

METAL MASTER 3.1
3D-PARTS OVERVIEW



mb-Sabers.com

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1. Additional required parts

MB-sabers only offers parts for the chassis build.

Electronic components and GRAFLEX parts have to be purchased separately.

Additional required parts are listed below.

Basic Chassis parts

- M2 threaded steel rods <https://www.mb-sabers.com/shop>
- M1.2 brass rod <https://www.mb-sabers.com/shop>
- steel rods (1mm diameter) <https://www.mb-sabers.com/shop>
- brass tubes (4mm diameter) <https://www.mb-sabers.com/shop>
- 3x M1.2 countersunk screws <https://www.mb-sabers.com/shop>
- 6x M2 nuts DIN934 <https://www.mb-sabers.com/shop>
- 4x M1.2 nut <https://www.mb-sabers.com/shop>
- speaker cover ring <https://www.mb-sabers.com/shop>
- speaker chamber accent LED spacer <https://www.mb-sabers.com/shop>

Plasma Gate Parts

- 3x screws 4-40 UNC 3/4" <https://www.mb-sabers.com/shop>
- 15x M2 nuts <https://www.mb-sabers.com/shop>
- 3x steel tubes (3mm diameter) <https://www.mb-sabers.com/shop>

GRAFLEX parts

- GRAFLEX flash gun <https://thesaberarmory.com/>
<https://graflexshop.com/>
<http://romanprops.com/>
- GRAFLEX add on parts <https://www.thecustomsabershop.com/>
<https://thesaberarmory.com/>

Bladeholder

<https://www.mb-sabers.com/shop>

Electronic parts

- 18650 3.7V Li-Ion Battery (**protected only!**) <https://thesaberarmory.com/>
Keppower 3,7V 18650 Lithium-Ion 3500 mAh
- 1x 28mm speaker (max 13mm high) <https://thesaberarmory.com/>
- 0.02 mm² (AWG 34) wire
- 0.05 mm² (AWG 30) wire
- 0.09 mm² (AWG 28) **PTFE** wire
- 0.14 mm² (AWG 26) **PTFE** wire
- 0.21 mm² (AWG 24) **PTFE** wire
- 0.32 mm² (AWG 22) **PTFE** wire
- SMD LEDs 0805
- SMD resistors
- single pixel LED
- Soundboard <https://thesaberarmory.com/>
- Oled display 0,91" (128 x 32)
- NeoPixel connector PCBs (blade and hilt) <https://thesaberarmory.com/>
- Blade parts <https://thesaberarmory.com/>
<https://www.thecustomsabershop.com/>
- power switch (**TS01CQE 3A 120V**) **DigiKey**
- micro USB-C port (female) <https://www.mb-sabers.com/shop>
- battery contacts <https://www.mb-sabers.com/shop>

2. 3D-print parts overview

The 3D-print parts are available at the mb-Sabers **Shapeways shop**. [LINK](#)
There is a folder for Metal Master chassis parts in the shop menu.

3D-print parts lists

In addition to the main shop folders, **parts lists** on Shapeways make it easier to find the correct parts for a complete Metal Master chassis.

Start with these default lists and change the parts as required. Follow this LINK or select and click a list below:
Metal Master
Metal Master PRO
Emitter Add-On Design 01
Emitter Add-On Design 02
Blade Plug with Charge Port

3D-print parts variations

Some 3D-print parts have variations. Choose or change parts as required.

Slide switches (Part 06 Tech):	YES or NO
Illuminated side bars (Part 05):	YES or NO
Emitter Add-On parts:	Design V1 or V2
Part 06:	Design V1, V2 or Oled

3D-print materials

3D printed precious Metal (cast metal):

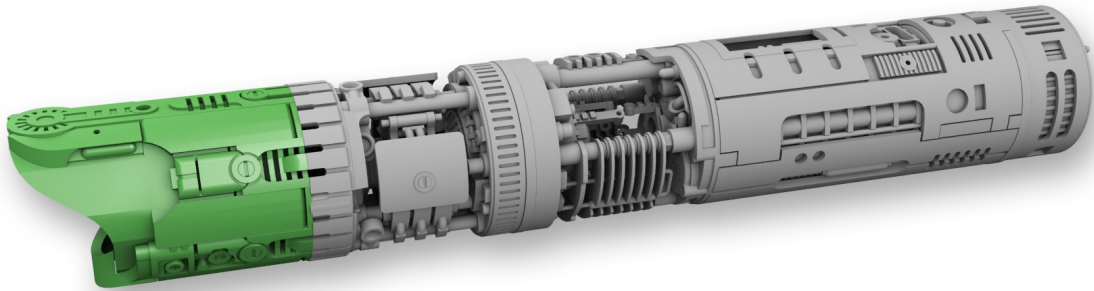
The Metal Master metal parts are designed for precious metal material printing (Silver, Brass, Bronze).

