



Beautiful Reef

TRULY SMART BEAMS 2

BASIC EVEN ADVANCED MODULAR SYSTEM GEN

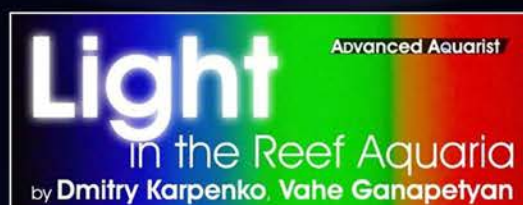
LIGHTING WITH AUTOMATIC
EXPERT SETUP



EVERYTHING BASED ON SCIENCE

We were the first to conduct a dedicated study to determine **what spectrum corals actually need**. The results were published in 2012 on **Advanced Aquarist**. Since then, our work has been translated into several languages.

[READ >>](#)



There are many lights for corals. BEAMS is created for people.

Our lights have been designed and tested for over 7 years in Russia. They are the result of **research and engineering**, not marketing. The technical solutions used in BEAMS are protected by patents in the United States and Russia. More than 20 additional patents are currently in progress.



UNIVERSALITY

FOR BEGINNERS —
fully automatic configuration
tailored to the specifics
of your aquarium.

FOR ADVANCED USERS —
intuitive manual control
with the precision of scientific
equipment.

No need to download an app or connect to the internet.



COMFORT & DESIGN

BEAMS is pleasant not only for corals but also for people. A carefully selected LED set, soft, enveloping light, no flicker, no noise — only some of the advantages.



RELIABILITY

A combination of technologies allows us to offer a full two-year warranty — if anything happens, we replace your light with a new one.



EXPERT APPROACH

We have nothing to hide — and plenty to be proud of. We explain all technologies, capabilities, and technical features of every BEAMS model.

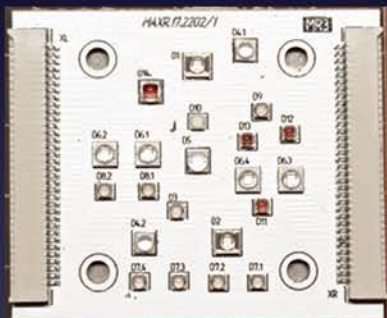


Want to learn everything about aquarium lighting?
Here are three articles: [FIRST >>](#) [SECOND >>](#) [THIRD >>](#)

BEAMS ADVANTAGES ARE BUILT ON PATENTED SOLUTIONS

Patent in the USA
US 11,006,495 B1

Patent in Russia
RU 2 739 704



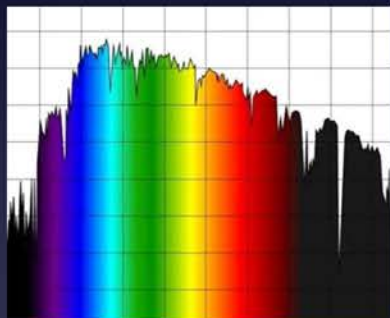
Full-spectrum, identical LED modules

Unmatched
uniformity
of illumination
and spectral balance



Controller + micro computer running Linux

Limitless
control
possibilities.



Spectra without PWM

True, stable spectra
—
not an imitation.
No flicker, no artifacts,
no distortion.

Automatic
configuration
tailored to each
aquarium

No PAR
meter needed

Scientific
grade precision

Comfort
for corals

Maximized
photosynthesis

Any lighting
scenario

Cycles of
any duration

A picture
to your taste

Easy high
quality photo

No eye strain

No deflector
required

CREATE LIGHTING TO MATCH YOUR TASTE. BEAMS WILL HANDLE THE REST

Light is one of the most powerful ways to transform your aquarium. Look at these corals — the photos are taken without any color correction!



Spectrum that highlights ultra bright extra spectral colors.



Shallow lagoon spectrum — perfect for warm tones.

