

RGBBlue LM5K Twin Light

by Phil Rudin

AOI Japan Co. Ltd. is a company that many have only associated with its line of Acrylic and glass dome ports. Starting with ports for Olympus OM-D and Pen mirrorless camera housing, compact camera housings and recently released ports for the Fantasea Line housings.

What you may not know is that AOI also produce the expanding line of RGBBlue Video lights, Spot Beam lights, Twin beam lights, Screen Magnifier systems, compact tripods for U/W use, snoots and more. AOI distributes products in Asia, Europe, Oceania and The Americas. RGBBlue's excellent Twin Light is the subject of this review.

In issue #104 of uwpmag.com I reviewed RGBBlue System02-2 video lights for both stills and video. I have been seeing video lights used more and more for stills both on and off camera. For still imaging video lights work equally well for both wide angle and macro. Many macro shooters have also been using small video lights handheld or on tiny tripods for back and side lighting while shooting macro stills and video.

The RGBBlue System03 (Premium Color) twin lights are module lights

consisting of the LM5K1300V light module and the MB3500B battery module. For those like myself who already have access to the RGBBlue System02-2 video lights the MB6700B battery module from that light works equally well.

The first thing you will notice about these lights is the excellent build quality, small size and the portability of the system. The RGBBlue system03 packaging is first rate and contains the "Exclusive case L" (for light I believe).

The Exclusive L is a zipper case with an impact resistant cutout foam insert which holds the light and all of the standard accessories included with the kit. In addition too the twin light heads and battery module the kit includes storage caps for both modules require by law for air travel, a 100 to 240 Volt AC charging kit with three different removable power plugs, RGB-MK01 maintenance kit

Chromodoris Lochi, Puerto Galera Philippines, Sony A7 III, Sony 90mm F/2.8 macro, Nauticam NA-A7RIII housing, RGBBlue PC Twin Lights, ISO-400, F/8, 1/100th sec



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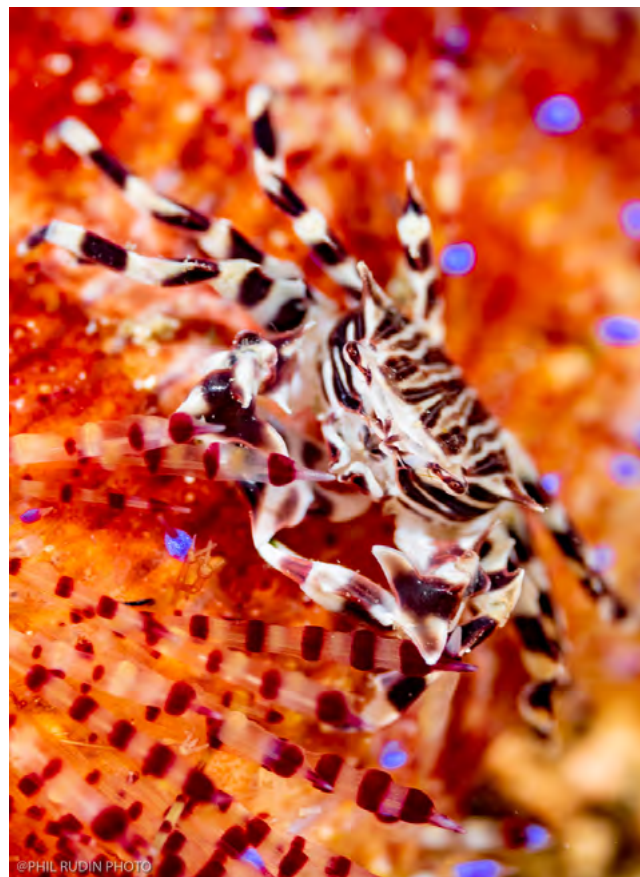
and YS adapter set. The maintenance kit includes a spare O-ring, O-ring remover, silicone grease and lintless cotton swabs.

The YS adapter set is for mounting the battery module onto the housing using the Sea & Sea type mount or a ball mount.

RGBBlue System03 Premium Color Twin Lights

The RGBBlue LM5K1300V twin light consists of the module head which connects to the battery and two small light heads. The two light heads are connected to the module by coiled cords which are each about 20cm in length when not stretched out. Each head has a small YS type mounting point which allows it to be used with RGBBlue adapters like the micro ball adapter and the rotating ring adapter set.