These materials have the best accuracy and usability. They can be drilled, cut and tapped very easy.

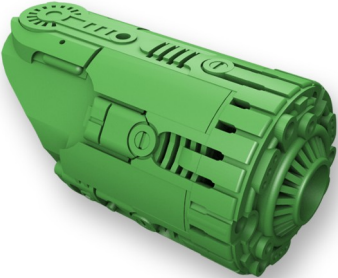

3D printed Steel:

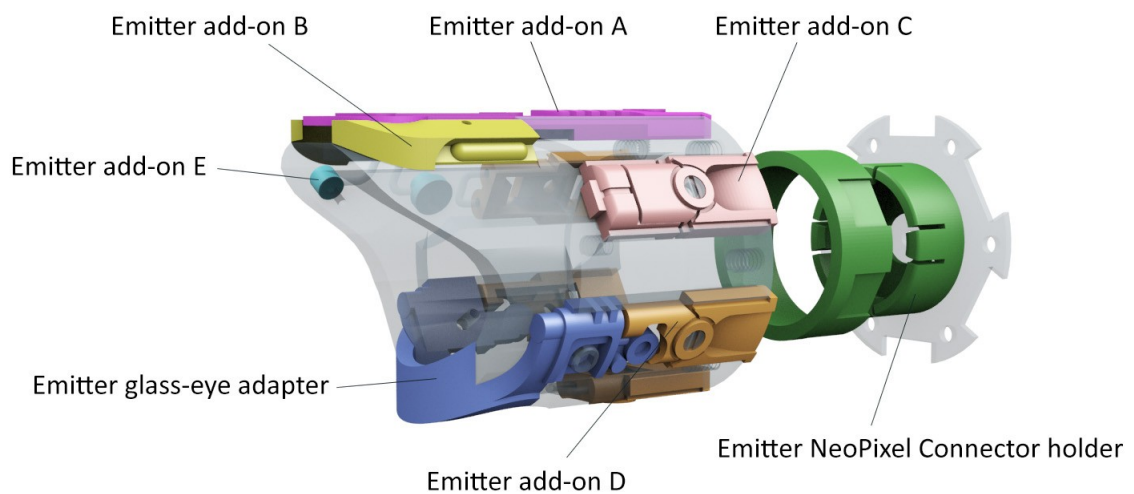
Steel material prints are not recommended and **will discontinued!** The standard Shapeways steel material is brittle and cannot be drilled, cut or tapped! All steel material prints have an accuracy of +/- 5%! **Not all parts are available as steel prints!**

2.1 Emitter Section

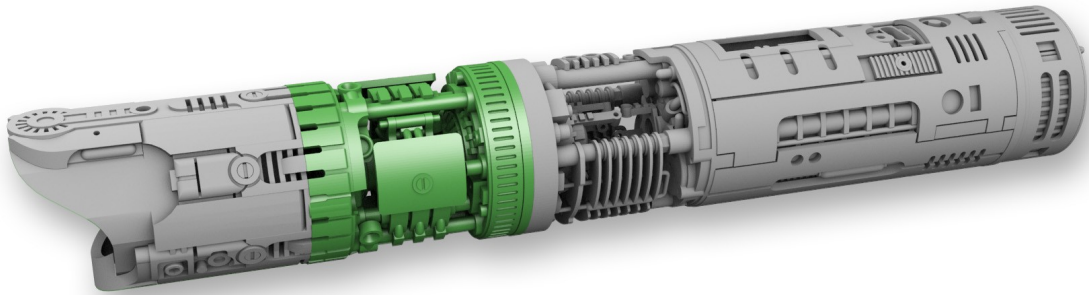


The main body of the Emitter is CNC machined (Brass or Aluminum)
All Emitter Add-On parts are 3D printed.
The **Emitter add-on A, C, D** and **Part 01 front** have two design variations!

