

# BNV-Battery Pack

Bootleg Night Vision Battery Pack

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## General Description

The BNV-Battery Pack is an open-source battery pack designed for use with night vision equipment in mind. It is meant to be a DIY solution for replacing a common analog night vision battery pack. With a 3D-printed case it is an easy and cheap solution. No shortcuts have been made in performance compared to commercially available night vision battery packs. It is waterproof, dustproof and airproof, as well as shock and weather resistant. The bigger body will except larger cells and can therefor provide up to 14 000 mAh.



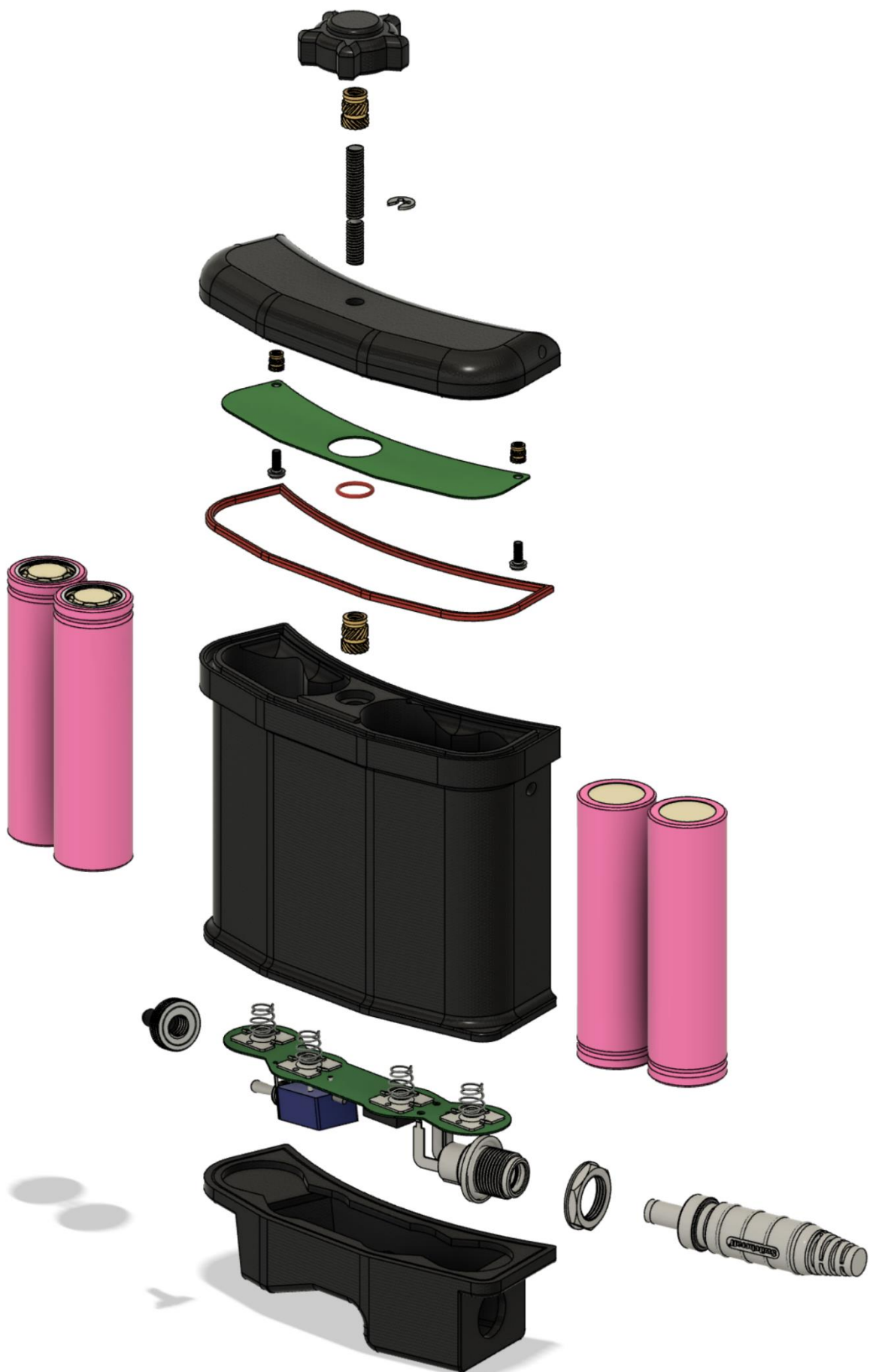
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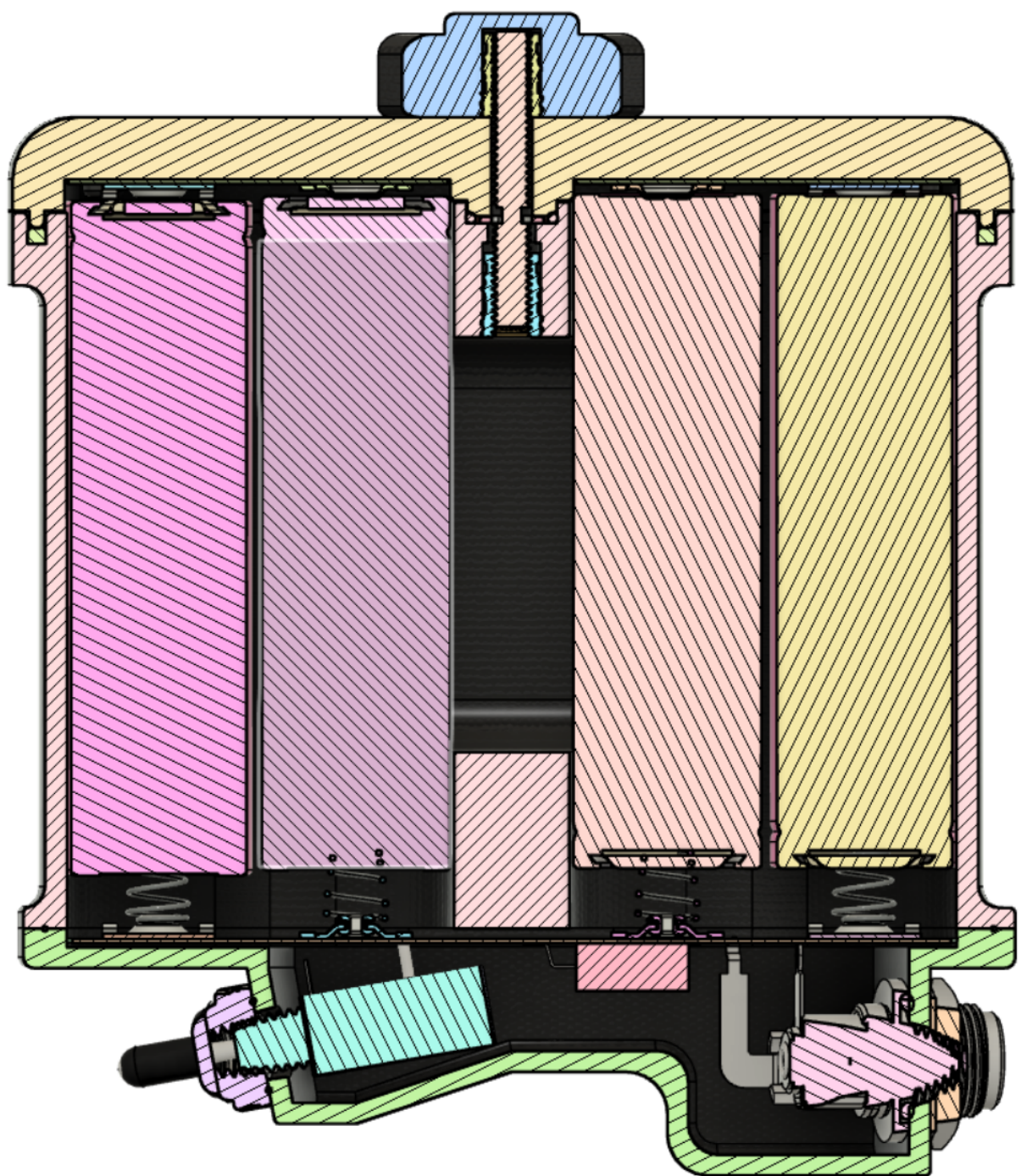
## Specifications

Voltage Output	: 12 V
Batteries	: 4 x 18650, 8 x CR123A
Current output	: 1.25 A
Protection class	: IP68 (planned/unverified)
Dimensions	: 111 mm x 97 mm x 36 mm
Weight (empty)	: 115 g

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## Assembly





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### Development data and configuration

The designed purpose for this battery pack is power supply for night vision utilizing cameras for image acquisition and NTSC/PAL displays for video output.

