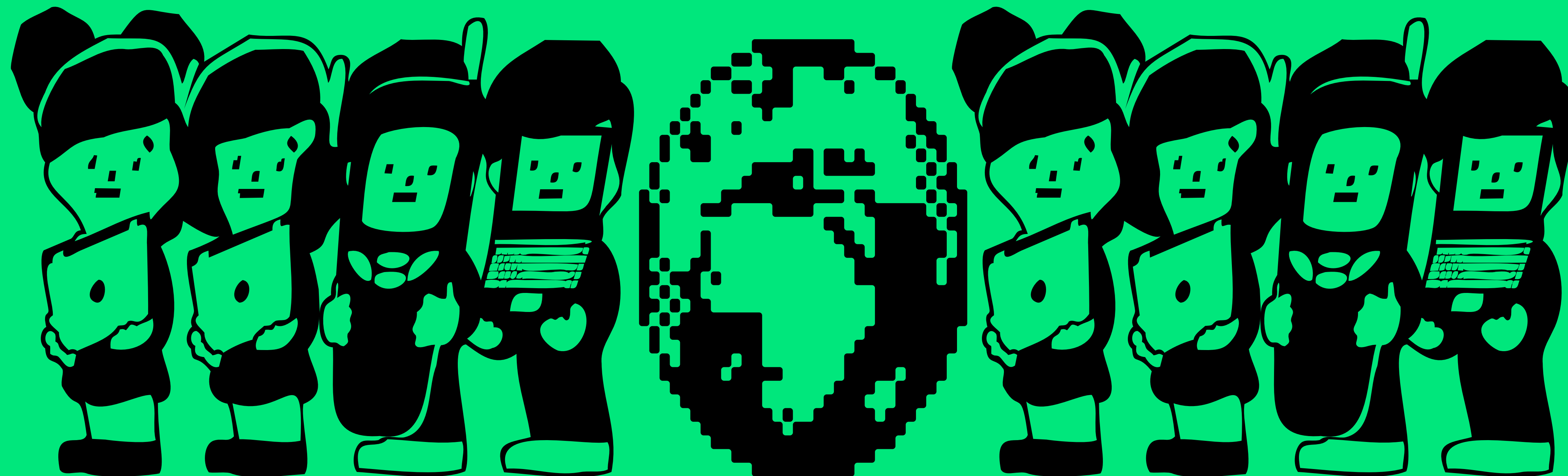


COMPUTERCLUB.

COMPUTERCASE.



Instruction manuals and assembly guides of the computer lovers,
by the computer lovers, for computer lovers



INSTRUCTION MANUALS AND ASSEMBLY GUIDES

**MAXIMUM
CONFIGURATION
IN
MINIMUM
SPACE.**

MUM.1



MUM1 – The Smallest Full-Size Open-Frame PC Case

MUM1 is one of the smallest full-size open-frame PC cases that supports ATX motherboards and up to eight expansion slots. The frame is built using 20mm × 20mm aluminum profiles as its structural base, with 3D-printed joints for modular assembly.

The motherboard mounting panel and front panel are made of metal, providing exceptional durability.

Additionally, side mesh panels can be added for enhanced airflow.

The front panel features a custom-designed module that integrates a fan controller and power switch, offering both functionality and aesthetics.

Compact Yet ATX-Compatible

Traditional ATX cases are generally large, but MUM1 challenges this by minimizing its footprint while maximizing expandability.

You may be surprised by MUM1's compact size. However, its internal space is intentionally kept minimal, meaning the selection of compatible PC parts must be carefully considered.

Fully Disassemblable & Flat-Packing Design

Unlike conventional cases, MUM1 does not use welded parts.

All panels, frames, and joints can be completely disassembled, allowing for easy transport and storage in a fully flat state.

However, assembly requires some technical skills and time, making it more challenging compared to pre-assembled cases.

This design is meant to be part of the experience, appealing to those who enjoy the process of building their PC from the ground up.

A detailed assembly manual is provided, and we encourage you to take on the challenge!

If you need assistance, feel free to reach out via Discord or email, and we will provide full support.

The Result of Years of Research & Development

MUM1 is the culmination of over seven years of design, refinement, and engineering by filmmaker Kanta Mochida.

