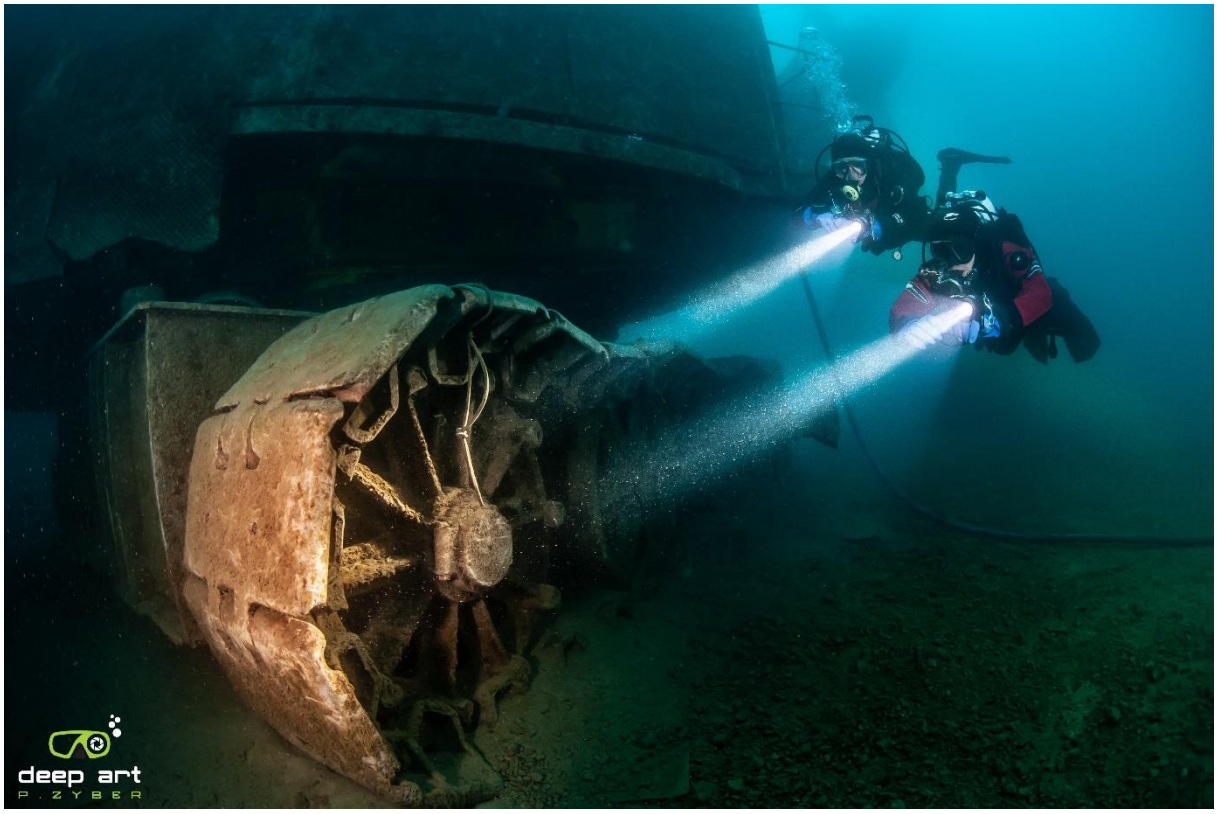
LIGHT UNDERWATER: COMMUNICATION, DPV, DOCUMENTATION

How to choose a dive lamp?



Underwater light communication can be passive or active. Regardless of the form, the communication is directly influenced by the transparency of the water and the parameters of the chosen dive lamp. When we choose our future light, it is **worth to estimate what are the most difficult conditions in which we will use the light**. Paradoxically, the lower visibility we expect, the less powerful and saturated light should we use. For example, in the visibility typical for wrecks in the Baltic Sea (1-5 meters), a strong, saturated light does not give the right effect. The same paradigm applies to video documentation in water of poor transparency - the use of typical video light can then cause the "over-exposure" effect. Rather than that, you need a light source that "penetrates" the sediment.