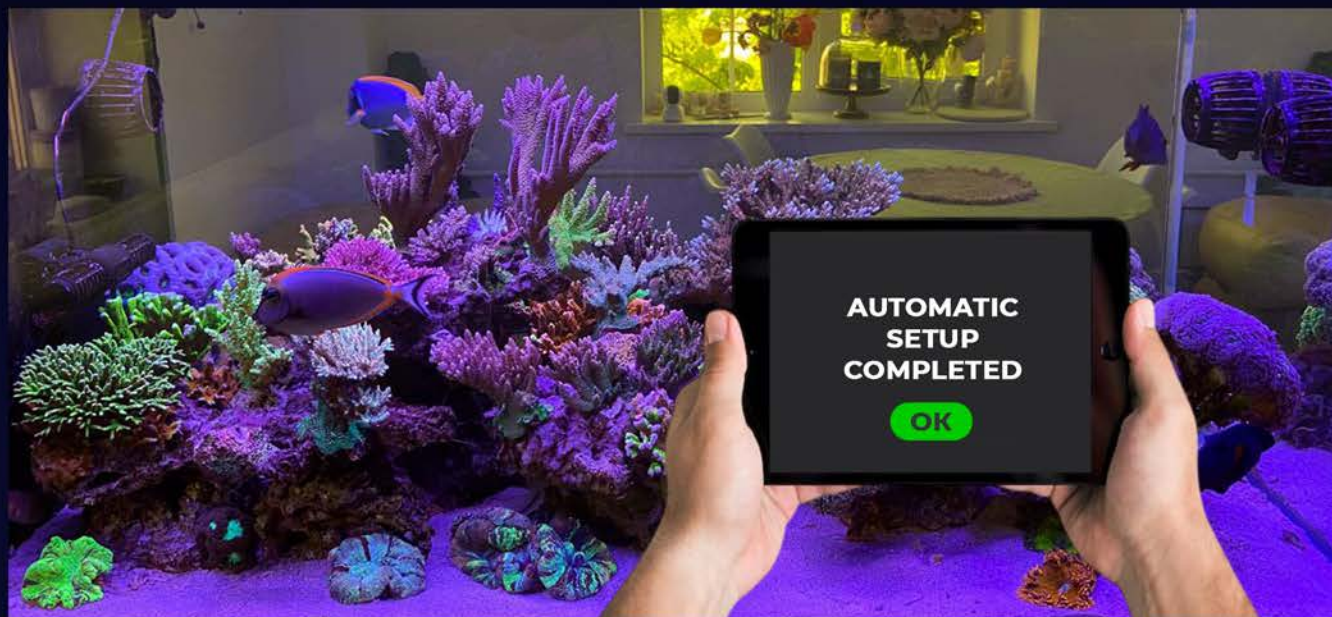


Spectrum that enhances coral fluorescence.

AUTOMATIC CONFIGURATION: EASY EVEN FOR BEGINNERS

Suitable for almost everyone — from those setting up their first aquarium to experienced reef keepers.

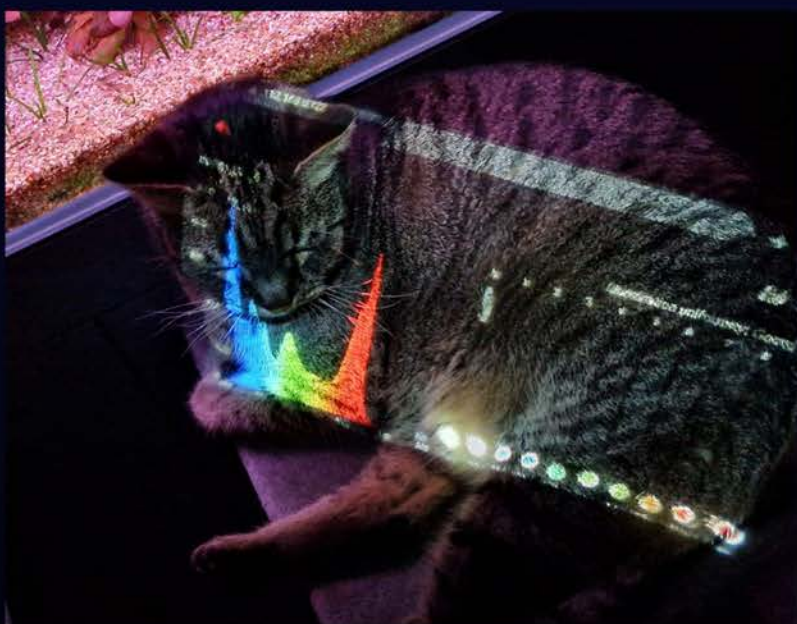
Just answer a few questions about your tank, choose the lighting scenario you like most, and the **Setup Wizard** will configure the light with expert level precision specifically for your aquarium.



