



Solartronic



User Manual

English



FOCUSTRONIC
SETTING NEW STANDARDS

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Introduction

Thank you for choosing the Solartronic for your reef system. Solartronic is a patented lighting fixture which is the only light that allows dual axis movement with the ability to auto adjust intensity based on tested parameters from Mastertronic.

Basic Philosophy

Solartronic is a standalone unit with patented dual axis control. When being used together with Mastertronic in the same system, the full potential is unleashed. In the past, no matter what light you are using whether that is metal halide, T5, or the industry leading LED fixtures, the light settings is pretty much static. That includes the **angles, day to day lighting intensity, and intensity adjustment based on water chemistry**. As we all know, lighting has a direct relationship with coral's health, coloration, and growth rate. Unfortunately, almost all reef lighting in the market lacks the automation. With today's technology, lighting can be much more automated and that's why we created the Solartronic.

Why does aquarium lighting need to be static? We cannot mimic the sun completely but at least we can add in the dynamics which allows the system to receive lighting at different angles during the day. In today's market, many brands talk about "blanket lighting" but it is still a static light meaning where light cannot get to will never change. With Solartronic, the angle of the light source changes during the lighting cycle meaning light can be directed to wherever it is needed. This allows users to have **total control** of the 2 LED clusters when and where light should be distributed while the XHO light strips provides the "blanket" coverage.

Another unique feature of the Solartronic is the ability to run different lighting profiles on different days of the week. To our knowledge, no other lighting fixture allows this but why not? With the adjustable angles in each profile, we can further allow good coverage of the system while we can change the "focus" between each day of the week. No matter what lighting fixture is being used, a static light will give the same "hotspot" every day but Solartronic converts this drawback into an advantage with multiple "sweetspots". Corals don't bleach in 1 day but when the hotspot stays the same daily, after a period of time, corals will suffer when receiving too much light. On the other hand, when we have multiple sweetspots, we can provide higher intensity every few days while allowing corals to "rest" after a day of more intense lighting. In many articles, this has proven to be beneficial to corals instead of receiving the same "energy" day in day out.

In the past, lighting seems to be a set and forget item of the system. As we mentioned earlier, lighting has the most direct relationship to corals health, while users will do all sorts of changes, light settings will not be adjusted based on the ever changing water chemistry. For example, when nutrients start to increase, user may change out the filter socks or replace the ROWA and tries to bring nutrients back to the levels they require. This takes time as it is dangerous to adapt rapid changes to a system. Why not adjust the intensity of the lights? Reasons can be oversight, laziness, or lack of knowledge? With Solartronic, the lighting intensity can be automated with the help of Mastertronic. This has never been achieved before but with today's technology of the Focustronic range of products, this is possible!

Thank you again for choosing Solartronic, we will work together with feedback from the public to make reefing automation simple and enjoyable!

What's in the box

- Solartronic x 1
- USB Cable x 1
- PSU x 1
- Power Cord x 1
- Hanging Wires x 4

Specification

- 280W full spectrum LED reef fixture with dynamic motion (2 axis)
- +/- 24 degrees¹ for each axis. Mimic sun travel across the reef with blanket lighting.
- Powered by ReefBrite's industry leading XHO LED strips and cluster
- Different lighting profiles (spectrum, intensity and angles) for different days of the week (7 days, 7 different profiles)
- 8 individually controlled lighting channels (XHO, Cool White, Blue, Royal Blue, UV-1 (365 & 395nm), Green, UV-2 (410 & 420nm), Photo Red)
- Wifi iOS and/or Android app with cloud access
- Dimension: 52 (L) x 39 (W) and 11.2cm at the highest point (middle)

Feature Highlights:

- Dynamic lighting angle prevents hotspot bleaching corals but allow fixture to run at higher (max) output to bring out more colors
- Lighting should not be set and forget but rather a constantly changing parameter (PAR) due to water chemistry such as nutrients and alkalinity.
- Different lighting profile for different days of week. Individual fixture in a group can also have a different lighting profile for best light angles.
- Auto adjustment of lighting intensity based on nutrient level. Example, lighting is now at 70% (define by user) and with PO4 at 0.1ppm. Mastertronic now has a new reading of 0.3 PO4 and will increase lighting intensity for the profile by 10%. When PO4 resumes 0.1ppm, the intensity is back to default which is 70%. Will also work in opposite direction when nutrient is too low and reduce intensity.
- True UV LED diodes. 365nm and 395nm
- Machined reflector for the dual cluster giving best spread and without laser type beams

¹Angle tolerance can be +/-3 degrees

Registration

Visit our website (<http://www.focustronic.net/product-registration>) and register your product within 30 days of the purchased date (sales invoice).

Product Registration

This site is protected by reCAPTCHA and the Google [Privacy Policy](#) and [Terms of Service](#) apply.

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Street Address *	
<input type="text"/>	
Street Address 2 *	
<input type="text"/>	
City *	Region *
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Zip/Postal Code *	Country *
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Product Model *	
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Setup Procedures

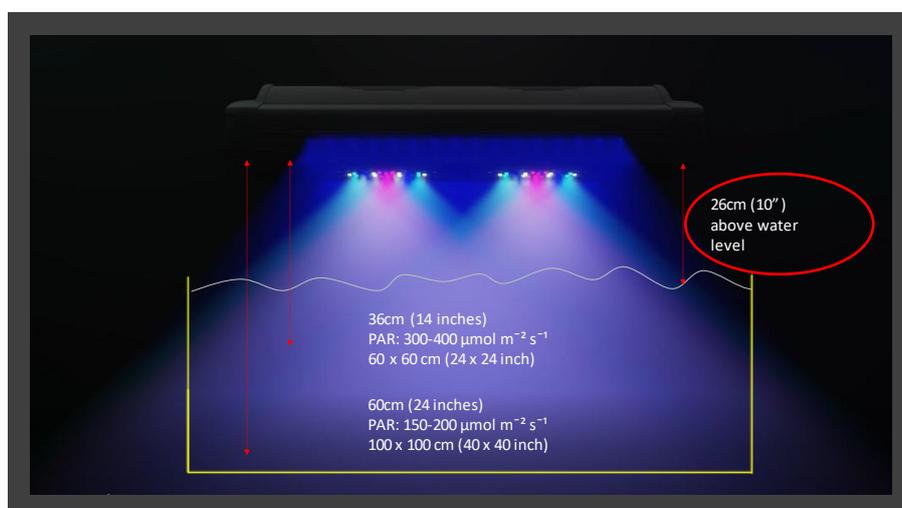
Safety Precautions

- Do not look directly into the light.
- Only use power supply and cables that come with the package.
- Do not handle or install the fixture if/when your hand is wet.
- The unit is not designed to be used in water.
- Apply caution when installing over your aquarium and do not allow water to get onto or inside the unit.
- If you plan on installing the light into a closed canopy, be sure to allow good ventilation. This is a high powered LED fixture and requires sufficient ventilation to prolong durability.
- Follow the installation instruction carefully. If in any doubt, contact official support before proceeding.
- To reduce risk of electric shock or fire, do not expose this device to water, moisture, dripping or splashing.
- When hanging the fixture with the included hanging wires, make sure the ceiling or the installation can carry the weight of the product with sufficient allowance.

Placement

Solartronic must be mounted at least 10 inches (26 cm) above water to avoid water splashing into the unit.

The PSU (power supply unit) must be placed away from the water source. If the PSU needs to be placed below water level, a **drip loop** must be applied.