Design 1	Design 2
	
Click here for the 3D-print parts LIST	Click here for the 3D-print parts LIST



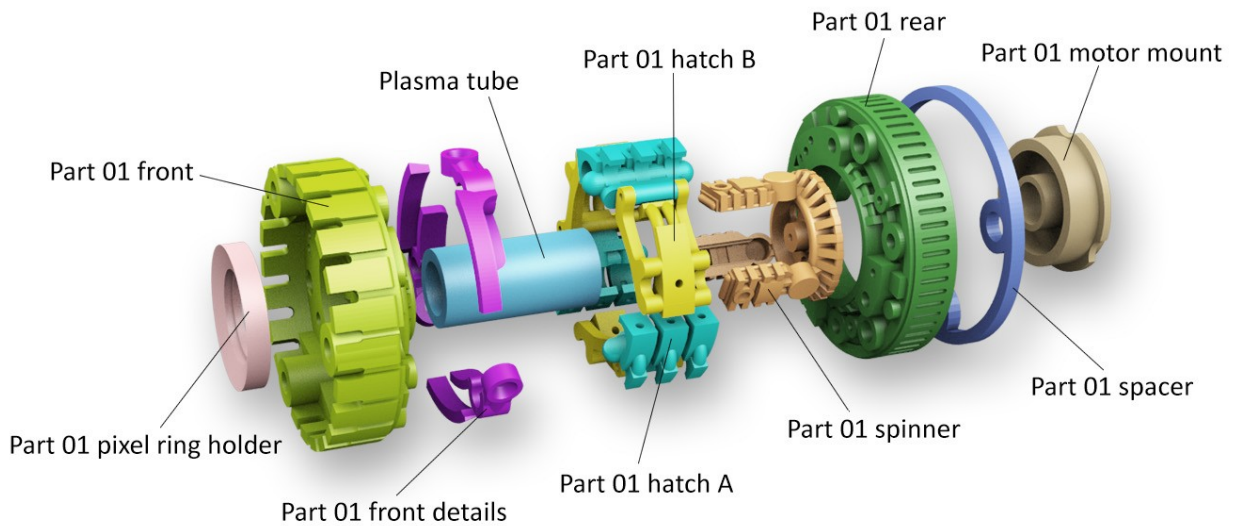
2.2 Plasma Gate Section (Part 01)



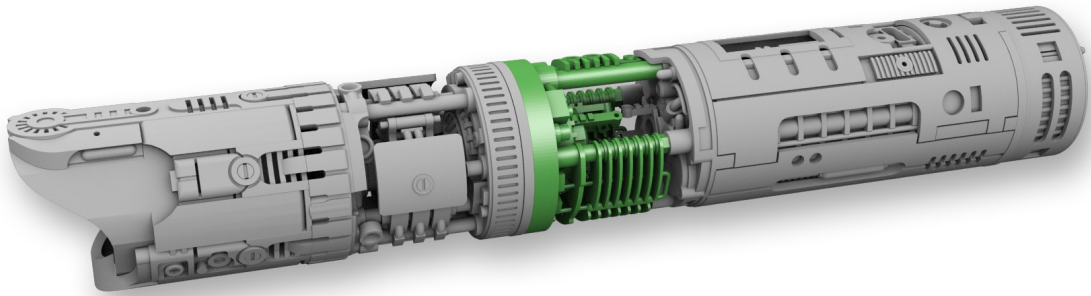
The Plasma Gate Section includes the Spinner and a hatch system.
All parts including the plasma tube are 3D printed.
Part 01 front has two design variations (V1 and V2)!