"Everyone should know this — the Wizard doesn't make mistakes, please trust it."

This is the essence of the feedback users leave in our Telegram chat. [FROM HERE >>](#)

CONTROL FROM ANY DEVICE, FROM ANYWHERE



The BEAMS interface works even on this furry aquarist ;)

Often, automatic configuration is all you need — and you're already enjoying your aquarium.

No need to download an app or have internet access.

Use any device with Wi-Fi and a browser — a computer, smartphone, tablet, or even a smart TV.

When connected to your home router, you can control the light from anywhere in the world.

MANUAL CONTROL.

CREATE BEAUTY PLAYFULLY

Spectral preferences are highly individual. The **TrueSpectrum** interface turns light tuning into an enjoyable, creative process — make your aquarium look exactly the way you want. TrueSpectrum ensures an optimal coral friendly mode by monitoring the most important lighting parameters — **PPFD*** and **DLI****.

With scientific grade precision, you get virtually unlimited control over your lighting.



5000
brightness levels
per channel

up to 14
control channels

up to ∞
lighting cycles of
virtually any duration

ESSENTIAL & INFORMATIVE

This is how a daily lighting cycle looks in the interface of one aquarium light.

A patented BEAMS feature — **near ideal uniformity** of illumination even at short distances from the light. We can specify PPFD with high accuracy because it remains the same at any point directly under the light. Unlike other lights with large illumination gradients, we can display PPFD and DLI values with exceptional precision.

Point	From	To	White	Warm	Blue1	Blue2	Blue3	UV	Orange	Green	Red
12	10:04	10:45	060	032	075	070	100	100	100	100	100
13	10:46	11:20	065	039	085	080	040	100	100	070	100
14	11:21	12:00	070	041	090	100	100	100	100	040	100
15	12:01	13:00	072	042	095	090	060	100	100	100	100
16	13:01	13:50	078	038	100	090	100	100	100	100	100
17	13:51	14:30	080	039	100	095	100	100	100	100	100
18	14:31	14:55	072	027	100	100	100	100	070	100	100
19	14:56	15:42	085	041	100	100	100	100	100	020	100
20	15:44	16:30	070	043	090	090	100	100	060	010	060
21	16:31	17:00	060	034	085	085	100	100	060	013	070
22	17:01	17:22	046	014	090	080	050	100	067	015	100
23	17:23	17:44	042	011	086	077	040	100	055	012	100

From

To

00:00

00:00

Read from lamp

Send to lamp

Update row

White

Warm

UV

Blue1

Blue2

Blue3

Green

Orange

Red

70

43

100

0

0

0

0

60

60

Daily Cycle in the BEAMS Interface

PPFD and DLI are displayed clearly and intuitively.



* PPFD — Photosynthetic Photon Flux Density, $\mu\text{mol/s/m}^2$
** DLI — Daily Light Integral, the total PPFD accumulated over a day.
The most important parameter for coral health.

COMFORT ON BOTH SIDES OF THE GLASS

BEAMS is unique because it delivers an even, enveloping light. This means every coral polyp gets the illumination it needs — even those that normally fall into shadow under conventional lights and lose their color and appeal. Field measurements in hard-to-reach areas confirm this advantage, even when compared to T5 fixtures, whose light distribution was long considered the gold standard for uniformity.



T5 – 13 PPFD vs BEAMS – 46 PPFD



T5 – 60 PPFD vs BEAMS – 155 PPFD

[DETAILS >>](#)

EYE HEALTH

A high flicker coefficient causes rapid eye fatigue and poses potential health risks: headaches, chronic tiredness, sleep disturbances, reduced visual acuity. Corals also dislike flicker — they absorb such light less efficiently. In terms of flicker, BEAMS is virtually identical to sunlight. Corals use the light more efficiently, and your eyes stay comfortable.