The core design has remained unchanged over the years, with continuous improvements and optimizations leading to the current version.

Mochida himself has used this PC case for professional video editing, 3D CGI work, and rendering, proving that MUM1 is not just about aesthetics but also built for professional use.

MUM1 as Open-Source Hardware

One of MUM1's fundamental philosophies is open-source hardware.

We designed it to be as open and customizable as possible, allowing users to redesign and modify their cases to suit their own preferences.

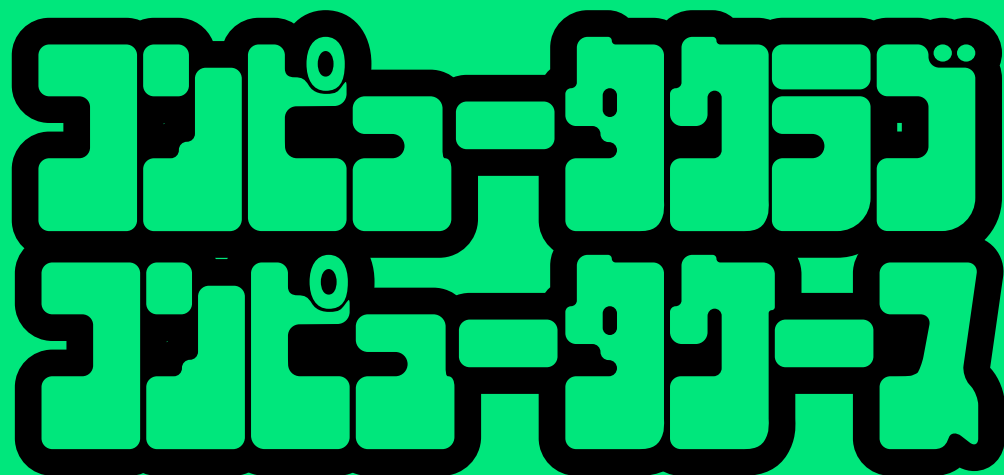
Since everyone has different requirements for PC components, it is difficult to create a case that meets all needs.

Therefore, we encourage you to take MUM1's versatile foundation and make it your own.

Building the Future of PC Cases Together

We hope MUM1 helps you enjoy a creative and fulfilling computing experience.

computerclub Kanta Mochida



MUM1は、ATXマザーボードと最大8基の拡張スロットを搭載できる、最小クラスのフルサイズオープンフレームPCケースです。
アルミプロファイル(20mm×20mm)をフレームの軸とし、3Dプリントパーツを使用したジョイントで構成されています。

マザーボードを固定するパネルやフロントパネルは金属製で、高い剛性を誇ります。
また、サイドメッシュパネルを追加することも可能です。
フロントパネルには、オリジナル設計のファンコントローラーとパワースイッチを一体化したモジュールを搭載しています。

コンパクトながらもATX規格対応
ATX規格のPCケースは一般的に大型ですが、MUM1は最小限のスペースで最大限の拡張性を実現しました。
なのでMUM1のコンパクトさに驚くかもしれません。内部スペースは必要最低限に抑えられているため、
搭載できるPCパーツは限られます。パーツ構成は慎重に検討する必要があります。

完全分解可能な設計
MUM1は溶接を使用せず、すべてのパネル、フレーム、ジョイントを分解できる設計になっています。
組み立て前の状態では完全にフラットになるため、輸送や保管が容易です。
ただし、組み立てには一定の技術と時間が必要となるため、
一般的なPCケースに比べてコストや手間がかかる点はご了承ください。
組み立てもプロセスの一部として楽しんでいただける方には、特に魅力的なプロダクトとなるでしょう。
詳細な組み立てマニュアルを用意しているので、ぜひ挑戦してみてください。
不明点があれば、Discordやメールでお気軽にお問い合わせください。最大限サポートいたします。

