

PRODUCT FEATURES

LEDS FIXTURES AND LED GROW LIGHT



one4all

HORTICULTURAL

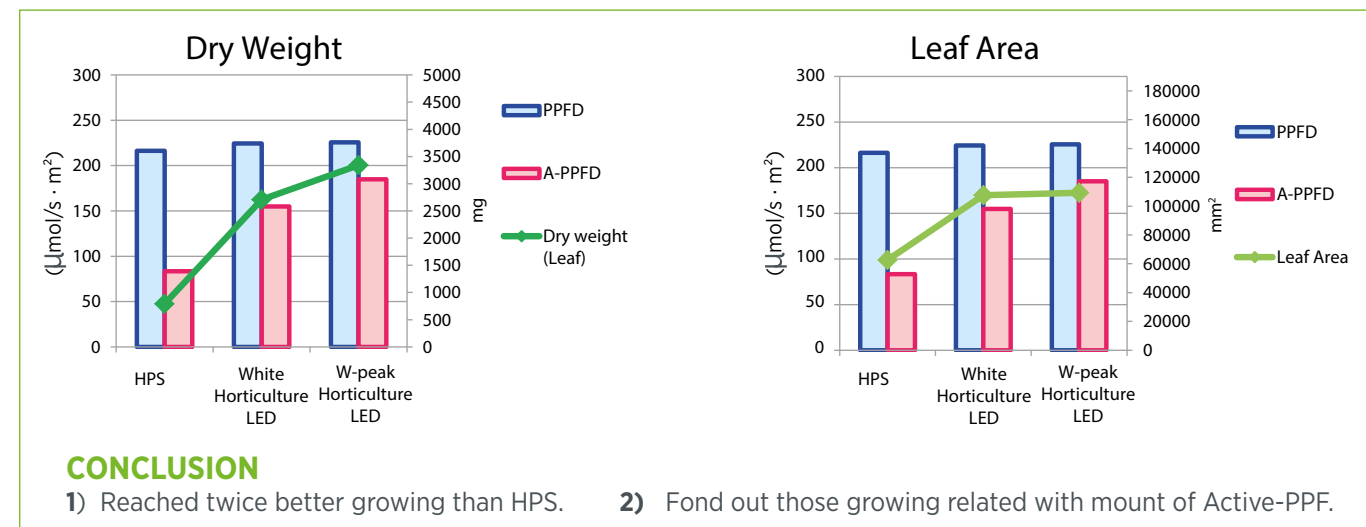
LEDS FIXTURES AND LED GROW LIGHT

RESULT FOR PLANT GROWING

LIGHT SOURCE	DAY 21	DAY 35	SPAD
HPS lamp 			7.0
White PKG 			15.0
RB PKG 			16.5

*SPAD - Index value for Chlorophyll which is developed by Ministry of Agriculture, Forestry and Fisheries of Japan. It is measured by KNICA MINOLTA's chlorophyll meter (SPAD -502Plus).

CORRELATION OF LIGHT AND PLANT GROWING



UNIK HC
[115W]



XTREAM HC
[300W]



SMART HC
[250W]



All plants have the same needs to grow: including nutrients, water, air and a suitable temperature but require a different combination of factors to grow more efficiently.

ONE 4 ALL Horticultural LEDs fixtures support the growing process through augmented light waves designed to enhance photosynthesis to increase agricultural output. We offer tailor made grow light solutions that expedite the growth phase, granting energy saving and an increase in production per m².

ONE 4 ALL is committed to deliver high-quality leading LED lighting products and pays attention to the new trends in the industry to be always innovative, pioneering new technologies and design solutions.



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- GREAT THERMAL MANAGEMENT THANKS TO A FULL PASSIVE COOLING SYSTEM BY AN ADVANCED HEAT PIPE SYSTEM
- UPGRADABILITY OVER THE TIME
- WIDE RANGE OF BEAM ANGLES ALLOWS TO ADAPT THE LIGHT DISTRIBUTION TO THE VARIOUS NEEDS OF THE GREENHOUSES AND THE CROP
- EXCELLENT CONCENTRATION OF LIGHT AND A DEEP CANOPY PENETRATION
- NO SHADE LEVEL ON THE CANOPY THANKS TO THE SPECIAL DESIGN OF ITS HOUSING
- UNIQUE LIGHT DISTRIBUTION WITH SPECIAL SILICONE LENSES (SIO3 ULTRA - CLEAR SILICONE LENSES [LSR])