Establish WiFi Connection

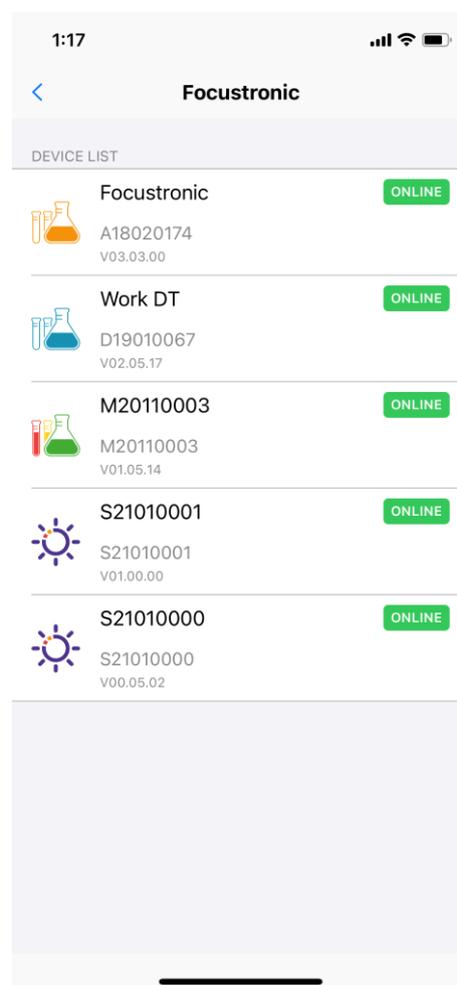
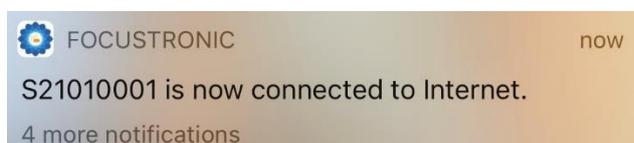
Download the “Focustronic All in One” App (AIO App) from App Store (iOS) or Play Store (Android).

If this is your first Focustronic product, make sure you create an account via the AIO app before proceeding. This allows the unit to be linked to your account so you can view and edit the settings.

1. Download the Focustronic All in One app
2. Open the app and create an account
3. Close the app
4. Power on the unit (**make sure the unit is suspended as the cluster will be auto calibrated on each startup**)
5. On your phone/tablet, go to wifi settings and you will be able to locate the Solartronic SSID (ie: S2101XXXX)
6. Connect to the SSID (S2101XXXX) and enter the password (stpassword)
7. Open the AIO app (will load for 60 seconds)
8. Enter your router’s SSID and Password and press SAVE (see notes)
9. Close the app
10. Solartronic will now do an internal reboot and you will get an notificaiton once it is connected to the internet.

After you get the online notification (see below pic), you can now proceed with doing the settings of the Solartronic. The new device will be shown in the “Default” tank and you can transfer it to a another tank.

You can have more than 1 Solartronic per tank and all profiles and settings will be synced to all devices within the same tank.



Notes:

- Router must be 2.4ghz
- SSID and Password must be alphanumeric ONLY. Symbols may not be accepted.

App - Features

Settings

Edit the current profile – the app will load the current profile from the unit. This button allows you to edit the current profile

Profile – this button shows you all the saved profiles you created and the default profiles templates.

Schedule – here you can set the profiles being used for each day of the week. You can have same or different profiles for each day. Within this page, you can enable the Solartronic to follow the real moon cycle or simply give a moon light schedule for each night (to be updated with software update).

Moon – when you set the moon intensity and period, this will be used for each day and is not profile specific.

