What Exactly is a Pontoon and What Will it Do for my Flowering Plants?

Try as we might, humans have just not found a way to economically recreate the wide spectrums or intensities of sunlight. However when we must grow indoors there are ways we can adjust our indoor growing environments to mimic those optimum conditions found in nature which can lead us to high quality, high yield, repeatable crop production for our indoor gardens.

By combining the energy efficiencies, low heat and long life benefits of both Induction and LED technologies, we are able to provide the indoor gardener with ideal spectrums and controls that one would only had expected to be found in ideal outdoor conditions.

420-Pfr-Pontoon installed over one of our Pro-420-PAR fixtures. The Pontoon draws 40 watts and runs during lights on flowering cycles.

Two 420-Pfr-Pontoons installed over our Pro-420-PAR induction lights work together to cover a 5 x 8 trellis through harvest.

Side by Side Trials with a variety of tomatoes.

Our Pontoons are designed to work as an enhancement accessory to our induction lamps' broad spectrum phosphor blend. They are a low wattage addition to our induction lamps' spectrums and should be considered when the gardener is seeking optimized quality, yield and reduced time to harvest. Please visit www.inda-gro.com galleries to see all of our in house gardens.

How Does it Work?

During Lights On Cycles: We run the Deep Red, 660nm diodes to meet an important Chlorophyll B peak absorption spectra for flowering thereby increasing flowering sites. Strategically placed diodes on 10^0 planes allow for even canopy coverage and excellent penetration. This is achieved without burning the canopy from high intensity diodes that are usually aimed straight down at the canopy. Diodes are asymmetrically placed to interlace light distribution patterns with the opposing Pontoon and of any adjacent fixtures similarly outfitted with Pontoons.

During Lights Off Cycles: It's noon on a cloudless day and the sun paints the sky a bright Blue. As the sun begins to set, the Blue is gradually replaced by increasing levels of Red to Deep Red and finally to Far Red. In nature it is this Far Red 730nm wavelength that triggers the Phytochrome, or flowering response, to occur within seconds of sensing that wavelength exclusively as the sun sets over the horizon.

For an indoor garden, the light cycle for flowering may typically be set for a 12 hour on and 12 hour off cycle. With the plants going instantly into total darkness the plants will require a 2 hour relaxation period before actual flowering begins. Obviously this has never been the most efficient way of maximizing flower production and density. Reducing that indoor relaxation period, by mimicking nature, is critical to increasing fruit and flower size.

Our patented Pontoon design utilizes a built in control circuitry that senses once the 660nm diodes turn off. Once off, the 730nm diodes, powered by Lithium-ion batteries built into the Pontoon, will run the 730nm diodes only for approximately 5 minutes at which time they turn off in gradual steps decreasing the normal indoor Phytochrome switch from 2 hours to less than 10 minutes. Indoor gardeners may wish to adjust their lights on photoperiods for an extra hour or more to take advantage of the indoor plants natural photobiological response to this wavelength.

Pontoons in Action!

Asymmetrically placed diodes on 10º planes allow for wider flowering areas with increased canopy penetration. Here you can see the 660nm diodes running at lights on. The diodes that are not on are the 730nm diodes that only run at lights out.

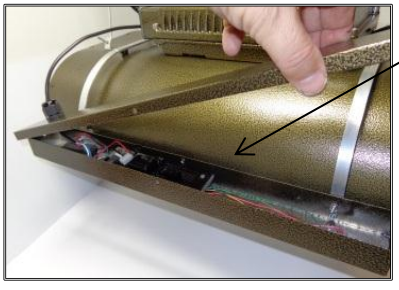
In this lights out image we are can see that the 6 ea., 730nm diodes are now running. These diodes run on batteries meaning there is no need for additional timers or power supplies. The diodes will run for 5 minutes and then gradually fade to off.

This is an infra-red capture of the 730nm diodes that shows just how much this wavelength means to the plants' receptors. Note the shadows on the partition below the canopy means excellent penetration on a very dense canopy!

Except for the lights, this Day 40 Flowering comparison shows 49 tomatoes on the Non-Pontoon side compared to 92 tomatoes on the Pontoon side.

The Non-Pontoon side typically yielded in the 6-7 oz. & 2.25" diameter range.

The Pontoon side typically yielded in the 8 -10 oz. & 3" diameter range.



The Lithium-ion battery pack is the one user-serviceable part within the Pontoon. This modular pack powers up the 730nm diodes at lights out and is designed to last for over 2000 duty cycles. The power pack is a 6.6v 1.1 amp-hr rated module with replacements available online through www.inda-gro.com.

Installation is easy as there is no assembly required. Simply place the Pontoon over your Inda-Gro light and plug the Pontoon into the same timer circuit that supplies power to your light. The Pontoon secures into place when pressed lightly down over the light and the Pontoons' rubber legs are touching all points of the light. That is all there is to it!

Universal Power Supply 120-240v AC 50/60Hz
420-Pfr-Pontoon: 40 watts
100/200-Pfr-Pontoon: 20 watts

Pontoons are warrantied to be free from defect for 5 years from the date of original purchase. Contact us prior to any returns for RMA issuance.

877.452.2244 or USA 619.266.4004
WWW.INDA-GRO.COM