LIGHT QUALITY (Flicker Coefficient)

Sunlight

0 %

BEAMS lights (typical spectra)

0.14 %

IEEE P1789 requirement

3 %

Typical adjustable spectrum LED lights

up to 50 %

← lower is better

SILENCE

BEAMS lights

2 dB

Threshold of hearing

20 dB

Permissible noise level (strictest U.S. residential limits, California)

40 dB

LED lights with cooling fans

up to 50 dB

← lower is better

[INTERESTING >>](#)

BEAMS 2 R uses a set of LEDs that allows you to create even non typical spectra for marine aquariums — including standardized solar spectra, and with greater accuracy than lights designed specifically for that purpose.

DESIGN: THE BEAUTY OF PURPOSE



Every component of BEAMS is an elegant engineering solution that directly influences the design and provides real benefits. For example, thanks to optimized thermal performance, BEAMS weighs **five times** less than comparable fixtures and has a compact form factor. Its design doesn't distract from the beauty of the aquarium and makes maintenance easier.

One of the key BEAMS technologies is **TruePower** — a hybrid brightness control system



It delivers the highest efficiency, extends LED lifespan, and ensures the target spectrum at any moment.

Thanks to TruePower, the following advantages are achieved:

UP TO 2×

faster
coral growth*

EXPLANATION >>

* Compared to LED lights at the same PPFD.

UP TO 2×

lower energy
consumption*

EXPLANATION >>



One possible cause of these horizontal bands is PWM* artifacts. BEAMS circuitry completely eliminates such effects, which are present to some degree in the vast majority of aquarium lights.

* Pulse width modulation

RELIABILITY

Reliability is a complex characteristic made up of many components. Here are just a few of them.

BEAMS uses not just the best LEDs available from Lumileds, OSRAM, and Cree — but carefully selected variants of these LEDs. We also use exclusive LEDs manufactured specifically for us by TSLC, a global leader in short wavelength LED technology.

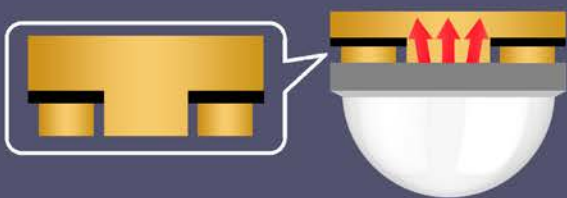
[DETAILS >>](#)

LED BOARD CROSS SECTION

BEAMS board with DHP*

x 100

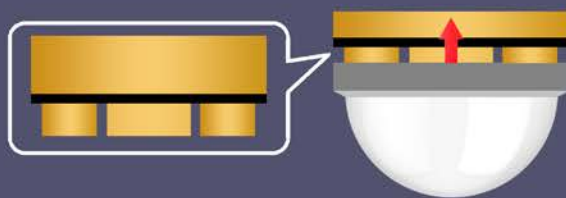
THERMAL CONDUCTIVITY



Standard board

x 1

THERMAL CONDUCTIVITY



Copper
(high thermal conductivity)

Insulator
(low thermal conductivity)

The Path
of Heat

* **DHP (Direct Heat Path)** — a technology that increases heat dissipation by more than 100× compared to conventional boards. This ensures the lowest possible LED temperature and dramatically extends their lifespan.

BEAMS uses only **ceramic capacitors** in its power system. Their exceptional durability guarantees stable LED power throughout the entire service life.

BEAMS lights come with **MeanWell power supplies**, which carry up to **7 years of manufacturer warranty**.



Our first BEAMS lights have already operated flawlessly for more than 7 years. LED lifespan exceeds **100,000 hours**.

This is why we confidently offer a **full 2 year warranty**.

If anything happens, you first receive a **new replacement light**, which stays with you forever — and only then send us the old one.

WE CARE ABOUT CONVENIENCE

We stay in close contact with the global reefing community and continuously implement your best ideas into BEAMS.

SMART BUTTON

Press it when you need to:

- activate a selected spectrum or assign a new one
- reset the Wi-Fi password
- test all LED channels

The button's capabilities will expand with future software updates.