Usable hardware with corresponding power consumption data and calculation for Bootleg Panoramic Night Vision Goggles:

manufacturer	part	model	current draw @ 12 V
Adafruit	display	911	50 mA
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Foxeer	camera	Micro Night Cat 3	95 mA
Runcam	camera	Night Eagle 2 Pro	90 mA

Calculating for panoramic night vision with 4 cameras and 4 displays in parallel with highest current draw.

4 x 50 mA

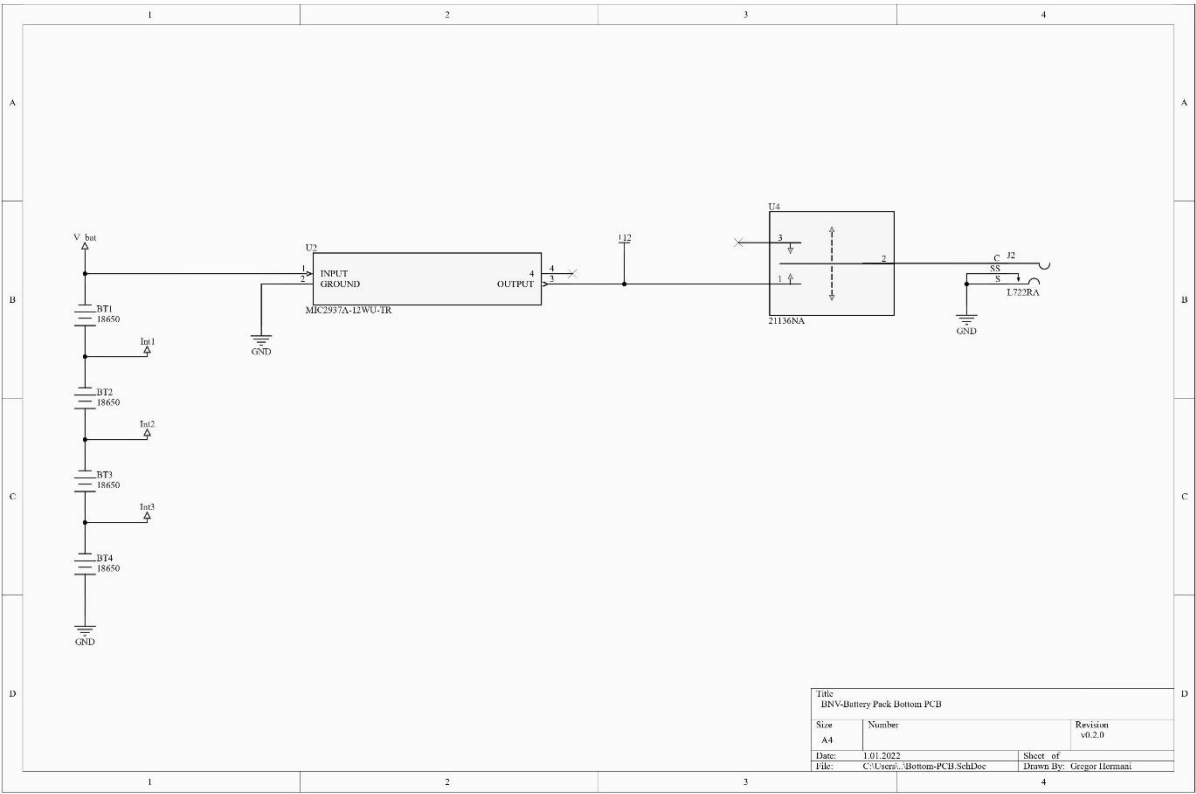
4 x 95 mA

580 mA

To calculate for additional IR illumination, it is useful to add at least 20 % of power output capability.

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battery pack schematic



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### **Version tracking and change log**

v0.1.0 - initial version

v0.2.0 - changed cell configuration from 2P2R to 4R, removed diode

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### **ToDo**

- undercurrent protection
- relocate switch
- add assembly guide

Disclaimer:

This an open-source project, all information is provided without warranty.