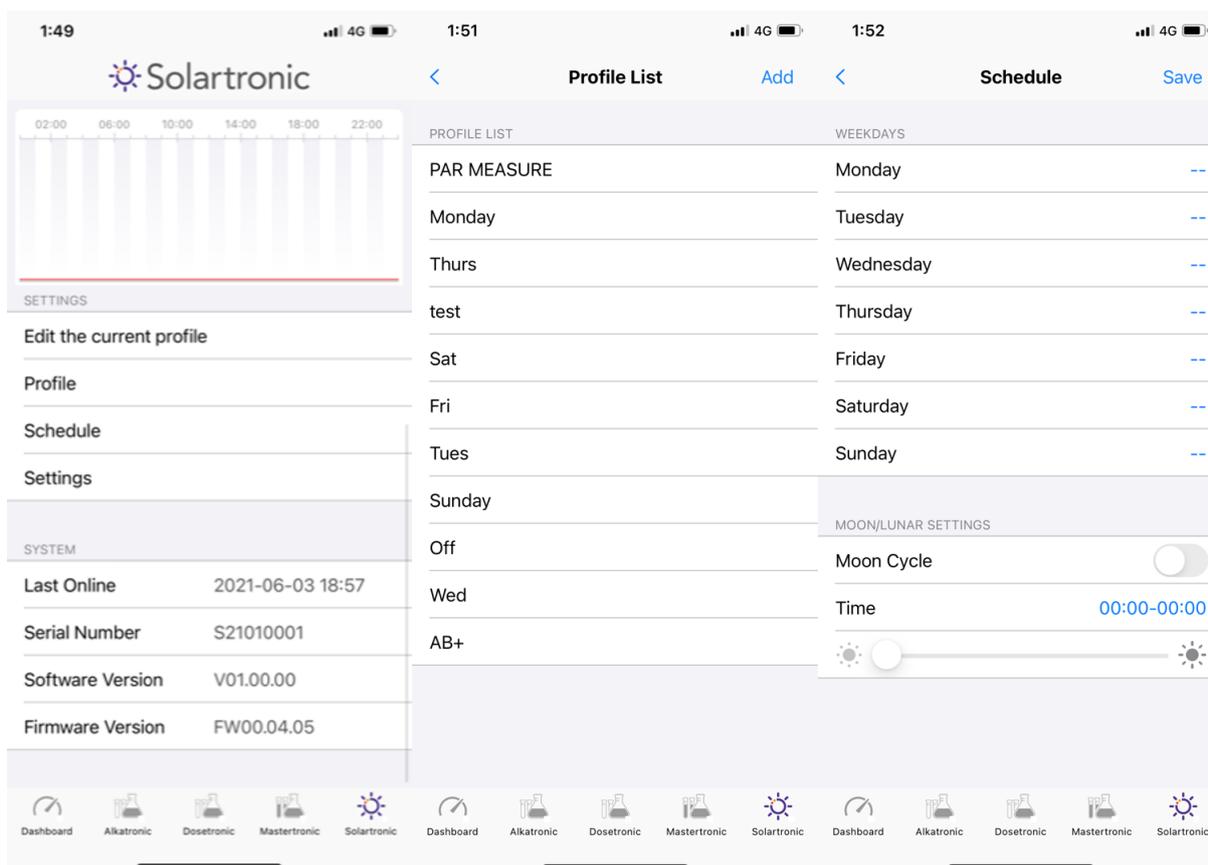
System

Last Online – when you open this page, the info shows the last online time. With an online unit, the time should not be more than 2 minutes from the current time.