DESIGNED TO COMPLY WITH THE HIGHEST IP RATE (IP 65) AND IK (IK10) STANDARDS

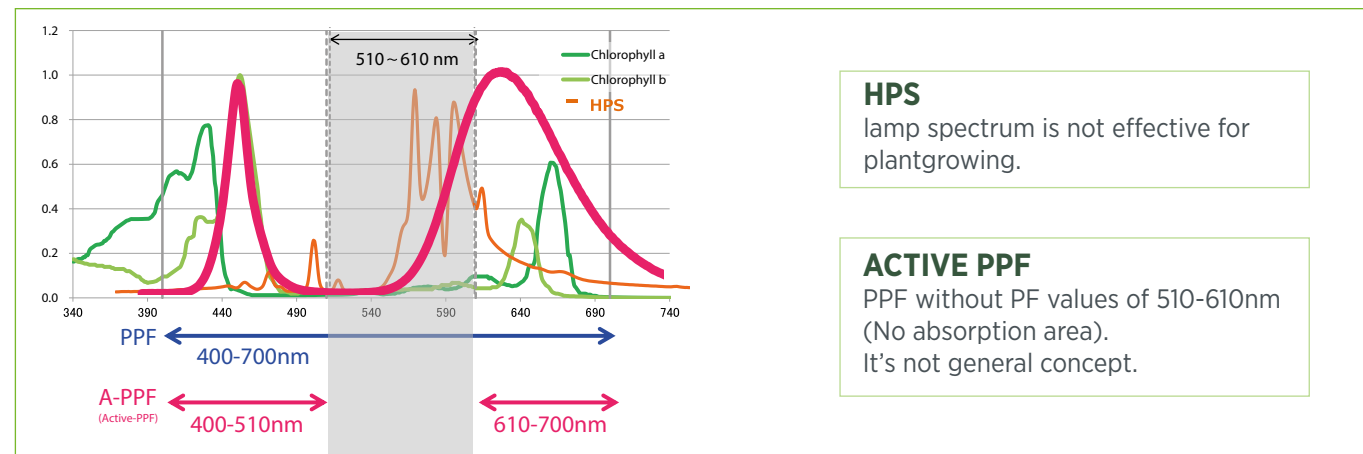
- SIO3 hydroponic property grants a great resistance in extreme environment applications
- High Thermal resistance in a range from - 40° C to 200°C
- Non- Yellowing effect ,
- High resistance to chemicals and aging
- Excellent transparency
- High efficiency in light distribution
- Low absorption of light
- No birefringence

LONG LIFE TIME

High heat dissipation package design and Phosphor Cob convert technology allow for high durability for life and stability of glowing effectiveness.

L90 70.000 h COVER THE GREEN HOUSE LIFE TIME, NO NEED FOR REPLACEMENT THE LUMINAIRE.




CHLOROPHYLL ABSORPTION SPECTRUM AND PLANT GROWING UNIT



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COMPARE HPS AND ONE4ALL LED FIXTURES FOR PLANT GROWING EFFECT AT SAME PPFD CONDITION.

LIGHT CONDITION		
LIGHT SOURCE	PPFD (400-700nm) (μmol/s · m ²)	A-PPFD (400-510, 610-700nm) (μmol/s · m ²)
HPS lamp 	216	83
White PKG 	224	155
RB PKG 	226	185

TEST PLANT: RED LEAF LETTUCE TEST ENVIRONMENT:UNIVERSITY OF YAMANASHI, AT PLANT EXPERIMENT UNIT

TEST PLOT

1. CE White
2. CE W-peak
3. HPS

(SAMPLING INFORMATION)

CONDITION

All test plot is at same condition.

Temperature	22°
Humidity	50-70%
Light timing	ON/OFF 12hours
Culture pH	pH 5.5-6.0
Culture EC	EC 1.5-2.0mS/cm
PPFD	230 μmol/sec · m ²

MEASUREMENT

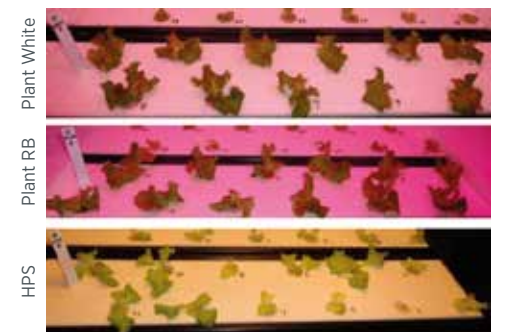
- Measurement item
1. Leaf Area
 2. Dry weight

MEASUREMENT 1,2

Measurement item
Date: Day21, Day28, Day35
Number: 4 heads × 3 times

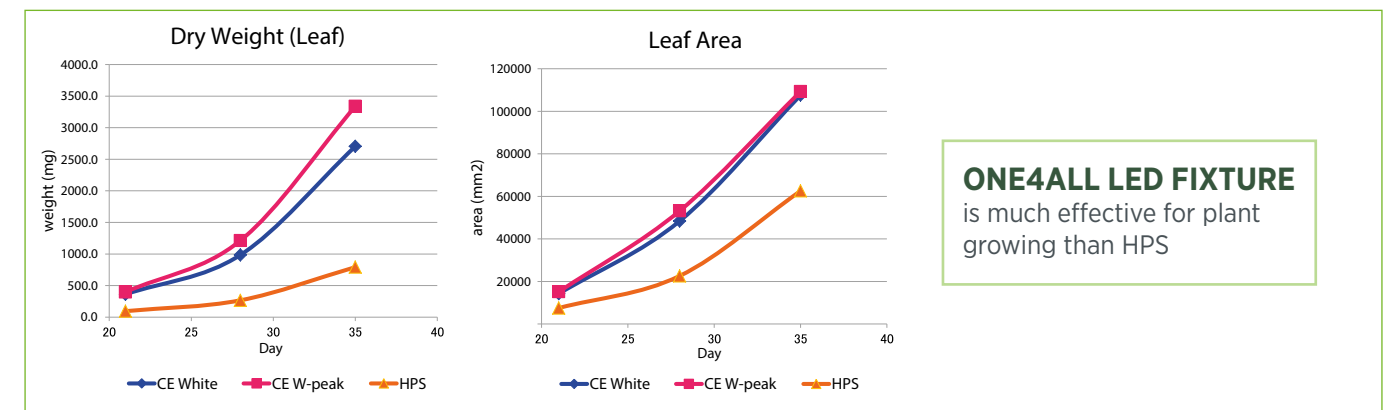
*Total 12heads/area

*Irradiance variability is within 20%



RESULT FOR PLANT GROWING

Date for 21, 28, 35 days after planting



SUITABLE LIGHT FOR PLANT GROWING

Offer the good light spectrum for plant by spectrum tuning technology. White horticulture color for good plant growing and good for human to observe.

