

## Scientific wavelengths of light | Designed for deepsea applications

The Aquorea Mk3 Colour is a high-efficiency, TTL synchronized **subsea LED** that can simultaneously operate as a lamp and strobe. Available in custom wavelengths, each LED Colour is designed for specific deepsea applications:

- Far-red assists in capturing deepwater natural species behavior
- Deep-blue is ideal for bio-fluorescence and leak detection
- Additional wavelengths are available. Contact us for more information.



SubC LEDs and lasers are plug-and-play when coupled with the **Rayfin camera** and are easily integrated into subsea ROV, observatory, drop, tow, and battery-deployed camera systems.

| Specifications     |                       | Deep-Blue  | Deep-Red    | Far-Red       |
|--------------------|-----------------------|--|-------------|---------------|
| <b>Light Specs</b> | Wavelength            | 457nm  | 624nm       | 740nm         |
|                    | Intensity             | 2200 lumens  | 8400 lumens | 108 μmols/sec |
|                    | Beam Angle            | 80% of the light is within an 80° beam<br>85% of the light is within an 90° beam |             |               |
|                    | Reaction Speed        | Approx. 190 microseconds   |             |               |
| <b>Electrical</b>  | Protection            | Short Circuit, UV-OV-RV, ESD, OT   |             |               |
|                    | Thermal Protection    | Auto Dim/Shutoff   |             |               |
|                    | Control               | Serial RS-485  |             |               |
|                    | Strobe                | TTL 5V (active high)   |             |               |
|                    | Power                 | 18-32 Vdc / 48 Watts   |             |               |
| <b>Mechanical</b>  | Min./Max. Temperature | -10°C - +20°C in water   |             |               |
|                    | Materials             | Sapphire, Grade 5 Titanium   |             |               |
|                    | Weight                | 0.9kg in water, 1.5kg in air   |             |               |
|                    | Depth Rating          | 6000m  |             |               |

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Titanium construction

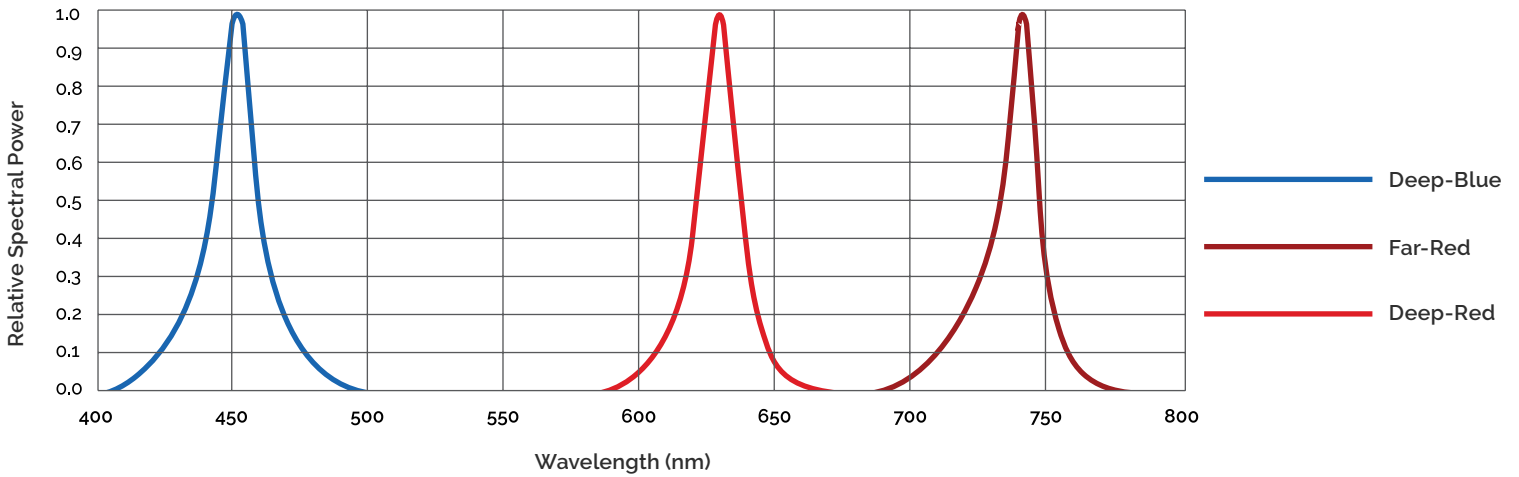


Smart subsea LED



80° Beam Angle

Typical Relative Spectral Power Distribution



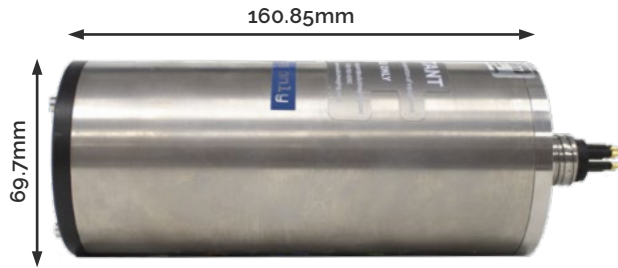
## Deep-Red & Far-Red

The advantage of far-red light lies in the fact that most deep-sea creatures are unable to see in the red spectrum. The Deep-red and Far-red LEDs allow researchers to view biota in their natural behavior.

## Deep-Blue

The deep-blue LED was designed for underwater bio-fluorescence and leak detection.

Fluorescent chemicals absorb energy from light and then emit a different colour of light. Bio-fluorescence is the absorption and reemission of light from living organisms.



| Pin # | MCBH5M        |
|-------|---------------|
| 1     | GND           |
| 2     | PWR           |
| 3     | Strobe enable |
| 4     | RS-485 B(-)   |
| 5     | RS-485 A(+)   |