

Inon Z-300 Type2

by Phil Rudin

Founded in 1994 Inon Inc. is a Japanese company which is well respected in the underwater photography world. I am sure many UWPmag.com readers have already been using Inon flashes, wet lenses, LED lights or any the hundreds of other products Inon offers.

One of the main reasons the Inon Z-330 & D-200 flashes have become so popular over the years is the very small size verses power output, the robust and time tested design, build quality, the use of nonproprietary AA batteries and the exceptional S-TTL which is compatible with just about any camera and housing.

In the Jan/Feb 2018 issue #100 of uwpmag.com I did a full review of the Z-330 when it was first released. This review will cover the upgrades implemented in the Z-330 Type2 release.

Inon Z-330 Type2 Flash

The Inon Z-330 Type2 is the latest and most technologically advanced of the Inon Z-line of flashes. All of the excellent design features of the Z-330 remain with two noticeable technical advances.

The same light weight polycarbonate gray resin body for the electronics and batteries remains unchanged. Inon's unique patented T-shape twin flash tube construction is unchanged and the powerful 33 guide number remains the same.

On the original Z-330 an oval shaped plastic fresnel device was placed in front of each flash tube standing about 8mm above the flash tubes. The fresnel device helps disperse the light more evenly across the center of the frame while allowing the light heading to the corners of the frame to retain at a higher intensity while traveling over a greater distance.

Inon Z-330 flashes use a clear dome over the flash tubes and modeling light that widens the beam angle of the Z-330 to 110 degrees without reducing the 33 guide number.

The new Z-330 Type2 strobes has replaced the clear dome with the high performance Fly-Eye dome lens. The fly-eye material is similar to the fresnel device that covered the flash tubes on the original Z-330. Having the dome fully covered with the fly-eye coating this coating acts similar to a softening diffuser without the downside of reducing the 33 guide



number or changing the 110 degree underwater beam angle. This greatly reduces uneven light distribution which often result in hot spots in a photo.

The flash tubes retain the same 5500 kelvin color temperature as previous Z-flashes when not using a filter and the output of the modeling light remains 220 lm.

The Z-330 Type2 removable

“light shade” which threads to the front of the flash and rotates 360 degrees around the flash tubes now has a reflective foil coating. The light shade has click stops all 360 degrees so that the shade remains in place once it is set.

The light shade is designed to dramatically suppress flare and ghosting when the flash is placed close to the lens port. It also redirects the



light while shooting close to a light sandy bottom where you would want to prevent blowing out the highlights of the sand.

By turning the shade to the bottom of the flash the light output over the sand would be reduced allowing a more even transition from the sand bottom to the flash lit main subject. This is not a new idea many photographers have been using their hands or a slate for this purpose since the film days. The shade with its 360 degree rotation will certainly make this process easier to control. All of the new features added to the Z-330 type2 are also found on the new Inon D-200 Type2 flash.

The same optional 4900K and 4600K color correcting dome filters plus a -4EV ND dome filter for shooting wide open with fast lenses can be used with the Z-330 Type2. All of the other Z-330 accessories work on the Type2 and the function settings remain the same.

Not All Strobes Are Created Equal

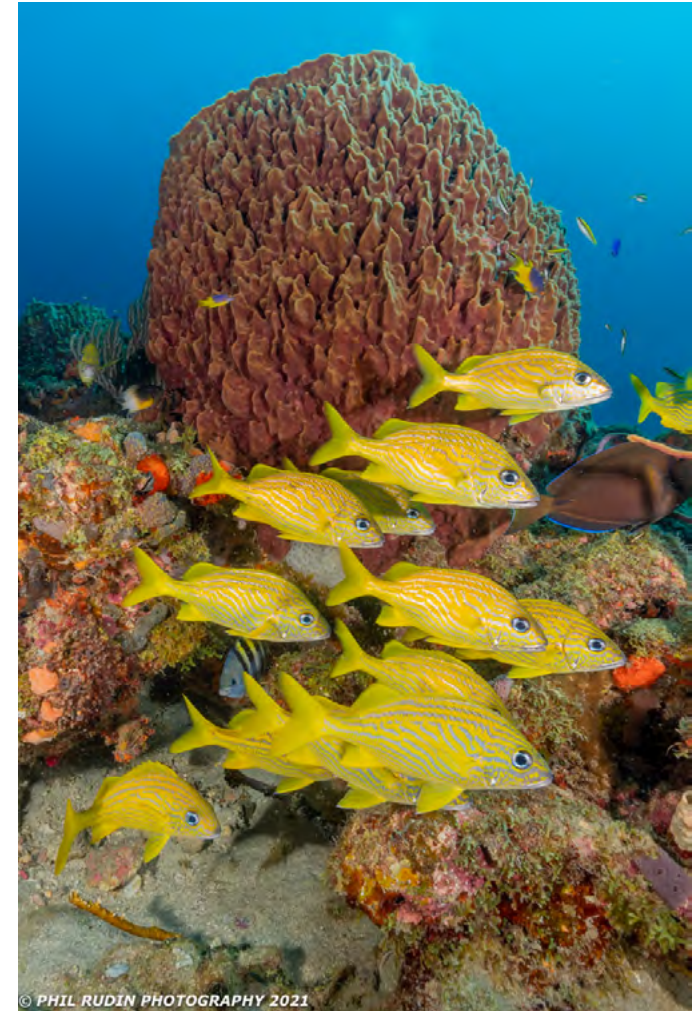
I want to take a moment to editorialize and say that selecting a strobe based solely on specs may be disappointing. Many other factors should be taken into consideration such as the track record of the manufacture, build quality, warranty and repair history. Also consider deviations between different manufacturer testing methods, overall flash size for traveling, use of one or more flashes, accessories like filters, snoots, camera triggering devices, available batteries or proprietary batteries and more.



