# The Original Innovators of LED Grow Lights

The Extreme2 (X2) series LED Grow Lights by Hydro Grow are the most powerful horticultural grow lights on the market. Featuring our patent pending Extreme Lens technology, the X2 lens provides 5.7 times the light output of a standard 90° lens. No other Grow Light on the market can rival the intensity of X2, including HPS! Our advanced spectrum provides lightning-fast growth from seed through flower giving way to monsterous fruits and huge yields. X2 is the perfect lighting solution for an 'extreme'ly vigorous and abundant indoor garden.

Exclusive to Hydro Grow is our custom-designed, copper core heatsink. No other LED company can match our thermal management as our copper cores quickly transfer heat away from the LEDs and out through thin aluminum fins. Another new feature is our unique Power-Link function that allows you to connect multiple lights in a series for a clean, streamlined garden. The internal components of the lights are also modular, featuring easy clip-in/clip-out wiring harnesses for simple warranty repairs.

Backed by over 4 years of research, 3 US Patent applications, university & independent grow tests, we are proud to say that Hydro Grow has the best performing horticultural grow lights in the world.

www.HydroGrowLED.com • 661-654-9376 • sales@hydrogrowled.com

FREE shipping to 48 states • 90 Day Returns • 3 Year Warranty

### X<sub>2</sub> Features

 Extreme lens technology for 5.7x higher output · Modular design allows for upgrades in the future Clip-in wiring design for easy self-help warranty repairs Copper core heatsinks for faster heat dissipation 6 foot power cords available in 110v, 220v and intl plugs Power-Link system connects multiple lights in a series Spectrum: 440nm, 479m, 525nm, 640nm, 660nm, 740nm · LED manufacturers: SemiLED, Bridgelux, Epistar Convenient On/Off switches • FREE industrial strength ratchet hanging system Full 3-year warranty



# A Closer Look at EXTREME LED GROW LIGHTS



Interested in learning more about Hydro Grow's LED Grow Light advancing technology?

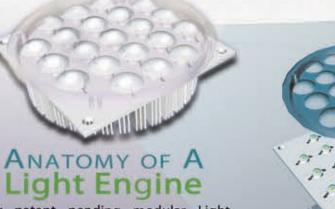
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www.hydrogrowled.com/Led-Basics-W6.aspx



## Engineering at its Finest

Hydro Grow engineers all technologies and components in the USA



New X2 casing is slimmer and lighter than

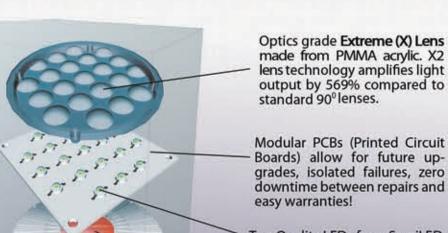
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previous models. Trademark logos are incor-

Our patent pending modular Light Engine is the cornerstone of our innovative LED grow lights. Each Light Engine operates as an independent grow light with it's own PCB, 21 LEDs, a custom heatsink, and our exclusive X-lens for enhanced penetration and coverage.

A sign that you are a true leader of innovation is that others line up to copy your achievements, and while many have attempted to re-create our light engine, as similar as they look don't be fooled because they will never perform like the



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Optics grade Extreme (X) Lens made from PMMA acrylic, X2 lens technology amplifies light output by 569% compared to standard 90° lenses.

Boards) allow for future upgrades, isolated failures, zero downtime between repairs and easy warranties!

Top Quality LEDs from SemiLED, Bridgelux and Epistar.

Copper core inserts transfer heat 41% more efficiently than aluminum, while custom thin-finned heatsinks dissipate heat quickly for longer lifespan and brighter output!

#### each light engine operates as an independent grow li



# Leading the Industry through

## Research & Development

While growing with HID lights, plants that are more than 3ft tall have foliage at the bottom that begins to die off due to weak light penetration in dense canopies. This is because light is dispersed over a larger area as the distance from the source increases, and therefore light intensity (penetration) is weakened. This is especially true for light sources with large viewing angles or

The graph to the right demonstrates this concept as we compare the PAR (PPFD) output between HPS and Hydro Grow's X2 LED technology over several distances. As is shown in the graph, the HPS loses it's light intensity dramati-

reflectors like HIDs.