Spinning Plasma Gate (Part 01) - Metal Master

[Click here for the Metal Master PRO default 3D-print parts LIST](#)

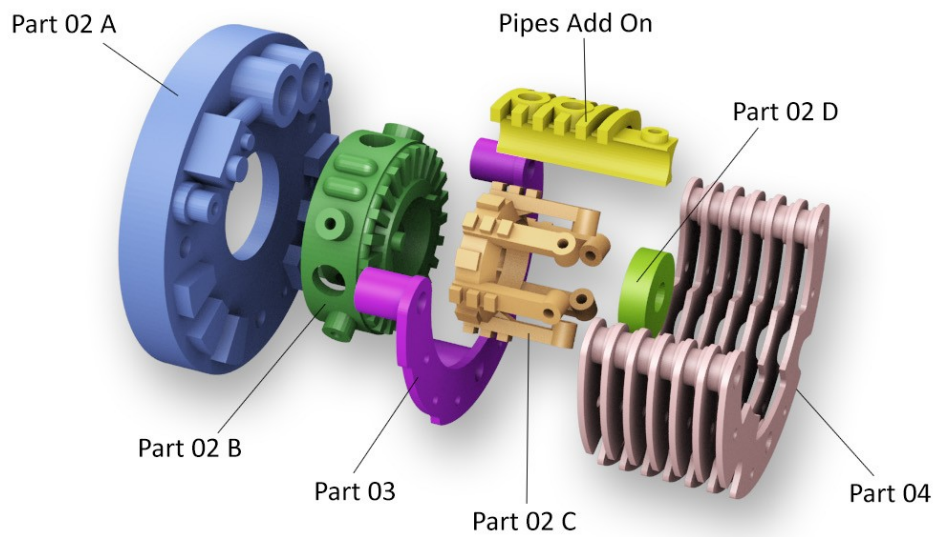


2.3 Crystal Chamber Section (Part 02, Part 03, Part 04)

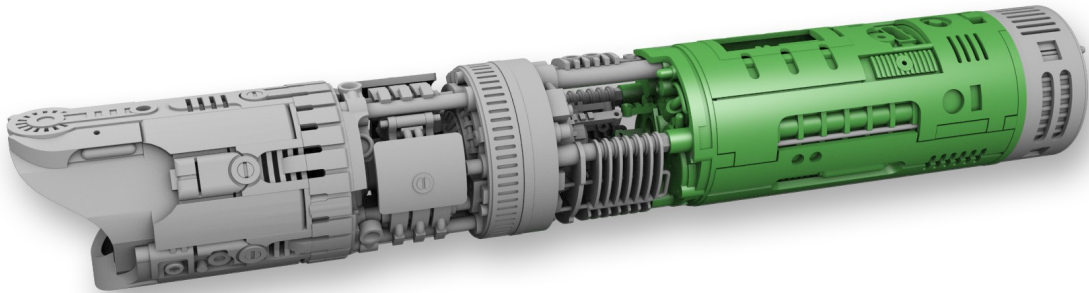


Crystal Chamber Section - Metal Master

[Click here for the Metal Master PRO default 3D-print parts LIST](#)



2.4 Main Section (Part 05, Part 06, Part 07)



The main Section has some design variations.

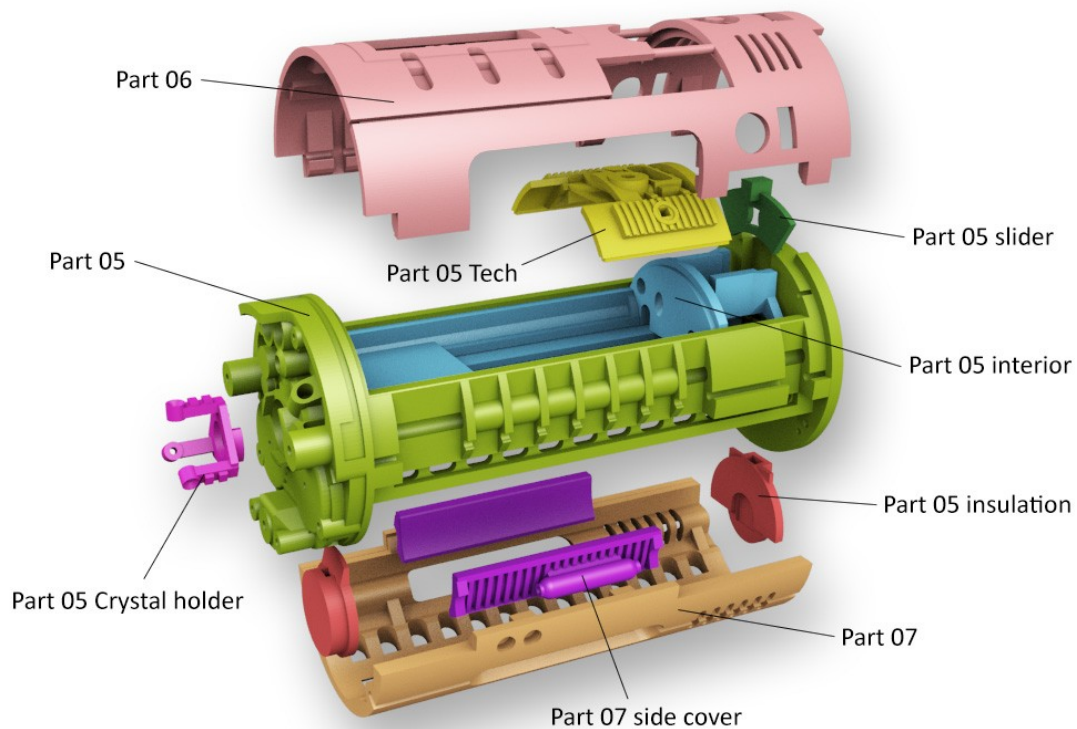
Part 05 is also available as a PRO version for illuminated side bars.