[LEARN MORE >>](#)

MOUNTING OPTIONS

You can mount the light on a hanging kit or legs — but there are other options as well. For example, like this:

[HOW ELSE CAN YOU MOUNT IT? >>](#)



POWER CABLES

- Different cable gauges for different power levels
- Length options from 5 to 23 ft — reaches anywhere
- One click bayonet connectors for quick, secure attachment



GROUP CONTROL

The BEAMS controller includes a powerful Wi-Fi router. This allows you to create a group of BEAMS lights in several ways:

- connect the main light to your home router
- connect all lights to the router
- connect lights directly to each other

FULL TRANSPARENCY OF INFORMATION

WE SPECIFY THE LED PARAMETERS USED IN BEAMS

They are essential for displaying critical lighting parameters — **PPFD** and **DLI** — with high precision in the controller interface, thereby safeguarding you against errors. That is precisely why we always specify not only the LED brand but also the exact bins in our specifications.

YOU KNOW THE EXACT PARAMETERS OF YOUR LIGHT

Every BEAMS light undergoes “hot testing” during production. The final stage of this testing is collecting precise information about the parameters of each individual lamp.

You receive this data in a table.
For BEAMS 2 MAX R 10, it looks like this:



#	LEDs ¹	Color	PWL nm	DWL nm	PPFD ²	P W ³	PPFD / W 30 / 100 %	Δ % ⁴
1	10	Ultraviolet	383	-	89	38	2.59 / 2.37	1.4
2	10	Dark violet	408	428	76	37	2.24 / 2.05	3.9
3	10	Violet	422	431	61	35	2.03 / 1.74	0.9
4	20	Indigo	440	444	287	113	3.15 / 2.55	-0.3
5	10	Royal blue	450	454	136	58	2.89 / 2.37	0.6
6	40	Azure	466	468	240	115	2.93 / 2.08	0.1
7	40	Blue	473	477	174	130	1.77 / 1.34	-1.1
8	20	Turquoise	495	497	68	64	1.49 / 1.06	1.2
9	10	Green	522	530	31	39	1.16 / 0.81	0.5
10	10	Mint	543	-	52	33	1.89 / 1.57	-0.1
11	10	Amber	593	590	15	23	0.81 / 0.66	0.2
12	10	Orange-red	622	614	55	30	2.24 / 1.87	0.3
13	10	Red	632	621	61	29	2.51 / 2.12	-0.1
14	10	Ruby	656	634	103	25	4.62 / 4.16	0.0

1 — Number of LEDs of this type in the light
2 — PPFD measured at 10 in from the light
3 — Power consumed by the LED chain
4 — Deviation from the average PPFD of lights of this model

[DETAILS >>](#)

Lights manufactured without precise **PPFD** control can vary by more than 50% between lamps. We guarantee parameter stability with deviations of less than 8% from the average.

BEAMS 2 R PRODUCT LINE

BEAMS 2 R — EVERYTHING YOU NEED FOR A BEAUTIFUL AQUARIUM



LED set optimized for easy configuration

+ Minimal size and weight

Lowest cost

- For ultra light demanding corals in photoinhibition mode, multiple units may be required.

