



GROW LIGHT STRATEGIES

The Lumatek "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 Lumatek set-up performance per product and grow 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 for the hobby grower that is now starting. In both cases, to help growers grow with the best Led Grow Lights in the market. Lumatek of course!

LUMATEK
PROFESSIONAL LIGHTING

Indoor Top and Supplemental Light Growing Stages LED Grow Light Strategies <i>By LUMATEK</i>		i850 W Top Light Full -Spectrum LED (400V)		100W Full -Spectrum Individual Supplemental Light LED Bar		LUMATEK 30W UV LED Bar <i>(To apply at the final Flowering stage.)</i>	
Efficacy PPF		2.7 $\mu\text{mol}\cdot\text{J}^{-1}$	2295 $\mu\text{mol}\cdot\text{s}^{-1}$	2.9 $\mu\text{mol}\cdot\text{J}^{-1}$	295 $\mu\text{mol}\cdot\text{s}^{-1}$	NA	NA
Footprint		1.2 x 2.4 m ^(*) (4 units)		1.2 x 0.25 m ^(*) (1 units)		Minimum 2 units in grow areas above 1.4 x 1.4 m .	
Seedling Light Duration 24 ON / 0 OFF until cotyledons are open. 18 ON / 6 OFF seedlings.	Intensity (PPFD)	NA	NA	100-300 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	500-800 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	NA	NA
	Distance canopy to the light	NA	NA	0.5 m	0.3 m	NA	NA
	Dimming (Power Consumption)	NA	NA	100% (103 W)	100% (103 W)	NA	NA
	Supplemental CO ₂ (ppm)	NA	NA	No	Yes (\pm 800 ppm)	NA	NA

Clones Stage Light Duration 18 ON / 6 OFF	Intensity (PPFD)	NA	NA	75-150 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	500-800 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	NA	NA
	Distance canopy to the light	NA	NA	0.5 m	0.3 m	NA	NA
	Dimming (Power Consumption)	NA	NA	50% (51 W)	100% (103 W)	NA	NA
	Supplemental CO ₂ (ppm)	NA	NA	No	Yes (\pm 800 ppm)	NA	NA

Mother's Light Duration 18 ON / 6 OFF	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 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	NA	NA
	Distance canopy to the light	1 m	0.8 m	NA	NA	NA	NA
	Dimming (Power Consumption)	25% - 852 W (4 x 213 W)	25% - 852 W (4 x 213 W)	NA	NA	NA	NA
	Supplemental CO ₂ (ppm)	No	No	NA	NA	NA	NA

Vegetative Stage Light Duration 18 ON / 6 OFF	Intensity (PPFD)	400-600 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	800-1000 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	400-600 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	800-1000 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	NA	NA
	Distance canopy to the light	1 m	1 m	NA	NA	NA	NA
	Dimming (Power Consumption)	25% - 852 W (4 x 213 W)	50% - 1700 W (4 x 425 W)	NA	NA	NA	NA
	Supplemental CO ₂ (ppm)	No	Yes (\pm 1100 ppm)	NA	NA	NA	NA

Flowering Stage Light Duration 12 ON / 12 OFF	Intensity (PPFD)	800-1000 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	1000-1400 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	800-1000 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	1000-1400 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	Install together with Zeus 600W 2.6 or above models.	
	Distance canopy to the light	1 m	1 m	NA	NA	Same height as the installed Zeus 600W or above models.	
	Dimming (Power Consumption)	75% - 2552 W (4 x 638 W)	100% - 3400 W (4 x 850 W)	NA	NA	NA	NA
	Supplemental CO ₂ (ppm)	No	Yes (\pm 1800 ppm)	NA	NA	NA	NA

(*) For higher coverage areas and higher heights, supplemental CO₂ may not be necessary.