While the twin lights have an emission angle of 100



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Zebra Crab On Fire Urchin, Puerto Galera Philippines, Sony A7 III, Sony 90mm F/2.8 macro, Nauticam NA-A7RIII housing, RGBBlue PC Twin Lights, ISO-400, F/6.3, 1/80th sec

degrees and could be used for some wide angle the more practical application will be for macro work.

The color temperature of the System03 Premium Color twin lights is 4200K with a color rendering index (CRI) of Ra95. The total luminous flux range (lumens) for the system03 twin light is from 600lm to 2200lm depending on whether it is set to the step or non-step control.



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Doriprismatica, Puerto Galera Philippines, Sony A7 III, Sony 90mm F/2.8 macro, Nauticam NA-A7RIII housing, RGBBlue PC Twin Lights, ISO-640, F/6.3, 1/200th sec

With the four-step brightness control continuous lighting starts at 800lm with an approximate run time up to 310 minute, at 1200lm/160min, at 1400lm/95min and at 1800lm/60min. In non-step continuous lighting brightness run times are 600lm/550 minutes and 2200lm for 45 minutes. Lighting run times are standard values when starting with a fully charged BM3500B



White Spotted Pufferfish, Puerto Galera Philippines, Sony A7 III, Sony 90mm F/2.8 macro, Nauticam NA-A7RIII housing, RGBLue PC Twin Lights, ISO-400, F/9, 1/125th sec

battery. Run times were provided by RGBLue and may vary depending on a variety of conditions. The BM3500B is a rechargeable lithium-ion 3200mA/7.2V battery module and the System03 is depth rated to 100 meters.

The LM5K1300V twin light module mounts to the BM3500B battery module by aligning the small LED light on top of the module with the open mark on the battery module front ring. Press the light head into battery module until the yellow O-ring

is seated in place then rotate the battery front ring counter-clockwise until the red lock on the bottom on the light head snaps into place. You should hear the lock snap into the locked position.

To remove the light module press the red lock forward and rotate the front ring clockwise until the open dot aligns with the LED. Then just pull the light head off. After diving the light should be submerged in fresh water to clean off any salt residue. The light head and battery pack



Thorny Seahorse, Puerto Galera Philippines, Sony A7 III, Sony 90mm F/2.8 macro, Nauticam NA-A7RIII housing, RGBLue PC Twin Lights, ISO-400, F/9, 1/125th sec

should remain assembled during the cleaning process and not disassembled until fully dried.

On top of the RGBLue twin light module is a small LED indicator located between the up/down push button controls.

Viewed from the top with the light facing away the right button is the up button and the left is the down button. To turn the light on just push and hold both up/down buttons until the LED flashes. Then push the up button once and the LED will glow

continuously. To activate the light in the four-step mode push and release the up button and the lights will turn on at the lowest power level. Then each time the up button is pushed the power will increase by one stop through the four power levels.

To lower the power from the max of 1800lm just push the down button and the power is reduced by one stop through the four steps. For the non-step mode follow the same startup process, when the LED glows continually push and hold the



Phyllidia, Puerto Galera Philippines, Sony A7 III, Sony 90mm F/2.8 macro, Nauticam NA-A7RIII housing, RGBBlue PC Twin Lights, ISO-640, F/5.6, 1/400th sec

up button and the light increases in intensity until maxing out at 2200lm. Keep in mind that the twin light will begin to heat up when turned on out of the water so don't leave it on too long especially at the higher power settings.

When the light is turned on and the battery is at a 50% or greater power level the LED glows blue. Below 50% the LED shifts from blue to purple then yellow and then to red as the power drains. The LED turns red when the battery module drops to

5% power remaining.

At 5% the light output is automatically reduced to 600lm and will remain running for about an hour. If an error is detected such as in the startup sequence the LED flashes red. When the light is first turned on the LED will only flash for about five seconds and if the up button is not pushed within that five seconds the LED shuts down and the process needs to be started over.

The light weighs 570g on land, 240g underwater and dimensions



Small Reef Cuttlefish capturing a Fish, Puerto Galera Philippines, Sony A7 III, Sony 90mm F/2.8 macro, Nauticam NA-A7RIII housing, RGBBlue PC Twin Lights, ISO-400, F/4.5, 1/200th sec

your priorities. Quality of the light or CRI should be high on your list of considerations when buying a video light. Like having more megapixels simply having higher number of lumens does not always make the product better. Chances are if you go shopping for video lights that don't display the CRI number in their literature it is likely because the CRI numbers are not so good.

without accessories is a maximum of 64.2mm X 150mm.