BEAMS 2 PRO R — EVERYTHING ADVANCED USERS NEED



Expanded LED set

+ Light output sufficient for any coral in any mode

Optimal price to performance ratio

BEAMS 2 MAX R — EVERYTHING LED TECHNOLOGY CAN DO TODAY



Complete freedom to shape the spectrum — even beyond PAR

+ Extremely high efficiency, resulting in near eternal LEDs

Wide model range — 5 versions for tanks from small to large

- Higher cost

SPECIFICATIONS

	BEAMS 2 R				BEAMS 2 PRO R				BEAMS 2 MAX R				
Number of LED modules	4	6	8	10	4	6	8	10	2	4	6	8	10
Automatic configuration	YES				YES				YES				
Hanging or rim-mount installation	YES				YES				YES				
Group control via Wi-Fi	YES				YES				YES				
Length of the fixture, in	15	22	29	37	15	22	29	37	12	20	29	39	48
For aquariums up to, in	28	35	43	51	28	35	43	51	24	35	43	55	67
Optimal for aquariums of length, in	20	28	35	43	20	28	35	43	16	28	35	47	59
For aquariums up to width, in	up 22				up 24				up 28				
Optimal for aquariums of width, in	up 16				up 16				up 18				
Max PPFD (PAR) at 10 in*	330	370	500	500	470	600	650	700	530	730	730	730	830
LED module lifespan, hours**	>50 000				~100 000				>100 000				
Rated LED power per module, W	30				50				80				
LED types / control channels	8 / 8				10 / 10				14 / 14				
Rated LED power, W	120	180	240	300	200	300	400	500	160	320	480	640	800
Max power draw from outlet, W	65	95	140	180	95	150	190	250	95	160	190	250	330
Max heatsink temperature at 25 °C ambient, °C	70	70	70	70	65	65	65	65	60	60	60	60	60
Fixture weight without power supply, lb	1.8	2.4	3.1	4.0	2.2	3.1	4.0	4.9	2.0	3.1	4.6	6.0	7.5

* Values shown for a single fixture installed on an aquarium of optimal size.

** L70, typical spectra.

Full brightness available only above 110 VAC.

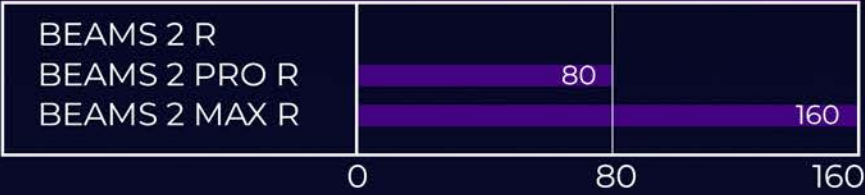
BEAMS 2 R PPFD BY SPECTRAL RANGE

BEAMS overdelivers in every spectral band, letting you pick your spectrum purely by taste.

RECOMMENDED PPFD LEVELS

SOFT CORALS	50 - 150 PPFD
LPS CORALS	100 - 250 PPFD
SPS CORALS	300 - 500 PPFD

From UV to Dark violet

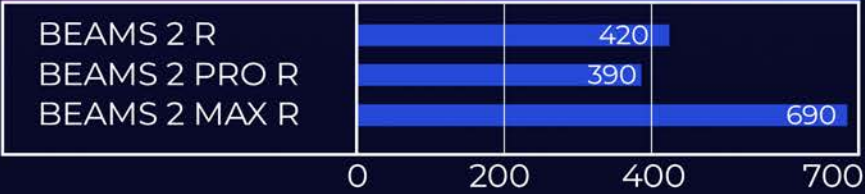


Needed by some corals for maximum coloration. Excessive amounts may be harmful.

Recommended usage:

soft corals	0 - 10 PPFD
LPS corals	0 - 30 PPFD
SPS corals	0 - 70 PPFD

From Violet to Azure

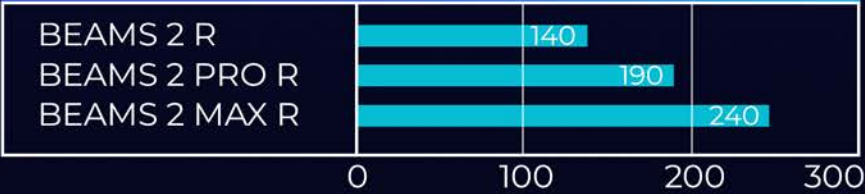


Essential for all corals — both for growth and coloration. Provides strong fluorescence visibility.

Recommended usage:

soft corals	50 - 100 PPFD
LPS corals	50 - 120 PPFD
SPS corals	150 - 300 PPFD

From Blue to Cyan

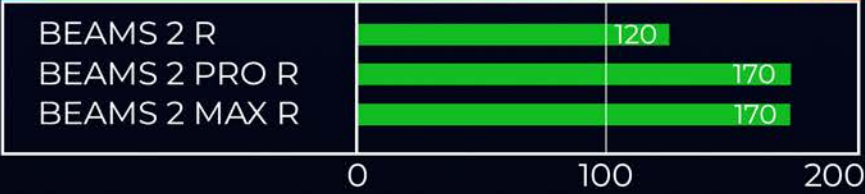


Shapes and enhances beautiful blue and turquoise tones in the aquarium.

