The Opportunity

Made in USA

Strategic Partnership

Full Spectrum LED Technology

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Manufacturing Experience

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The Opportunity:

High Power 4S (HP4S) was developed as a grow fixture company by a few individuals that had extensive experience in 2 different industries, The Lighting Industry and The Grow Industry. With 31 years of Lighting Manufacturing Experience and over 10 years of Organic Growing both Indoors and Outdoors, this combination seemed like a sure fit. Having Alta LED Full Spectrum Technology at our disposal, the 2 years of R&D projects all over the country with unmatched results, was the final touch to make the decision to put up the new company. The Organic Grow Industry is a multi billion dollar industry that is worldwide. This industry has real life needs, with the HP4S and Alta LED combination, we feel that the opportunity is now to make a difference.

Made In USA:

HP4S prides themselves in offering domestic technology along with the domestic highest quality manufacturing process in this industry. Over 90% of other Grow Fixture Mfg. is done overseas with Low Level LED Technology, or outdated HID Grow Technology (High Pressure Sodium or Metal Halide). We are confident that the combination of the best full spectrum LED technology along with vertical in house manufacturing will give us the strength we need to give this industry the product and results it demands.
Strategic Partnership:
Having extensive experience in growing for over 10 years has exposed all the technologies in the world and what they will and won’t do. Alta LED is a Full Spectrum LED Technology that has the characteristics and performance like nothing used before in the grow industry. High Power 4S has aligned themselves with Alta LED to take the Full Spectrum LED Technology to the world. Having Alta LED and HP4S working together from the Creation Level of LED to the Finished Fixture for the customer is very unique and unmatched.

Full Spectrum LED Technology:
As an Ally and Believer of Alta LED, we know Alta is excited and poised to introduce their full spectrum technology to the International Market. We have conducted private trials for over a 2 year period and now are very confident that the worldwide grow industry will benefit on its results.
If you are happy with your Metal Halide or High Pressure Sodium results, performance, and costs then keep using it.
If you are happy with RGB LED Style of Grow Lights, then keep using it.
Alta is the answer for the consumer that is motivated to go with the newest LED technology, most energy efficient, longest lasting, and American Made. State of the Art facilities that are being built around the world are spending tens of millions of dollars, even though the HP4S series is not cheap, it is the future and the best option. Below are the 2 Spectrums that are provided to the Grow Industry at this time.

![Full Spectrum Graph 3150 Kelvin, 97 CRI LED Array #FS-R-100W-3150](image)
![Full Spectrum Graph 5600 Kelvin, 95 CRI LED Array #FS-R-100W-5600](image)
Energy Comparison

HP4S is 80% MORE EFFICIENT with over 50% REDUCTION in Electrical Infrastructure
Manufacturing Experience:

High Power 4S brings a lot to the table when the subject of experience in the lighting industry and grow industry is a topic of discussion. The following subject lines below will give confidence to any customer in the organic indoor grow industry.

• 31 years of Lighting Application Experience brings confidence into decision making of the HP4S light that is re-shaping the industry. Knowing the differences between HID (Metal Halide and High Pressure Sodium), RGB LED, PLASMA, and their limited capabilities when growing, along with the direction the world is going today with Green Technologies, Alta LED Full Spectrum was the Technology we chose to change the landscape of Organic Indoor Growing.

• Design Engineering is another strength of HP4S. Not only is the HP4S design more of an American Stealth Look like the Stealth Bomber, but the options that are included in this unit is like no other LED fixture in the grow industry. IP65 Rating along with high power reflectors, 100% Aluminum construction, with 5 year warranty components, with Full Spectrum LED Technology, makes this American Made Product one of a kind in both design and performance.

• Having over 10 years of Grow Experience Indoor gives the consumer or distributor the piece of mind when buying a HP4S Light fixture. Not only can we have a detailed discussion about Lighting Technology, but we can have a discussion from Grower to Grower about strategies, strains, vegetables, micro greens, flowers, air conditioning, humidifiers, nutrients, genetics, etc. The Growing experience that we bring to the table enables us to have visitors that can not only see the lighting manufacturing experience, but to also see and discuss strategies on growing indoor without any sunlight, or greenhouses with supplemental light.

300W HP4S Fixture Design

Automatic Milling Video (1).mov
Grow Projects/Applications

The HP4S Grow Fixture Series comes in 2 designs, Higher Power Stealth looking overhead units used as a main source of lighting, and a Linear Bar Design used as a main source of lighting or a supplemental source depending on what you are growing and the layout of your facility. Below are real life grow situations happening today with different strategies and techniques. Keep in mind, this is LED Full Spectrum Technology at its best giving the industry a whole different set of characteristics while at the same time without compensating great and healthy results.