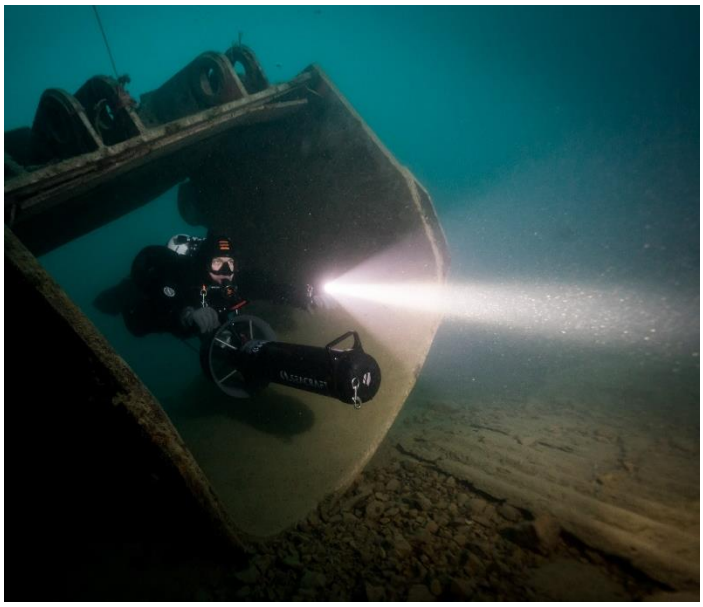
The "**Wall of light**" effect can be observed i.e. when the strong light produces reflection from sediment at such a level that the diver sees very little or nothing, being blinded by his own reflected light. The moment when the "wall of light" appears determines the maximum strength of the light for the given conditions. This creates a real communication problem. Another problem is related to the illumination of underwater objects. The identification of wrecks is often based on small details, which are worth filming in a way which assures a possibility to analyse them thoroughly on the surface.



Supported by an engineering team, specialized in underwater lights and electronics, expertise of a company known for their excellent dive lights and over 30 years of my diving experience, I decided to build a dive lamp tailored to the needs of divers who regularly face difficult conditions under water.

I started with... clean water in the caves of Florida. Cave diving with scooters require devices that give an efficient light stream, easy to observe by all team members. The second important feature is the ability to light up the surroundings. Navigation in caves is based on the so-called "goldline" system - a permanent line, fixed in the cave as a main reference. Moving along the goldline on the DPV with a strong light stream may reduce safety. When a diver focuses on the goldline, he/she can be unable to follow the dynamic profile of the cave – inability to see the ceiling and the visibility drop may be similar to driving at high speed, on winding mountain roads... in the dense fog. A good solution are lamps which, in addition to the communication stream, have an additional "halo" which greatly facilitates the navigation inside the cave or wreck. This halo is usually a sufficient addition in caves with reflective walls. However, it is not enough in caves with dark or black walls - in such a situation the use of a scooter and a very narrow light stream becomes dangerous. The solution is a narrow spotlight which shines simultaneously with a wide stream (stronger than a delicate halo). Obvious but essential element of the light head is a DPV Ring. It allows for a convenient hand switch during gas control or buoyancy adjustment. Stability is not only the firm grip but also the light's behaviour with different cuffs on different scooters.