If you are not familiar with the Color Rendering Index (CRI) in a nutshell it is a quantitative measurement of the ability of a light source to reveal colors as faithfully as an ideal natural light source. Higher number ratings indicate better light quality with Ra80 and above being very good and Ra90 and above being excellent. With an Ra95 rating you can expect the very best in light quality from the RGBBlue twin light system.

If the first question that comes to your mind when shopping for a video light is how many lumens the light has you may want to rethink

RGBBlue also offers System03 Twin Lights without the Premium Color option. All of the physical specs remain the same except for the CRI rating which is Ra80, the color temperature which is 5000K and higher brightness values. The higher brightness values in step mode are 1000lm/310 minutes, 1400lm/160min, 1600lm/95min and 2200lm/60min. In non-stop 800lm/550mins, 2600lm/45mins. The cost difference is about \$25.00 US less for the NON-Premium Color model.

Additional accessories include light arm extensions, color filters, four color filter wheel, filter ring, threaded macro snoot, macro light blade and more.

Field Testing the RGBL System03 Twin Light

I tested the System03 Premium Color twin lights using the Sony A7 III camera, Sony 90mm F/2.8 macro lens and an Nauticam NA-A7R III housing with macro port.

I also used the optional RGB-RR01 Rotation Ring Adapter Set (\$94.00 US) to mount the lighting system to my macro port. The Ring adapter mounts to the macro port using the standard 67mm threads which most macro ports have. The Ring Adapter has two mounting arms that except the mini YS mounts on the two small lights. Once the ring is mounted to the port and the lights are mounted to the ring they can be rotated 360 degrees around the port glass and locked down using two small threaded locks.

You can mount both light heads on one side of the lens, over/under, side to side, rabbit ears and more. The ring also has 67mm threads to allow a wet closeup lens to be mounted. For my tests I used the Nauticam SMC-1 with the supplied ring adapter. I was not able to use my Nauticam flip-adapter because it interferes with the small adjustable arms on the RGBL ring adapter.

I found the best results for most macro was with the lights locked at the ten and two positions above the lens. In addition to the light heads being able to move in (towards the lens) and out you can also move the small arms forward and back.

Moving the arms forward while using the SMC-1 closeup lens prevented shadows from being cast onto the subject by the extension of the SMC-1 lens. Once the SMC-1 was removed the arms could be moved back for greater control of the light pattern.

This system is very compact and light



compared to using two strobes both above and below water. I was able to move the system into smaller tighter areas because of the compact size.

Like all of the constant light sources I have tested in past reviews the LED lights are just not as powerful as a burst from a strobe. As a result proper exposures can only be achieved by bumping up the ISO from what I would normally use with strobes and/or opening up my aperture value from my normal F/11 to F/22 to F/8 to F/11. I tried aperture settings as low as F/4.5 and shutter speeds as low as 1/60th of a second. At F/4.5 on a full frame camera depth of field is razor thin and shutter speed settings below about 1/125th of a second were soft because of the constant light exposure rather than a 1/1000th of a second light burst from most strobes.

I shot everything at around ISO-400 and my recommendation for full frame would be to start at ISO-640 and tweak for higher shutter speeds. I found the color from the light heads to be excellent



just as the Ra95 rating would indicate. I did very little color correction in post finding the colors in my images to be quite pleasing for my taste.

Most of my dives I used the non-stop high setting of 2200lm's and turned the light down or off between subjects. This would allow enough power for an average of two macro dives without a battery change. I was also able to remove one or both of the light heads underwater if I wanted to back light or side light.



This system is much more versatile than the continuous ring light systems I have tested in the past and very much like the above water macro lighting systems that many readers may have used in the past.

I did not shoot video for this review and I hope at some point I will be able to do a followup review of the video capability.

All of the RGBBlue products I have used to date have been very well built and quite robust. The RGBBlue System03 twin light has impressed and lived up to the quality standards I now expect from all RGBBlue products.

The RGBBlue System03 Premium Color twin light retails for around

\$968.00/£995.00. Anyone looking for a high quality continuous lighting source for macro should definitely go to the RGBBlue web site or contact a retailer for additional product information and pricing.

I would like to thank RGBBlue (rgblue.jp) for all of the assistance with the equipment for this review. The rgblue.jp web site is in English and Japanese for those interested in more information about all of the excellent RGBBlue products.

Phil Rudin

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