336X PRO vs 1000w HPS: Micromole (PAR) Output at 24", 36" and 48" from Light Source 336x PRO LED Grow Light 1000w High Pressure Sodium (HPS) Micromoles 1400-1600 1200-1400 1000-1200 800-1000 **600-800** 400-600 200-400 ■ 0-200 36" 48" 24' 36"

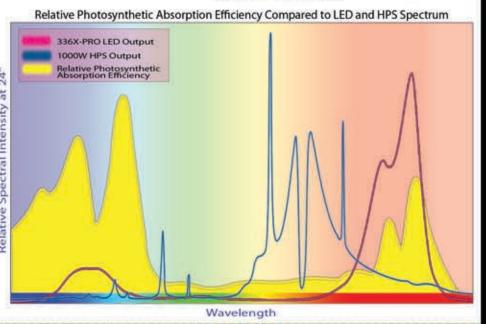
Lighting Type	336 x 3w LEDs	1 x 1000w HPS bulb
Power draw	520w	1150w
Bulb change	every 6-12 years/50,000 hrs	every 6-12 months
Operating Temp	85-105° F	450 - 650° F
Cooling req?	No. Built - in cooling	Yes. AC or external cooling req.
Spectrum	6-band Formulated for plant growth	2700k white: optimized for human eyes
Usability	Plug - and - grow	Ballast, hood and cooling req.

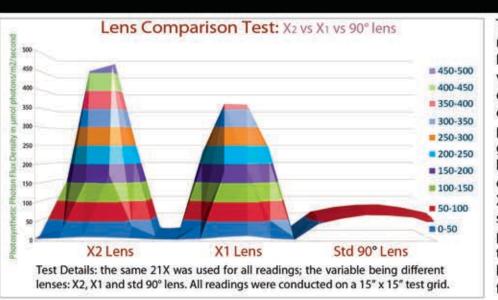
cally over a distance while Hydro Grow's patent pending X2 lens retains it's light intensity. In fact, at 48" the 336X-PRO delivers similar PAR output as the 1000w HPS at 36" while covering the same 4x4 area! Better yet the 336X-PRO consume 55% less energy than the HPS, requiring little to no AC needs (or other cooling accessories) and absolutely no routine maintenance (bulb changes).

The HPS loses it's light intensity dramatically over a distance while Hydro Grow's X2 lens retains it's intensity

With our quantum balanced spectrum, you are guaranteed to achieve record-breaking yields all year long!

The entire visible spectrum (400nm-700nm) is utilized during photosynthesis, however chlorophyll absorbs light most efficiently at peaks in the blue (439nm & 469nm) and red (642nm & 667nm) regions. Any wavelengths outside of these peaks are absorbed with relatively low efficiency, meaning plants convert very little of the light energy into plant energy. The graph on the right demonstrates relative photosynthetic absorption efficiency compared to the spectral output of Hydro Grow's 336X-PRO and a 1000W HPS. Our quantum balanced 6-wavelength spectrum was formulated specifically for plant growth and therefore the output matches all chlorophyll absorption peaks, whereas HPS does not. With a spectrum this advanced, you are guaranteed to achieve record-breaking yields, tight internodes and huge fruits all year long!





Throughout our history Hydro Grow has remained the innovative leaders of the LED grow light industry, starting with developing the market's first 60° lens in 2009. our game changing X1 lens in 2011, and our mind-blowing X2 lens in 2012. Like its predecessor X1, the X2 lens is an optics grade secondary lens custom developed by Hydro Grow to amplify light. X2 however, has 25% increased output over the X1 lens, and is 569% more intense than a standard 90° primary lens. No other company uses such advanced lens technology to increase LED intensity, which is how X2 by Hydro Grow became the most powerful Grow Light on the market.

### The Genius of the Hydro Grow X-Lens

#### About Hydro Grow

Hydro Grow is a science based LED company specializing in research, development and marketing of professional LED lights. Since the inception of our company in 2007, we have single-handedly changed the LED grow light industry with our complex spectral ratios, leafpenetrating lens technologies, cutting edge grow light designs, side-by-side light comparison tests, and our full disclosure marketing strategies. We started out as a LED grow light company, but are expanding our influence in the aquarium and commercial lighting industry. With continuous research and development in our US and overseas offices, we strive to remain the industry leaders of LED lights.

In the three years that Hydro Grow has sold LED Grow Lights, we have become recognized world-wide for our superior performance and unprecedented product quality. All of the claims and information we post are backed by scientific research and data, as we believe honesty is the only policy in marketing. To date, we have supplied everyone from home gardeners to hydro stores, commercial greenhouses, schools, universities, biotech companies and government agencies around the world. Our mission is to create the most innovative products, made with the finest components to ensure total customer satisfaction. When you buy a Hydro Grow light you can rest assured that you have the best indoor lighting equipment the horticultural industry can offer, secured by a full 3-year warranty.

In the years to come Hydro Grow will continue to offer the best customer service, top quality products and reasonable prices to meet our customers' demands.