Greenhouse Growing Stages LED Grow Light Strategies <i>By LUMATEK</i>		1050W GH TOP LIGHT LED (Red + Blue)		680W GH TOP LIGHT LED (Red + Blue)		680W GH TOP LIGHT LED (White + Red)		300W GH TOP LIGHT LED (Red + Blue)		100W GH Inter Light LED R+B	
Efficacy PPF		3.4 $\mu\text{mol}\cdot\text{J}^{-1}$	3570 $\mu\text{mol}\cdot\text{s}^{-1}$	3.4 $\mu\text{mol}\cdot\text{J}^{-1}$	2285 $\mu\text{mol}\cdot\text{s}^{-1}$	2.9 $\mu\text{mol}\cdot\text{J}^{-1}$	1945 $\mu\text{mol}\cdot\text{s}^{-1}$	3.2 $\mu\text{mol}\cdot\text{J}^{-1}$	985 $\mu\text{mol}\cdot\text{s}^{-1}$	3.0 $\mu\text{mol}\cdot\text{J}^{-1}$	300 $\mu\text{mol}\cdot\text{s}^{-1}$
Footprint		1.2 x 2.4 m ^(*)		1.2 x 2.4 m ^(*)		1.2 x 2.4 m ^(*)		1.2 x 2.4 m ^(*)		1.2 x 2.4 m	
Mother's Light Duration 18 ON / 6 OFF	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 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$
	Number of fixtures	2	2	4	4	6	6	8	8	Between plants and the leaves	Between plants and the leaves
	Distance canopy to the light	1 m	0.8 m	1 m	0.8 m	1 m	0.8 m	0.6 m	0.5 m	NA	NA
	Dimming (Power Consumption)	25% - 526 W (2 x 263 W)	25% - 526 W (2 x 263 W)	25% - 680 W (4 x 170 W)	25% - 680 W (4 x 170 W)	25% - 1020 W (6 x 170 W)	25% - 1020 W (6 x 170 W)	50% - 1240 W (8 x 155 W)	50% - 1240 W (8 x 155 W)	NA	NA
Vegetative Stage Light Duration 18 ON / 6 OFF	Intensity (PPFD)	400-600 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	800-1000 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	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 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$
	Number of fixtures	2	2	4	4	6	6	8	8	1	1
	Distance canopy to the light	1 m	1 m	1 m	1 m	1 m	1 m	0.6 m	0.6 m	Between plants and the leaves	Between plants and the leaves
	Dimming (Power Consumption)	25% - 526 W (2 x 263 W)	75% - 1576 W (2 x 788 W)	25% - 680 W (4 x 170 W)	75% - 2040 W (4 x 510 W)	25% - 1020 W (6 x 170 W)	75% - 3060 W (6 x 510 W)	50% - 1240 W (8 x 155 W)	100% - 2480 W (8 x 310 W)	NA	NA
Supplemental CO ₂ (ppm)	No	Yes (\pm 1300 ppm)	No	Yes (\pm 1300 ppm)	No	Yes (\pm 1400 ppm)	No	Yes (\pm 1100 ppm)	NA	NA	

Flowering Stage Light Duration 12 ON / 12 OFF	Intensity (PPFD)	800-1000 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	1000-1400 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	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 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$
	Number of fixtures	2	2	4	4	6	6	8	8	1	1
	Distance canopy to the light	1 m	1 m	1 m	1 m	1 m	1 m	0.6 m	0.4 m	Between plants and the leaves	Between plants and the leaves
	Dimming (Power Consumption)	50% - 1050 W (2 x 525 W)	100% - 2100 W (2 x 1050 W)	50% - 1360 W (4 x 340 W)	100% - 2720 W (4 x 680 W)	50% - 2040 W (6 x 340 W)	100% - 4080 W (6 x 680 W)	100% - 2480 W (8 x 310 W)	100% - 2480 W (8 x 310 W)	NA	NA
	Supplemental CO ₂ (ppm)	No	Yes (\pm 1700 ppm)	No	Yes (\pm 2000 ppm)	No	Yes (\pm 2000 ppm)	No	Yes (\pm 1500 ppm)	NA	NA

(*) For higher coverage areas and higher heights, supplemental CO₂ may not be necessary.

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