Part 06 is available in three design variations.

Part 06 Tech is also available with two additional slide switches.

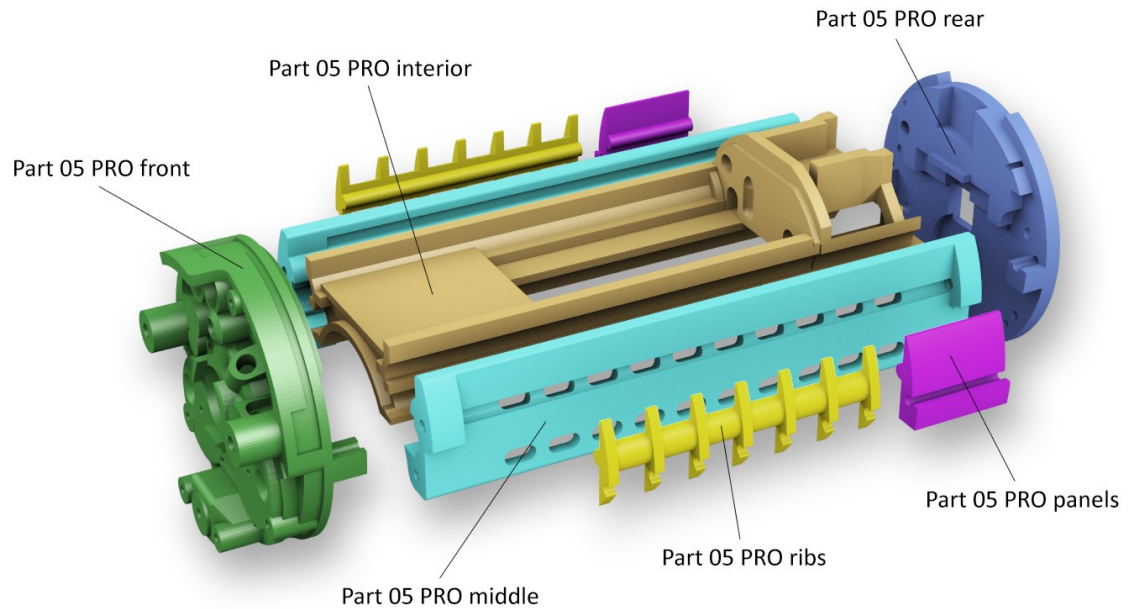
Main Section general overview - Metal Master

[Click here for the Metal Master PRO default 3D-print parts LIST](#)



Part 05 PRO

[Click here to go to the Part 05 PRO 3D-print parts folder](#)



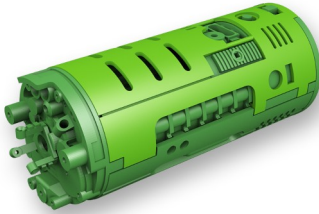

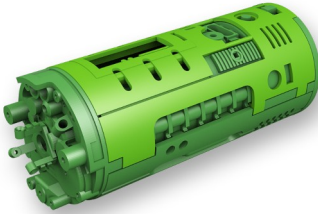
Part 05 PRO is included in the default Metal Master PRO print parts list!