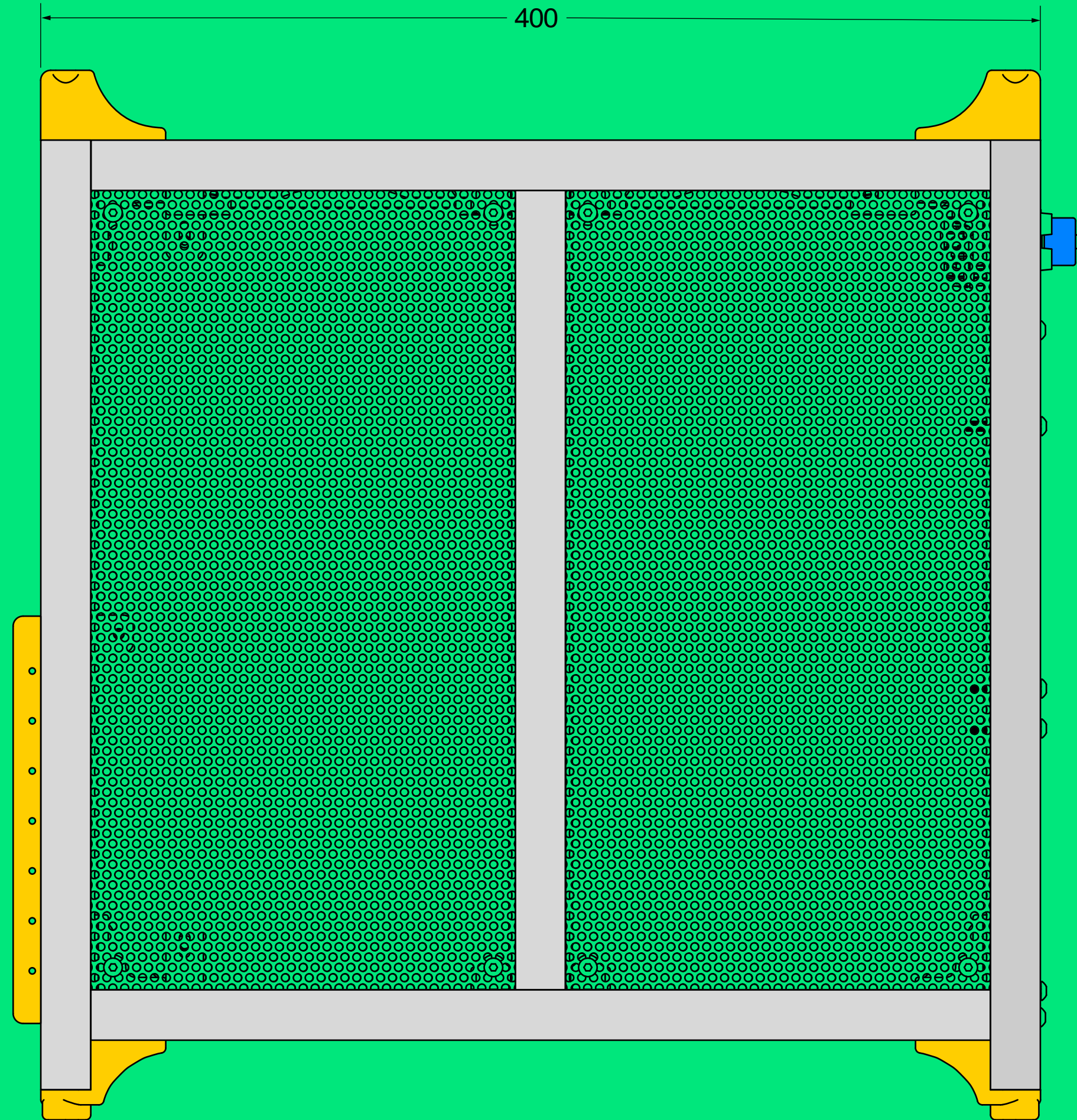
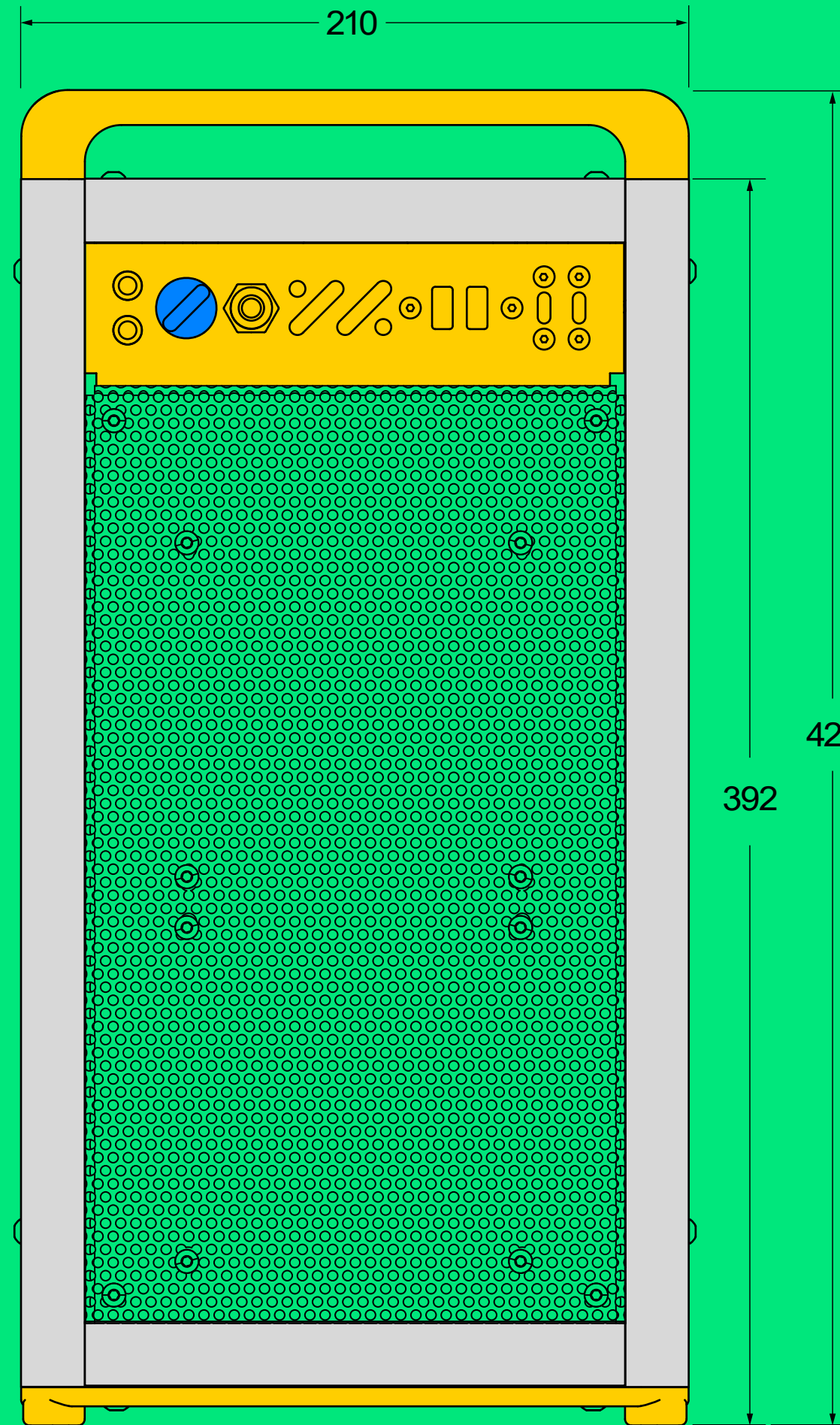
長年の開発による完成形
MUM1は、映像作家である持田寛太が7年以上にわたって開発・設計・デザインを重ねてきたPCケースです。
原型の設計は長年変わることなく、改良と研究を積み重ねた結果、現在のMUM1が誕生しました。
持田自身もこの設計のPCを使用して映像制作、3DCG作業、レンダリングを行っており、
表面的なデザインだけでなく、プロユースにも耐えうる性能を備えています。