Serial Number – this is the serial number of the unit being connected

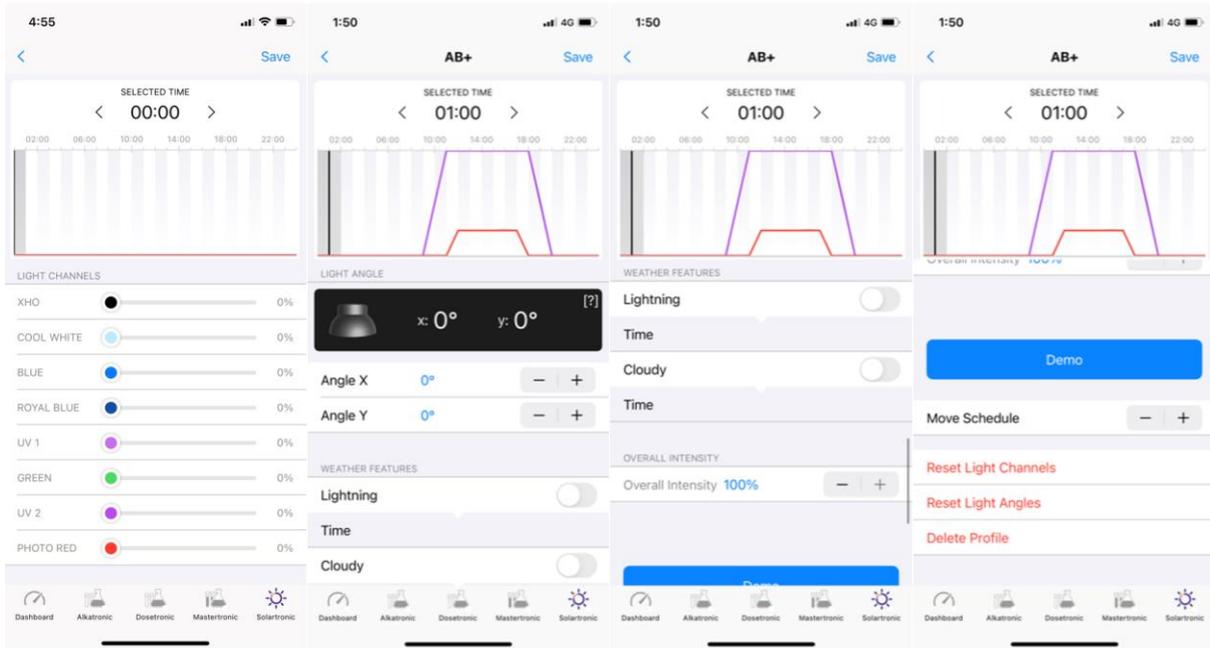
Software Version – the current software version on the SD card. This will be update automatically if unit is online.

Firmware Version – the current firmware version on the microprocessor. This can only be updated via the USB connector within the unit.



Add or Edit a Profile

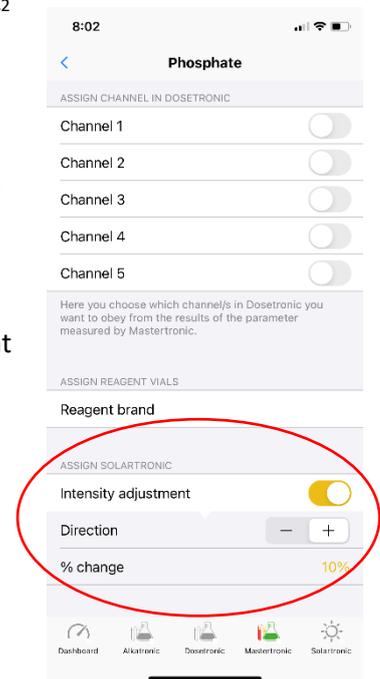
- To add and create a new profile, tap “Add” on the top right corner of Profile page.
- Click < or > to the time point you need start and adjust each LED channel.
- At each hour, the angles of the clusters can be set irrespective of what the previous or next time point.
- Enable LIGHTING and/or CLOUDY. There are random scenes for lighting and cloudy.
- Overall intensity can adjust the overall intensity of that hour meaning if you have fixed the ratio of LED channels, you can use this to adjust without adjusting each channel again.
- To play a demo of the profile, press the Demo button. The profile will be summarized into 2 min.
- Make sure you save the profile before leaving the page or closing the app.
- Move Schedule allows you to adjust the profile start/end time while keeping the schedule unchanged.



Mastertronic Control

Lighting intensity can be automatically adjusted +/- based on a parameter² measured in the Mastertronic. You can refer to the Mastertronic manual to set the + or – direction for a certain parameter.

For example, if you have the + sign enabled and set a value of 10% for phosphate, the lighting intensity will be increased by 10% if the measured phosphate is higher than the set high reference value in Mastertronic. When the measured phosphate falls back within range, the lighting intensity will be resumed as the profile setting. Note that the max intensity is 100% so therefore if the profile is set at 100%, auto adjustment can only be decreased.