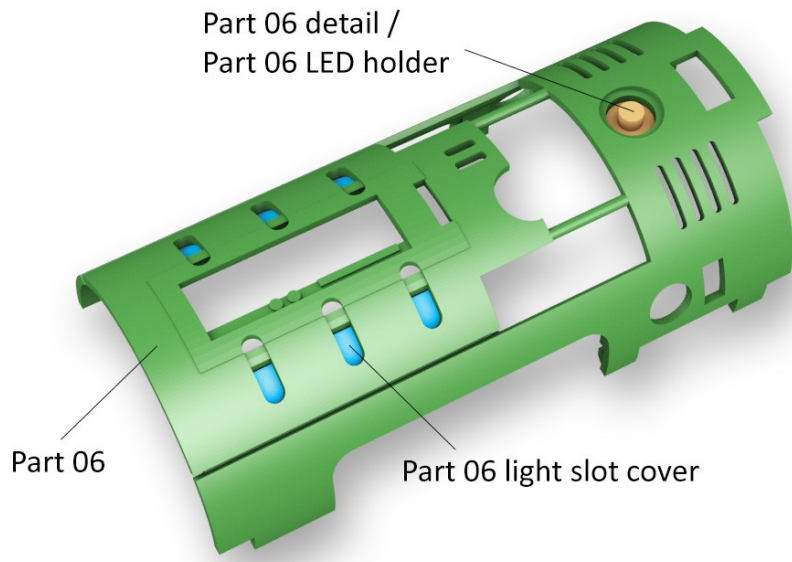
Part 05 PRO replaces the standard Part 05.

With nylon middle parts the PRO version is lighter than the standard Part 05 version. The PRO version is also more accurate and can be better adapted to Part 06 and Part 07.

The **Part 05 PRO middle** is available in different materials.

For illuminated side bars with pixel strips choose Accura Xtreme 200 material!

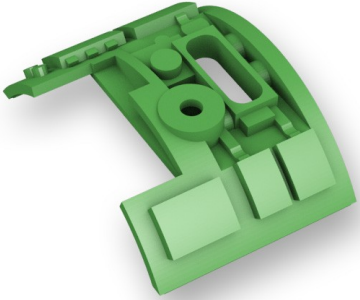

Part 06		
V1	V2	Oled
		
Klick here to go to the Metal Master 3D-print parts folder		

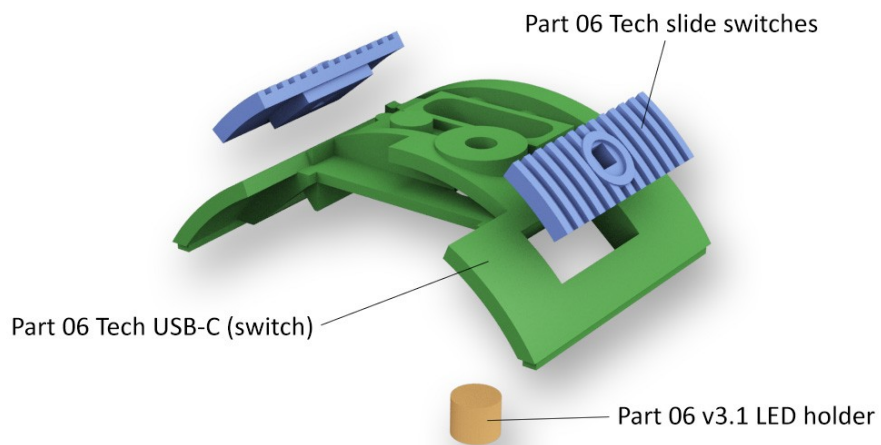


Part 06 v3.1 (Oled) is included in both default Metal Master print parts lists.

Each Part 06 version has it's own **light slot cover** design.

The round cut-out in front of the main switch cut-out can be used for the **Part 06 detail** or for a charging indicator LED with **Part 06 LED holder**.