Greenhouse:
Indoor Greenhouse projects are a prime example of either using overhead lighting alone or supplemental lighting at lower levels. Currently both techniques are being used to maintain existing production or layouts for new facilities. Since HP4S has the most energy efficient LED source in the world, lighting fixture layouts have become a partnership with the grower themselves for maximum results. Every project has its own secret sauce when growing, HP4S is the answer when it comes to the lighting.
Currently Cal Poly University Pomona has 20 – 300W HP4S 3200 Kelvin Grow fixtures mounted as the main supplemental lighting in their greenhouse over 350 Tomato Plants. The Lights have been growing for 4-6 months with results prompting the University to start the process of supplying White Papers for the technology. White Papers will be available by Fall of 2015 as a third party validation for not only the best spectrum known, but giving information on the nutrients full spectrum provides over RGB.

Cal Poly Pomona - Tomato Video Under 20 Lights.MOV
Greenhouse / Cal Poly Pomona/Site Photo’s

8 Lights, Greenhouse of Flowers

Yellow Bucket Technique, 20 Lights Overhead

Outside Night Time Photo, 20 Lights Overhead

8 Lights, Greenhouse of Flowers

20 Lights, 350 Tomato Plants

20 Lights Overhead, 350 Tomato Plants
Cannabis:
Growing Cannabis with LED separates the Men from the Boys. Alta LED Full Spectrum Technology is the only source of LED light that covers all wavelengths between 400 – 800 Nanometer instead of some spikes of Red and Blue. As we have assisted in Licensed grows for years, the value of full spectrum as a source is much more needed for the healthy growth of the plant than a few wavelengths. The Energy, Intensity, and Radiation given by the Alta Full Spectrum Technology is proving to be the most all in one solution in LED to replace the standard HID type lighting on the market today. Par Levels and Micromole Levels are the main readings people take when decisions have to be made. Unfortunately, these readings are with old technology that is giving a few wavelengths to produce the result. There has never been a meter made to give the value and result of what Full Spectrum Technology will do. What HP4S has done is provide the best LED Technology anywhere along with the High PAR Readings, which is a combination that is proving its worth to the Organic Indoor Grow Industry. Cannabis is a walk in the park from overhead lighting to finished results for HP4S without switching any fixtures for different spectrums throughout the cycle. HP4S Grow fixtures are currently being used by Tweed Canada with side by side testing against 1000W High Pressure Sodium. This is more of a documented grow cycle with daily video. There is also a Licensed California Collective that has used the HP4S fixtures only for cycles for the last 2 years. Please visit You-Tube and type in “The SPC Grow”, you will see cycles, strains, nutrients, strategies, results using the HP4S fixtures only in a real live fully indoor facility.
Other Industries / More Applications

The High Power 4S Full Spectrum Grow Fixtures have also made their mark in a few different industries where all wavelengths to match the rays of the Sun are in demand. Here are proven industries where the technology will penetrate in the upcoming years:

- Organic Replacement Sugar – Stevia – Growing at Oregon State University

- Indoor Stadiums – A big movement going on around the world is replacing the artificial turf with regular grass to protect the athletes. Full Spectrum LED’s are Perfect for this application.

- Poultry – Replacement of standard lighting with Full Spectrum LED – Chickens produce healthier eggs and meat because of the full spectrum wavelengths similar to sunlight, increased production was also noticed along with energy savings. Alta Full Spectrum Chip Technology is also the only LED technology in full spectrum that gives heat in front of the fixture also which is very healthy for living things and growing.

- Aquariums/Algae – Full Spectrum Chips replaced high power metal halide lamps in large aquariums with maximum results in this industry.

- Micro Greens – All 100% Organic High End Vegetables – We are hearing that the full spectrum rays are giving better color and taste to the products. High end growers are having great results.

Growing Squash

Growing Grass – Indoor Stadiums
Worldwide Marketing Platform:

High Power 4S is in an expansion phase and is very excited to setup Factory Representatives around the world. The manufacturing process for mass production is in place to push this technology to the international market. Currently we have Factory Representatives in USA, Ireland, and Australia. By the end of 2015, we will have full coverage for the USA, Canada, Middle East, Europe, Australia, and South America. Master Distributors and Stocking Distributors are continuously coming on board to help validate the best grow light fixtures in the world. Stocking Warehouses for easy shipping will be located in USA, Canada, Europe, and Australia.

The HP4S Sales and Marketing Team will be excited when our engineers release up to 15 new products for this industry. Since this industry has a lot of versatility and strategies when growing, HP4S will adapt to the applications needed without compromising the quality, and integrity of our products. Alta LED is the technology of choice for all the products released for all applications. Marketing HP4S through all channels has been very exciting. We utilize experts in all fields of advertising including Photography, Video, Cataloging, Social Media, Website Building, and on location interviews and video production. HP4S is ready to provide the expertise in the worldwide market place by participating in the most sought after Professional trade shows in all markets of the grow industry. Show and Tell, along with real live in person interaction only solidifies the greatness of the HP4S product and Alta Technology that we showcase. High Power 4S is involved in the major trade shows in the USA, but will be participating in the International Trade Shows in 2016.