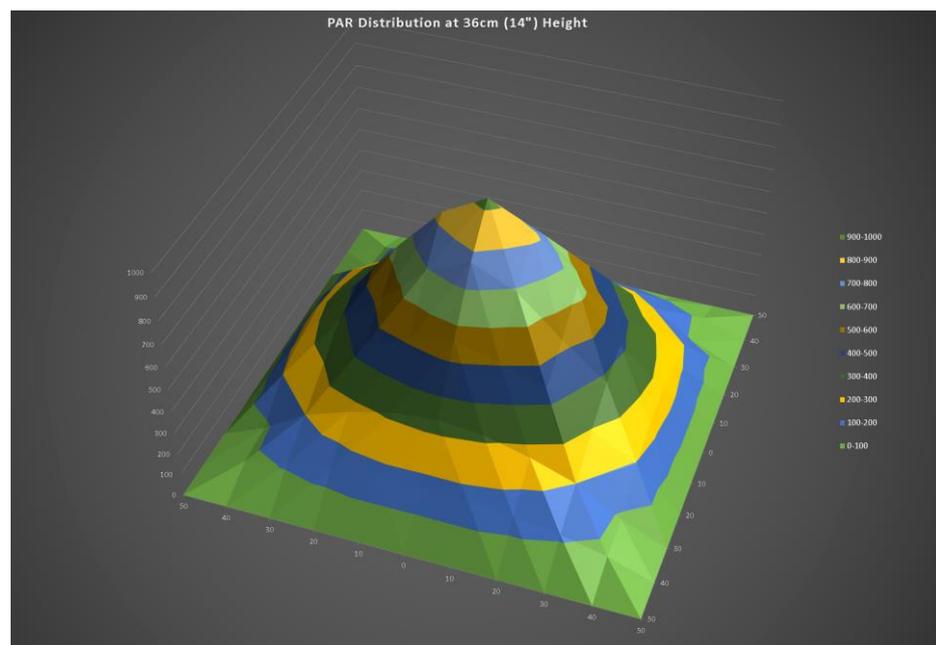
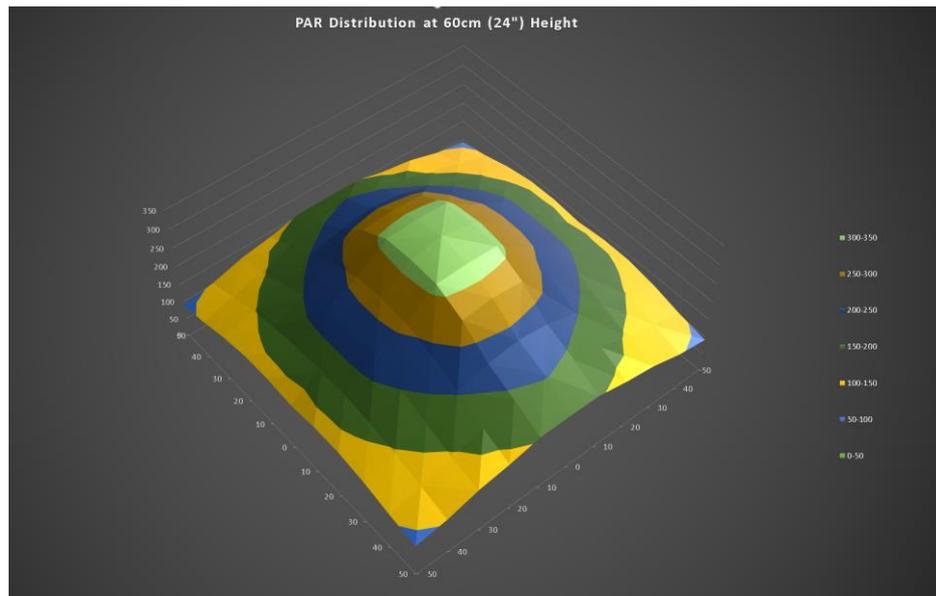


² except for alkalinity (dKH)

