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Princeton Tec EOS

Brad

- Gear reviews and tests - Lamps and Lanterns -



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Description :

Princeton Tec EOS flash light review.

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The EOS is a new offering from [Princeton Tec](#). This light uses 3 AAA batteries powering a 1-watt Luxeon Star emitter with three power settings and a flashing mode. The main body pivots up and down so that the light is aimed where you want it. The headband is very comfortable and even make a nice lanyard if you wish to hold the light in your hand. In addition to alkaline batteries, it can use lithium AAAs for extended runtime with less weight, and rechargables. The LED has true regulation circuitry, which means that it will maintain full brightness until the batteries are somewhat depleted, with declining brightness thereafter. From Princeton Tec's website, with alkaline batteries:

High output mode - 2 hours of constant brightness / 6.5 hours of run time

Medium output mode - 9.5 hours of constant brightness / 12.5 of run time

Low output mode - 28 hours of constant brightness / 36+ of run time

Total runtime is considered to end when the light produces 1/2 lumen, just enough to read by. My unscientific test indicated a total of two hours and forty-five minutes of regulated light on high mode, so I believe the manufacturers specs to be accurate. The EOS weighs 3.7 ounces and is waterproof to 1 meter. The batteries are changed by unscrewing a thumbscrew on the back of the light and opening the case in a clamshell fashion. The thumbscrew will not fall out. The thumbscrew can be opened with a fingernail if you don't really tighten it down. The light is operated by a single switch on the top right.



Note that some lettering has been removed- it smudges easily and then looks bad, so I just removed it entirely. I left the lettering that is recessed in the bezel. While operating the light, the first click goes to high, the next to medium, then low, and then a blinking signal mode. Leaving the light in any of the modes for a few seconds allows it to be turned off with the next click.



Princeton Tec EOS

This particular emitter has a very nice tint, but it becomes slightly greenish on low. This is normal and Luxeons will always vary in tint somewhat. Some will find this annoying, but I do not feel that this is at all detrimental to the light's functioning.

The LED uses an acrylic optic to focus the light efficiently into a nice round spot with plenty of sidespill directed at a somewhat wider angle. Since LED's cannot emit full spectrum light, white LED's have a yellow phosphor coating to create white output.

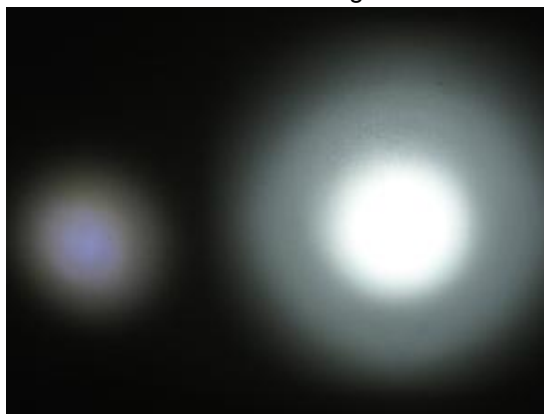


Beamshot on high versus Mini-Mag at 3 feet. The EOS is on right.

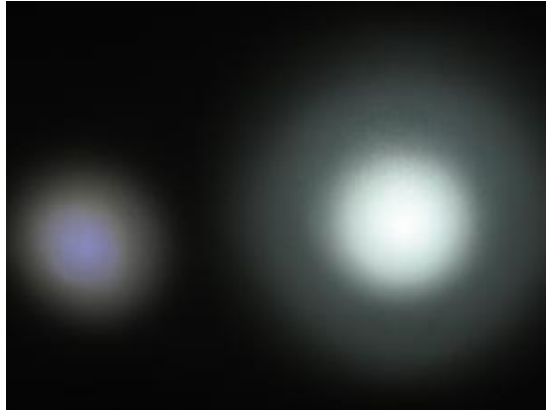


As you can see, this light stomps on the Mag for beam quality and brightness. The Mag beamshot did come out a little too orange in the picture.

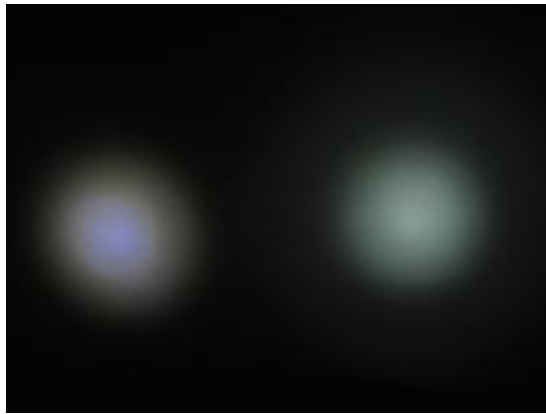
The next set of three pictures has a [Peak Matterhorn](#) (three 5mm white LEDs) included for reference. Again, the EOS is to the right and all pictures are taken at 3 feet. Beamshot on high



Beamshot on medium



Beamshot on low



The ability to use most any type of AAA battery is an advantage, as it can be used with scrounged batteries. This light is extremely versatile and surprisingly bright. I have tested it for walking a path and viewing at up to 50 feet, as well as carrying it every day for a week. I am very impressed by the EOS and will be using it extensively.

Brad