance from canopy to light: 0.5 m   0.3 m Dimming (Power Consumption): 100% (310 W)   100% (310 W) Supplemental CO <sub>2</sub> (ppm): no   Yes ( $\pm$ 1200 ppm)	Intensity (PPFD): 400-600 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$   800-1000 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ Distance from canopy to light: 0.5 m   <0.2 m Dimming (Power Consumption): 100% (208 W)   100% (208 W) Supplemental CO <sub>2</sub> (ppm): no   Yes ( $\pm$ 1100 ppm)	-   -	-   -	-   -	-   -	Install together with ZEUS 465W PRO 2.9 or above models.
<b>FLOWERING</b> Light Quality: Full Spectrum Light Duration: 12h ON / 12h OFF	Intensity (PPFD): 800-1000 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$   1000-1400 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ Distance from canopy to light: 0.4 m   <0.3 m Dimming (Power Consumption): 100% (310 W)   100% (310 W) Supplemental CO <sub>2</sub> (ppm): no   Yes ( $\pm$ 1400 ppm)	Intensity (PPFD): 800-1000 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$   1000-1400 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ Distance from canopy to light: 0.3 m   0.1 m Dimming (Power Consumption): 100% (208 W)   100% (208 W) Supplemental CO <sub>2</sub> (ppm): no   Yes ( $\pm$ 1200 ppm)	-   -	-   -	-   -	Install together with ZEUS 465W PRO 2.9 or above models. Same height as the installed ZEUS 465W or above models.	Install together with ZEUS 465W PRO 2.9 or above models. Same height as the installed ZEUS 465W or above models.

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