Recommended usage:

soft corals	20 - 40 PPFD
LPS corals	50 - 90 PPFD
SPS corals	60 - 120 PPFD

From Green to Orange



Creates visual brightness and reduces excessive blueness.

Recommended usage:

soft corals	20 - 30 PPFD
LPS corals	30 - 40 PPFD
SPS corals	10 - 50 PPFD

From Red to Ruby



Accentuates warm tones. Excessive amounts may reduce coral coloration.

Recommended usage:

soft corals	0 - 20 PPFD
LPS corals	0 - 30 PPFD
SPS corals	0 - 40 PPFD

Values shown apply to fixtures with 10 LED modules installed on an aquarium recommended size. PPFD indicated for a distance of 10 in from the fixture.

BEAMS 2 R SPECTRAL DISTRIBUTION

#	LED CHANNEL FEATURES	PWL nm	BEAMS 2 MAX R	BEAMS 2 PRO R	BEAMS 2 R
1	+ Required by some SPS for maximum coloration Additional fluorescence colors - Excessive amounts can be harmful to corals	380			
2	+ Required by many SPS for maximum coloration Additional fluorescence colors - Excessive amounts can be harmful to corals	410			
3	+ Required by SPS for maximum coloration Additional fluorescence colors	425			
4	+ Needed by all corals for coloration Chlorophyll A absorption peak Allows fluorescence to be clearly visible	440			
5	+ Needed by all corals for coloration Chlorophyll B absorption peak Allows fluorescence to be clearly visible	450			
6	+ Needed by all corals for coloration Bright blue light with a unique hue Additional fluorescence colors	460			
7	+ Bright sky blue light Additional fluorescence colors - Lower fluorescence visibility	470			
8	+ Turquoise “shallow lagoon” light Close to the peak of scotopic vision sensitivity	500			
9	+ Pure green light “Bleaches” short wavelength parts of the spectrum Improves aquarium photo and video capture	525			
10	+ Provides visible brightness to the spectrum Peak of photopic vision sensitivity	550			
11	+ Pure golden light Accentuates vivid yellow tones	590			
12	+ Accentuates orange tones - Excessive amounts reduce coral coloration	600			
13	+ Accentuates red tones Chlorophyll B absorption peak - Excessive amounts reduce coral coloration	630			
14	+ Highlights ruby red tones Chlorophyll A absorption peak - Excessive amounts reduce coral coloration	660			

QUESTION

**Where can I buy BEAMS lights?
Where can I read user reviews?**

ANSWER

You can purchase BEAMS lights through our official partners.
You can talk directly with BEAMS users and ask any questions about marine aquariums in our [Telegram chat](#).

QUESTION

How deep does BEAMS lighting penetrate?

ANSWER

Light intensity decreases with distance from the fixture, but at the same time becomes more uniform.
Even at relatively shallow depths, illumination under a BEAMS light becomes nearly perfectly even, and the decrease in intensity with depth is slow.
This is why BEAMS successfully illuminates even very deep aquariums — including public aquariums, where LPS corals grow at depths of more than 3 feet.

QUESTION

Can BEAMS be used on aquariums larger than recommended?

ANSWER

Yes. In this case, place the most light demanding corals closer to the fixture, while less demanding species will receive sufficient light even at greater distances.
BEAMS R2 10 has been used many times on soft coral aquariums of around **250 gallons**, consistently demonstrating excellent results.

QUESTION

What are the advantages of using more BEAMS lights than recommended?

ANSWER

In this setup, light intensity decreases extremely slowly with depth. You also get a unique effect — corals appear to be **“wrapped” in light**, and the undersides of branches receive illumination comparable to the top.

QUESTION

How does the warranty work for a BEAMS light purchased second hand?

ANSWER

Exactly the same as for a BEAMS purchased directly from us. During the warranty period, any issue is resolved with a **free replacement of the light with a new one**.
After the warranty expires, repairs are offered at discounted rates.

QUESTION

Where can I learn more about aquarium lighting?

ANSWER

Everything an aquarist needs to know about lighting is explained in these articles: [FIRST >>](#) [SECOND >>](#) [THIRD >>](#)
Practical information is covered in our webinar.
Additional discussions can be found on the specialized forum.