Loggerhead Turtle resting after laying eggs, Teardrop Reef, Palm Beach, Florida, Sony A1, Sony 14mm F/1.8, Nauticam Na-A1 housing with Zen 230mm dome port, Inon Z330 type II flashes, ISO-320, F/14, 1/125th sec. manual power settings

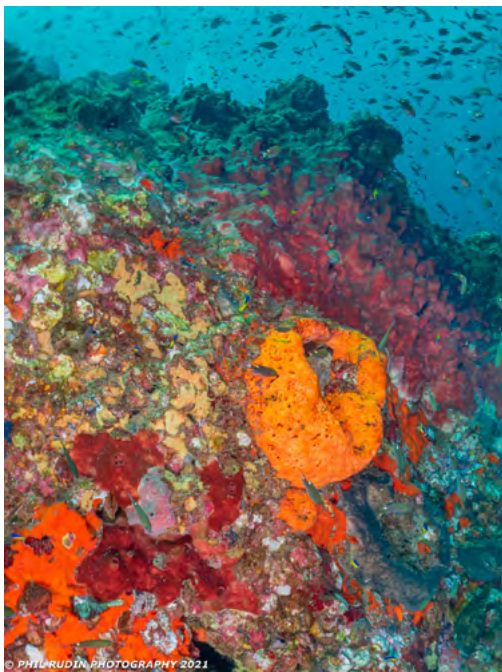
Schooling French Grunts, Teardrop Reef, Palm Beach, Florida, Sony A1, Sony 14mm F/1.8, Nauticam Na-A1 housing with Zen 230mm dome port, Inon Z330 type II flashes, ISO-320, F/13, 1/125th sec. manual power settings

Regarding the issue of guide numbers/watt seconds and how this value is reached, my best guess would be that most flashes are rated against each other when reviewers and some manufactures use a flash meter. At a given ISO setting (usually ISO-100) the flash meter is used to test output in meters and most often at the center point of the strobes flash pattern. As a result one flash may have a guide number of say 32 meters while the second flash has a GN of 24 all things being equal. The problem with this method is that the 32GN flash may only have a beam angle of say 80 degrees



(without a defuser) while the 24GN strobe may have a 110 degree beam angle.

When a 110 degree defuser is added to the 32GN strobe the GN can be reduced to 24. This is not exactly apples to apples for the purpose of a review. While the 32GN flash may fit the needs of the photographer shooting macro and wide angle it may not fit the needs of the dedicated hard core super wide angle photographer. Variations can also



Colorful Stetson Wall, Flower Gardens, Freeport, Texas, Olympus E-PL10, Olympus M. 14-42mm F/3.5-5.6 EZ lens at 14mm, AOI housing with AOI UWL-09 Wide Conversion Lens, two Inon Z330 Type II flashes, ISO400, F/4, 1/100th sec

be found in light meters some may read a 30 or 40 degree angle of the flash beam while others only read a few degrees.

Calculating recycle times and the total number of flashes on a single set of batteries may tend to vary between manufacturers as well. My point here is to not get hung up on the numbers and concentrate on how the flash will work for you in the field.



Spotted Scorpionfish, Flower Gardens West Bank #2, Freeport, Texas, Olympus E-PL10, Olympus M. 14-42mm F/3.5-5.6 EZ lens at 31mm, AOI housing with AOI UWL-09 Wide Conversion Lens, two Inon Z330 Type II flashes, ISO400, F/8, 1/100th sec

Field Testing The Inon Z-300 Type2

For my review I used a verity of flash configurations including clamping the strobes directly to the balls on the tray handles all the way to dual strobe arms.

My test cameras were a Sony A1 with the Nauticam NA-A1 housing using Sony FE macro and wide angle lens and an Olympus EPL-10 with the AOI housing and “kit” zoom with AOI wet lens. I used two Inon Z-330 type2 flashes with fiber optic cables and the UW Technics flash trigger for Sony in both S-TTL and manual settings. The Olympus camera was also shot with fiber optic cables but in manual only.

The Z-330 II is well suited to both cameras using one or two flash units. With the Z-330 II flashes in

manual with Sony full frame I used ISO-settings in the 100-640 range and with the Olympus M43 camera I used ISO-100 to 400. With the Sony I shot at F/9 to F/16 for wide angle and with Olympus I shot wide at F/4.5 to F/9. These numbers reflect the differences needed with the full frame versus the M43 for best corner sharpness. Also the difference between shooting full frame with a 230mm dome and the M43 with a wet wide lens.

I used the rotating shade for both macro and wide angle with positive results. This will require more testing before I can fully assess the benefits for both reducing backscatter and redirecting light.

The additional power of the Z-330 type II flash and the even light distribution created by the Fly-Eye dome was immediately evident

compared to my Z-330 and Z-240 type 4 strobes. Quality of light is somewhat subjective so for me the color and quality were excellent. I used new Eneloop Pro batteries for this review and noticed no difference in recycle times or battery life verses the Inon Z-240 or Z-330 flashes.

On the subject of ‘be careful of what you wish for’, while I found the new larger Z-330/Z330 II controls easier to use they were also easier to bump off the chosen settings if you are not paying attention. I found the color filters easy to attach and remove above water while remaining totally secure once installed. The filter is harder to remove underwater and it does have two small attachment points if you want to secure it to a clip.

The Inon Z-330 Type2 flashes are an excellent choice and a noticeable improvement over the original Z-330. The Z-330 Type2 retail in the US for \$650.00 while the Inon D-200 Type2 flash retails in the US for \$500.00. Additional color filters and ND filter should retail for under \$15.00 US.

I would like to thank Inon Japan and Takuya Torii for arranging the loan of the two Z-330 II flashes I used for this review.

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