References

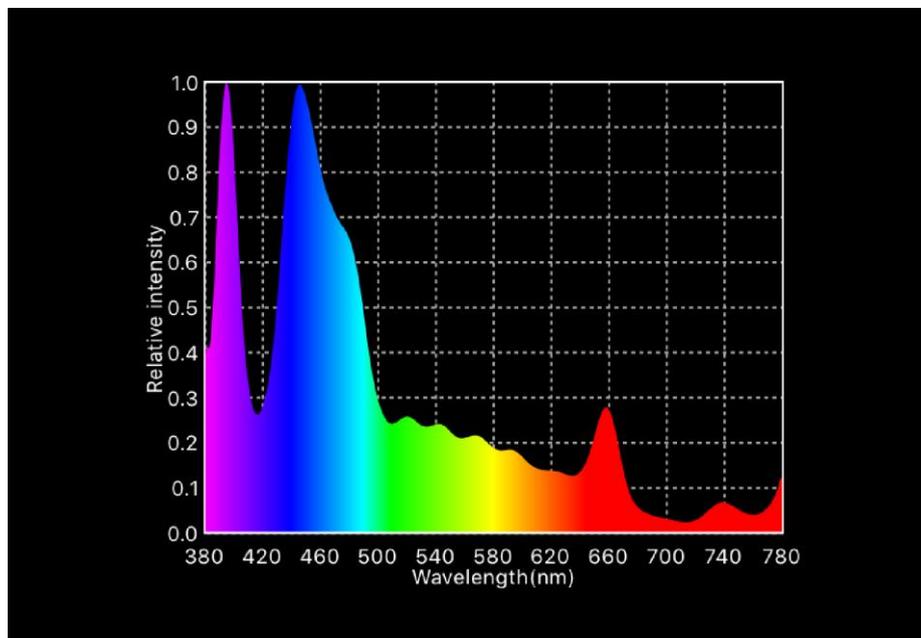
PAR Diagrams

Below are two diagrams which can show you the distribution over a 20" deep tank when light is mounted 10" above water level.

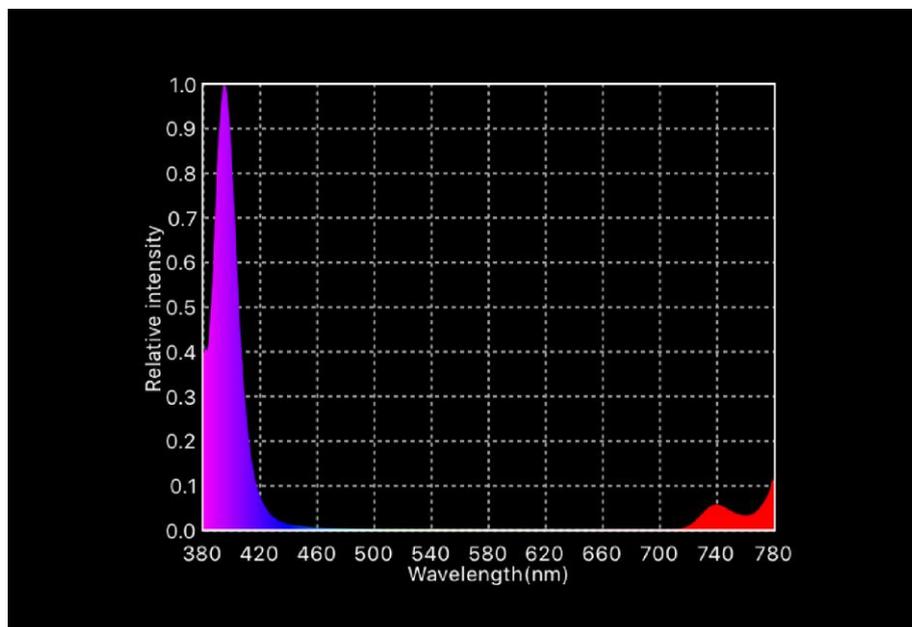


Spectrum

All channels at 100%



UV1 (365 & 395nm)



Spread / Coverage

A single Solartronic is suggested to cover a 40x40" cube tank with the majority area capable of sustaining high lighting demand SPS corals.

For deeper tank, optional narrow angled optics can be purchased separately.