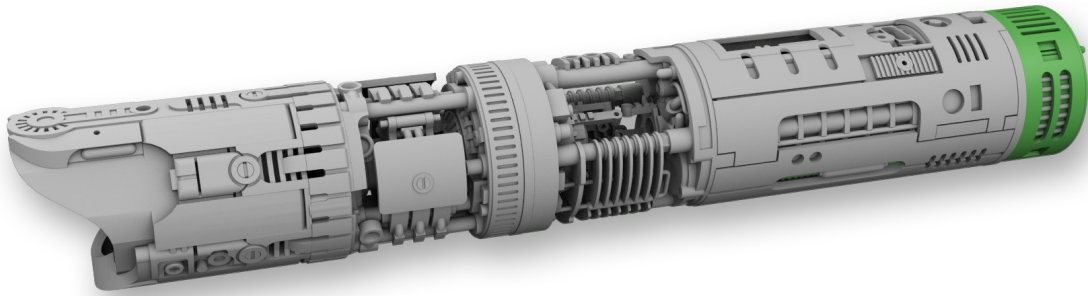
Part 06 Tech USB-C	
standard	with slide switches
	
Click here to go to the Metal Master 3D-print parts folder	



Part 06 Tech (switch) is included in both default Metal Master print parts lists.

The **LED holder** can be used for the charging indicator LED.

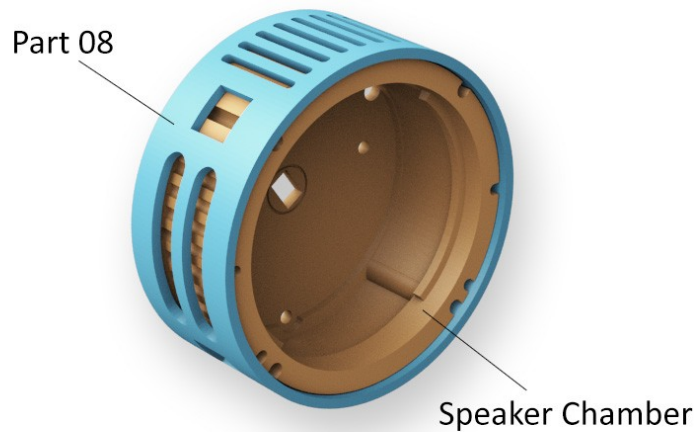
2.5 Speaker Section (Part 08)



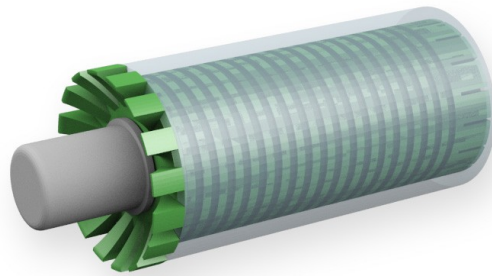
The speaker section is designed for 28mm Speaker with a maximum height of 13mm.
The speaker chamber has a **smd LED** mounting slot which can be enlarged for a **pixel LED**.

Part 08

[Click here for the Metal Master PRO default 3D-print parts LIST](#)



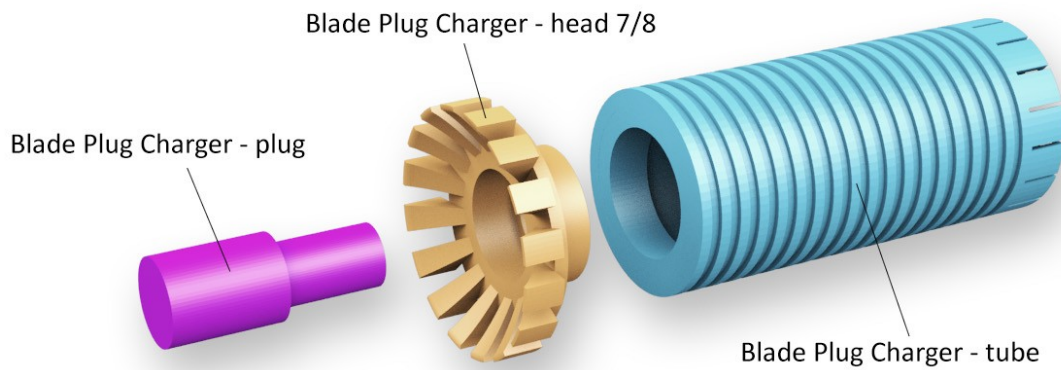
2.6 Blade Plug



This Blade Plug has an integrated 5,5mm charge port.

Blade Plug with charge port

[Click here for the Blade Plug 3D-print parts LIST](#)



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