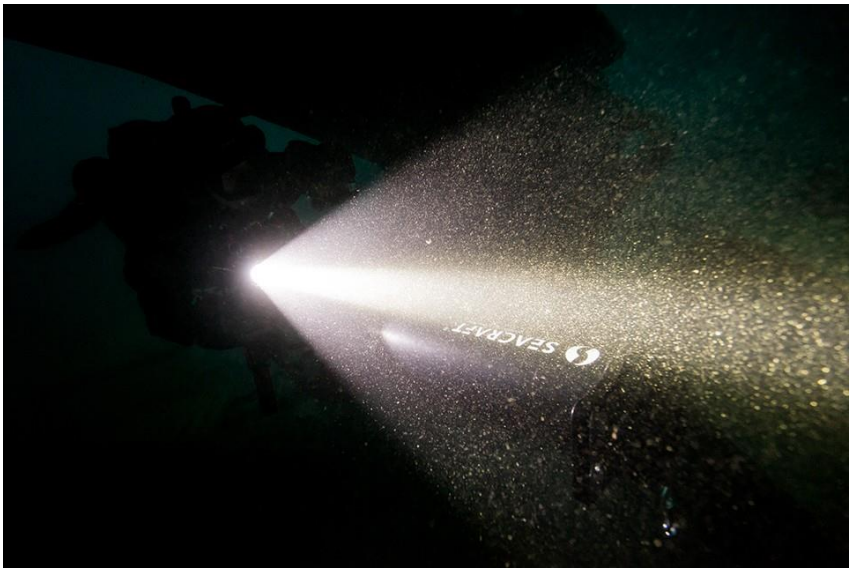


The new dive lamp has 3 modes of operation:

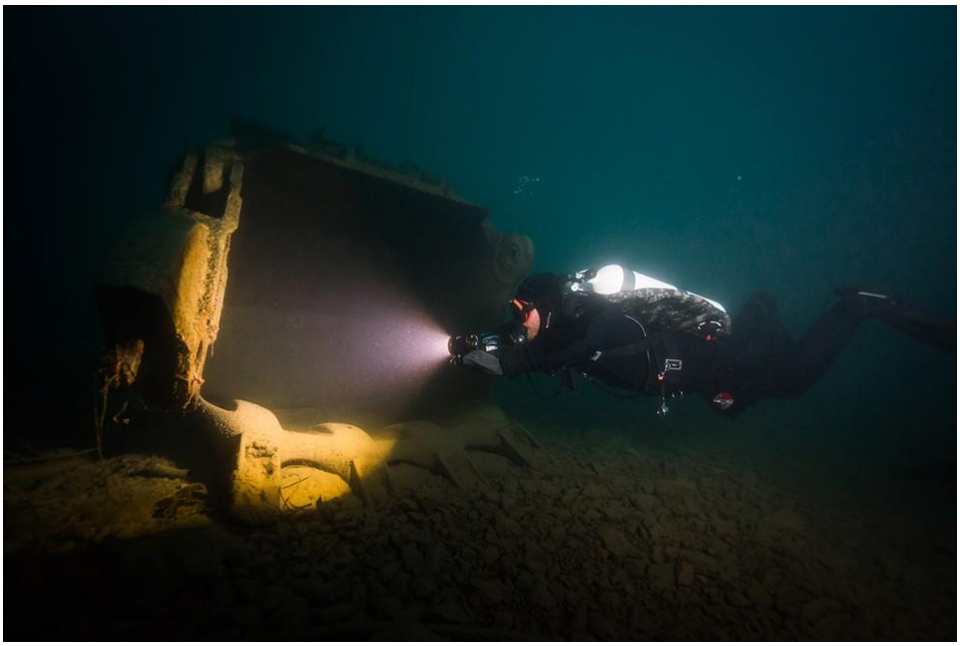
1. **Communication** with a 6-degree focus and a gentle halo,
2. **Video** with a 120 - degree focus and "soft" light saturation, allowing for an optimal video recording with action cameras
3. **Combined** (communication + video), allowing for wide and stronger ambient lighting while maintaining effective communication.

The modes are switched in a loop, i.e. each subsequent press of the switching button turns on another mode. **For extra safety, the lamp cannot be switched-off between modes**. The light is switched off by holding the switch pressed for more than 3 seconds.

The communication mode has 10W of power, 6º focus and flux saturation selected in such a way (1300 lumens) that it "penetrates" the sediment without creating any blinding reflections. This allows for efficient communication even in low visibility conditions.



The video mode has 30W of power, 120º of focus, 2,600 lumens and allows for filming from a very short distance, which is vital for any precise documentation works. The colour temperature is 6500 Kelvin, selected in such a way that all the automized action cameras maintain a stable white balance.



Combined mode (communication + video) combines the possibility of communication and wide exposure (40W / 3900lumens). It allows you to move on DPV in closed spaces, but also filming without any over-exposure effect on videos / photos.

The other issue is air transport. Teclight Tecline can be easily and safely transported by plane - carried in your hand luggage. 75Wh battery is a guarantee of no unnecessary questions during the security checks at the airport.

Teclight weights 1 kilogram (battery included).



