# GOAL ZERO NOMAD 20


You won't find too many camping grounds without any solar panels. It has become a must-have item for those who aren't ready to completely go off-grid when camping. The GOAL ZERO NOMAD 20 solar panel aims to offer a simple, easy to use solution for reliable solar power.Goal Zero is a big name in the solar energy space, and their motto of "Zero Apathy, Zero Boundaries, Zero Regrets" has made them a household name not just for their well-built solar energy products, but also for their humanitarian efforts.This 20-watt solar panel is the largest in Goal Zero's range of portable solar panels and is made with a tri-fold design which enables it to stand by itself. It can also be propped up against a rock or a tree to get the best angle to the sun. It also comes with handy loops around the edges which allow you to hang it from a tree or your tent, or connect to your backpack's daisy chains.

With a mesh zipper pocket for cables on the rear of the device, and a magnetic clasp to hold the panels tightly together, this product was made for casual backpacking. At almost 2.5 pounds in weight, it might be tough to decide whether or not it makes the cut on longer hikes.

Goal Zero makes use of mono-crystalline solar pump technology to make their panels more efficient. It is made from single silicon crystals and increases the lifespan of the panels to anything between 10-30 years, depending on the use. It also delivers a higher wattage per square foot, and performs well in both ideal and low light conditions.

The intelligent charging junction box comes with chaining ports which make it a breeze to add (or daisy chain) more panels for increased solar power collection.

## What can it be used for?

With its built-in junction box and smart-charging chip, you can use this panel to directly charge handheld devices. It comes with 4 different ports. By using the USB, 12V, Chain in, or Guide 10 port you can power up your devices directly. You can also use this panel to recharge a solar generator like the Yeti 150 solar generator or the Sherpa 100 portable power pack.

The USB port allows you to charge phones, GPS, tablets, radios, headlamps, MP3 players and any other device that can charge via USB. With the 12V port, you can charge the Goal Zero Sherpa and Extreme 350 battery packs, and the Guide 10 port allows you to charge the nifty Guide 10 Plus power pack.

I will mention that I had no trouble charging Apple products with the Nomad 20. It easily charges iPhones, as well as iPads. One thing I noticed was that if it gets cloudy overhead, I would have to unplug the iPhone charger and plug it back in. From my research, it looks like this is because Apple products require a steady 4.7V current. When clouds move past your solar panel, the output might drop below 4.7V which causes the iPhoneiPad to stop charging. Unplugging and plugging back in, gets your device charging again. A little annoying, but this is an Apple problem so other solar panels will mostly act the same.

It is important to note that this folding solar panel does not hold a charge. This means that when it is not in direct sunlight, it won't be able to charge your gadgets.

This panel is very popular among campers and hikers, as it is compact and lightweight (1.1kg) and fits easily into a day pack. It can also be used to charge your phone when fishing, or to power up your iPod on the beach.

It is important to keep in mind what you want to use it for. If you are buying a single Nomad 20 to power up something like a Yeti 150, it will take a few days to recharge depending on the sunlight.

With most solar panels, you can work on 75% of the claimed output. Goal Zero says this panel puts out 20W, which would be closer to 15W. This would be in perfect conditions with full sunlight, and the panels facing the sun directly. If there is cloud cover, or you don't adjust the panel to face the sun accordingly, the output will be less than 15W.

If you want to power a solar recharger like the Yeti 150, be prepared for a recharge to take a couple of days. Goal Zero thought of this and allows you to chain multiple panels together. This will increase the output. Two Nomad 20 panels chained together will deliver 40W, three panels will deliver 60W, etc. To recharge the Yeti 150 in a day, you would need clear skies and 3 Nomad 20 panels chained together.

If you are using the Yeti 400, or a similar solar power generator, you might want to look at other options. If you require a portable, folding panel the Nomad 100 will work for you. If you don't require a portable panel, the Boulder range of rigid panels are a great option.

## How to chain goal zero solar panels together

Chaining multiple solar panels will increase the output. This will decrease the time required to recharge your device. Goal Zero takes great care to make sure all their products are easy to use together. You can even chain different sizes of the Nomad like the 20 and the 13 together, or you could chain different models together like the Nomad and the Boulder. I recommend checking in with the responsive support team from Goal Zero to check whether you might require an adapter when chaining different models together.

If you stick with other Nomad 20's, you can chain 4 panels together for a combined output of 80W. That is enough to charge a Yeti 150 in one day of full sunlight, and the Yeti 400 in about two days.

If you want to chain the panels together, it is as easy as grabbing the 12V cord on the first panel, and plugging into the solar port (the female end) on the next panel. Make sure to listen for the click when doing this, to make sure you have a good seal.

When connecting different models, the larger panel must always be the output used to charge your device.

NOTE: When chaining a number of panels together, only the solar port will have more power to charge your device. The other ports are regulated, meaning they can only deliver a certain volt and wattage, irrespective of being chained together or not.

## Are Goal Zero solar panels waterproof?

I asked Goal Zero this question, and their answer was that it is not waterproof in the sense that the foldable solar panels can be submerged in water. I think a better term to use would be water

resistant as the panel has been designed to withstand rain. A friend of mine had his panel out in the rain, and the panel was no worse for wear after the downpour. Snow and morning fog will also not be a problem for this folding solar panel.
I will recommend that you make sure to dry it off completely before storing the panels. A handy tip I got from another Nomad user, is to seal off the junction box with a bit of silicone as this is the area most prone to water damage.

If you need a rugged panel that is completely waterproof, check out the Goal Zero Boulder series.

Where to buy goal zero products at the best price?

While these panels can be bought at various retailers and outdoor shops, I prefer buying my solar power products through Amazon. Free delivery and a wide range of products make it my preferred place to shop for Goal Zero products. They also tend to have the best prices on solar products.

When buying through Amazon, the Goal Zero products are covered by their standard 30-day warranty.

## The Final Verdict

When I first heard about the Nomad 20, I was expecting all the usual Goal Zero characteristics. Ruggedly built, competitively priced, good looks, easy to use and fully featured. I was not disappointed, the Nomad delivers on all of those fronts.

Whether you plan on taking this camping, on recreational hikes, boating, in the RV, the Nomad 20 packs a serious punch in a small form factor.