Some useful additions:

- Teclight is equipped with a steel ring at the back of the head. It makes it easy to temporarily hung the light during a gas switch or SMB deployment,



- it is equipped with a universal charger operating worldwide and charging a fully discharged battery in 2.5 hours,
- it has an alert system, informing a diver about battery discharge to 10% - the light then goes into communication mode, limits its' power to 50% and works for another 1 hour,
- it is protected against accidental switching off e.g. during the gas switch,
- also available in Sidemount and E/O versions,
- **operating time in the communication mode is 7 hours!**



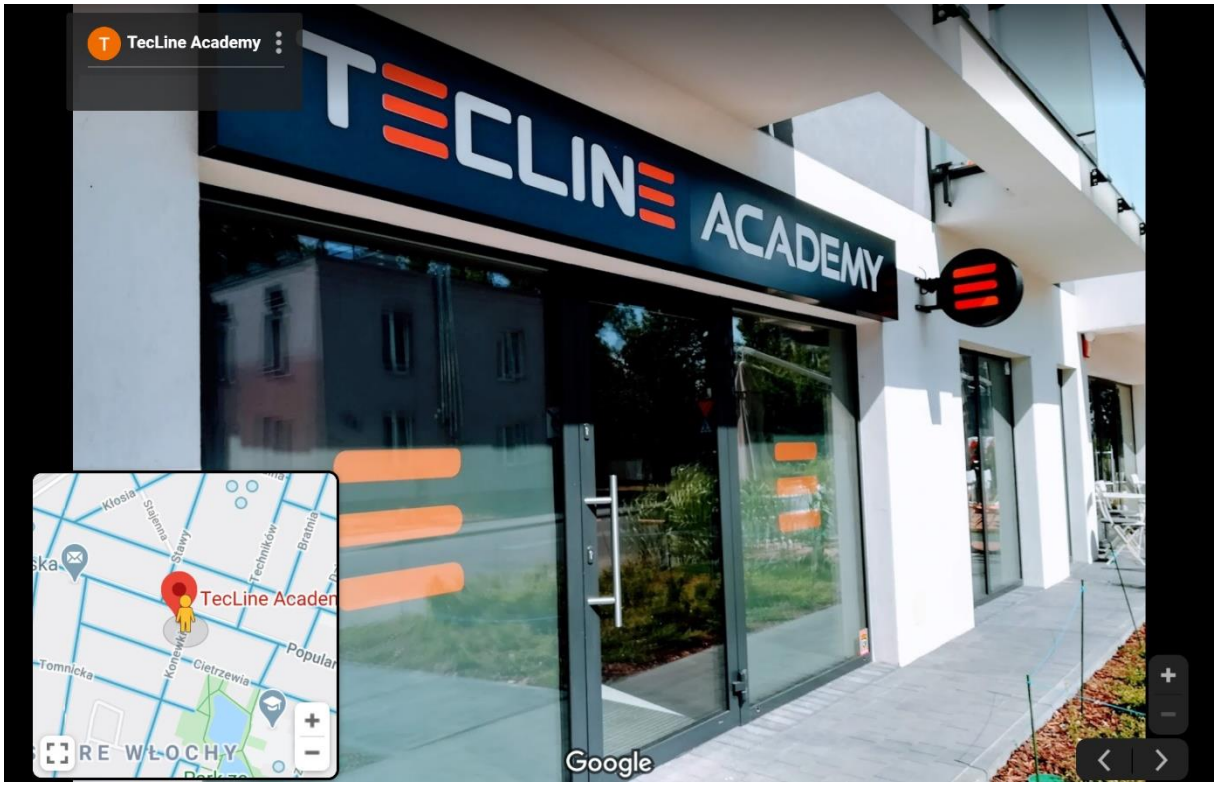


Teclight Tecline is a lamp for divers who like difficult and dynamic diving conditions. It allows for effective and safe communication in waters with limited visibility, allows for filming in such conditions and effectively illuminating objects without "burning" effect. It works perfectly in overhead environments, especially when diving with a DPV. Officially confirmed maximum depth of operation is 150 meters.

Feel free to visit our Tecline Academy, where you can see and test the Tecline Teclight.

https://teclinediving.eu/tecline-academy/#/

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