MUM1はオープンソースハードウェアへ
このケースの思想の一つに、「オープンソースハードウェア」があります。
ユーザーが自由にカスタマイズし、自分好みに再設計できるよう、可能な限りオープンな設計を目指しました。

PCパーツの選択は人それぞれ異なり、すべてのニーズに対応することは困難です。
そのため、皆さん自身の手でオリジナルの「MUM1」を完成させてください。

共に、理想のPCライフを
MUM1を通じて、自由に快適なコンピュータライフを楽しんでいただければ幸いです。

MEASUREMENTS OF MUM1



SPECIFICATION

Dimensions

W400 x D210 x H420

Volume & Weight

30L & ---- kg

Material

aluminum, iron, stainless steel, resin,

Form Factor

ATX / MicroATX / Mini-ITX

CPU cooler support

Up to 60 mm

Graphics board support (max size)*

A / front liquid-cooling 340mm(L) x 130mm (H)

B / front with 12cm fan - 360mm(L) x 130mm (H)

C / front no fan - 370mm(L) x 130mm (H)

Power Supply Unit (PSU) support

ATX & SFX & SFX-L

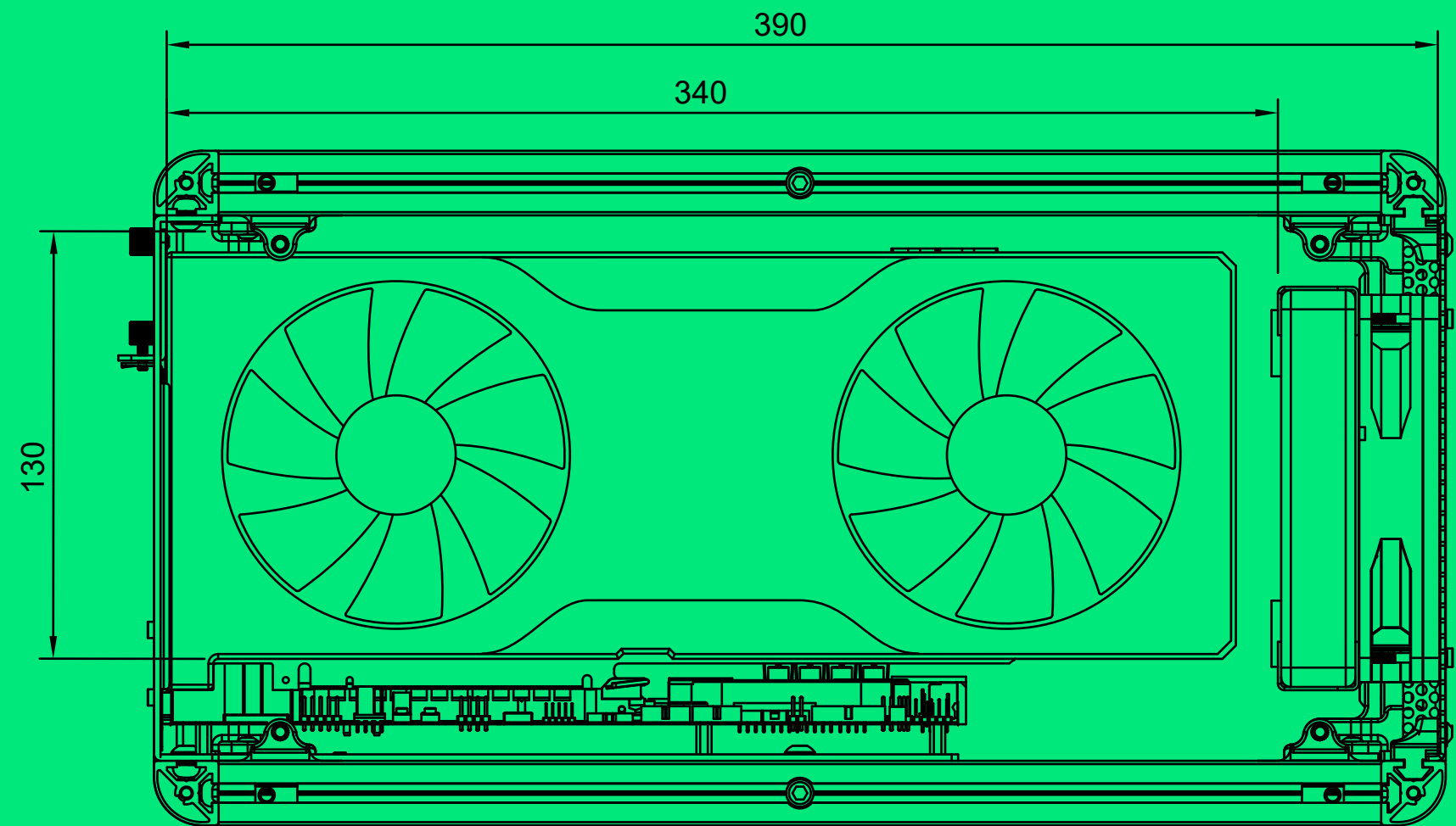
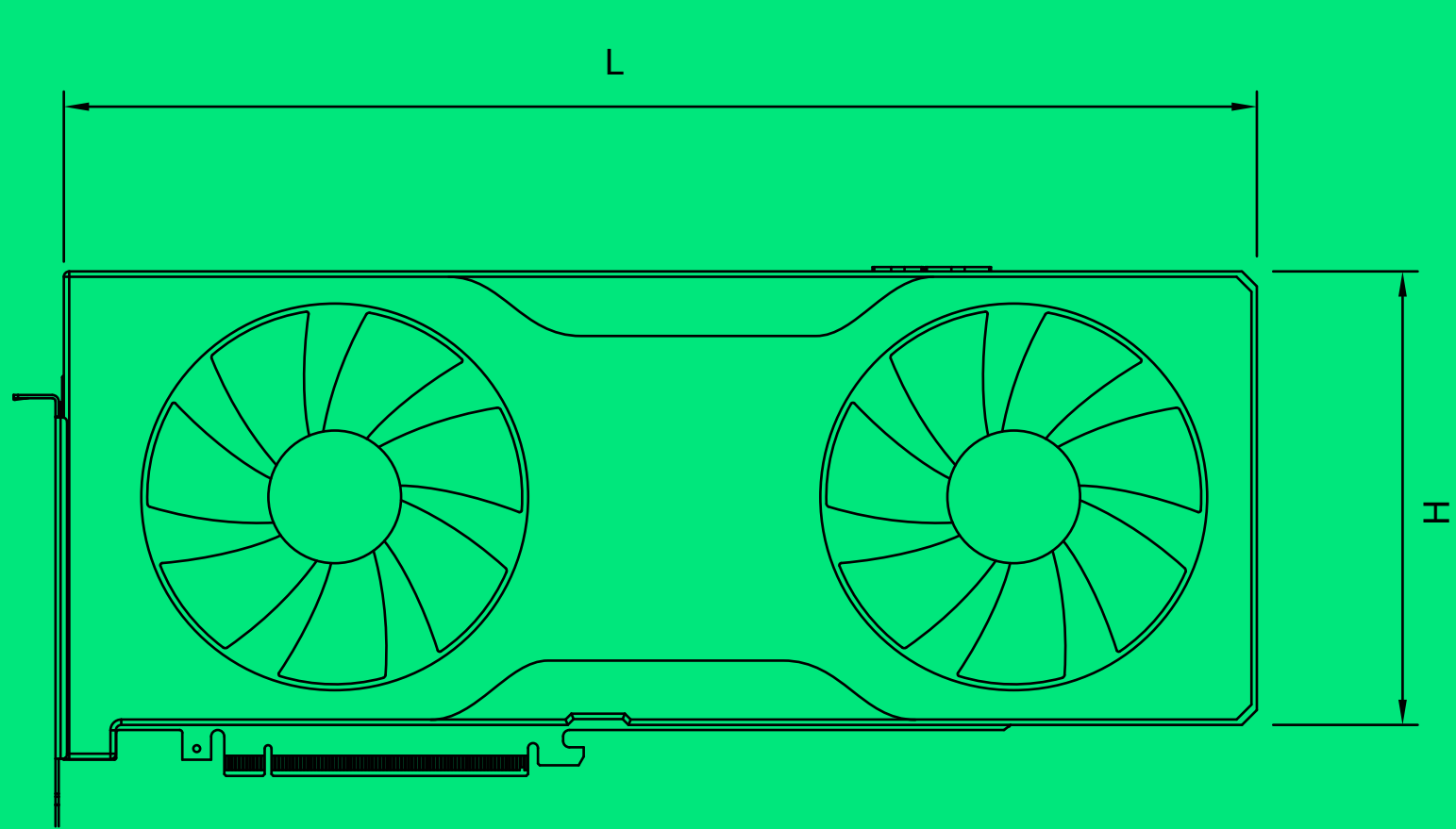
Storage

2.5" HDD/SSD

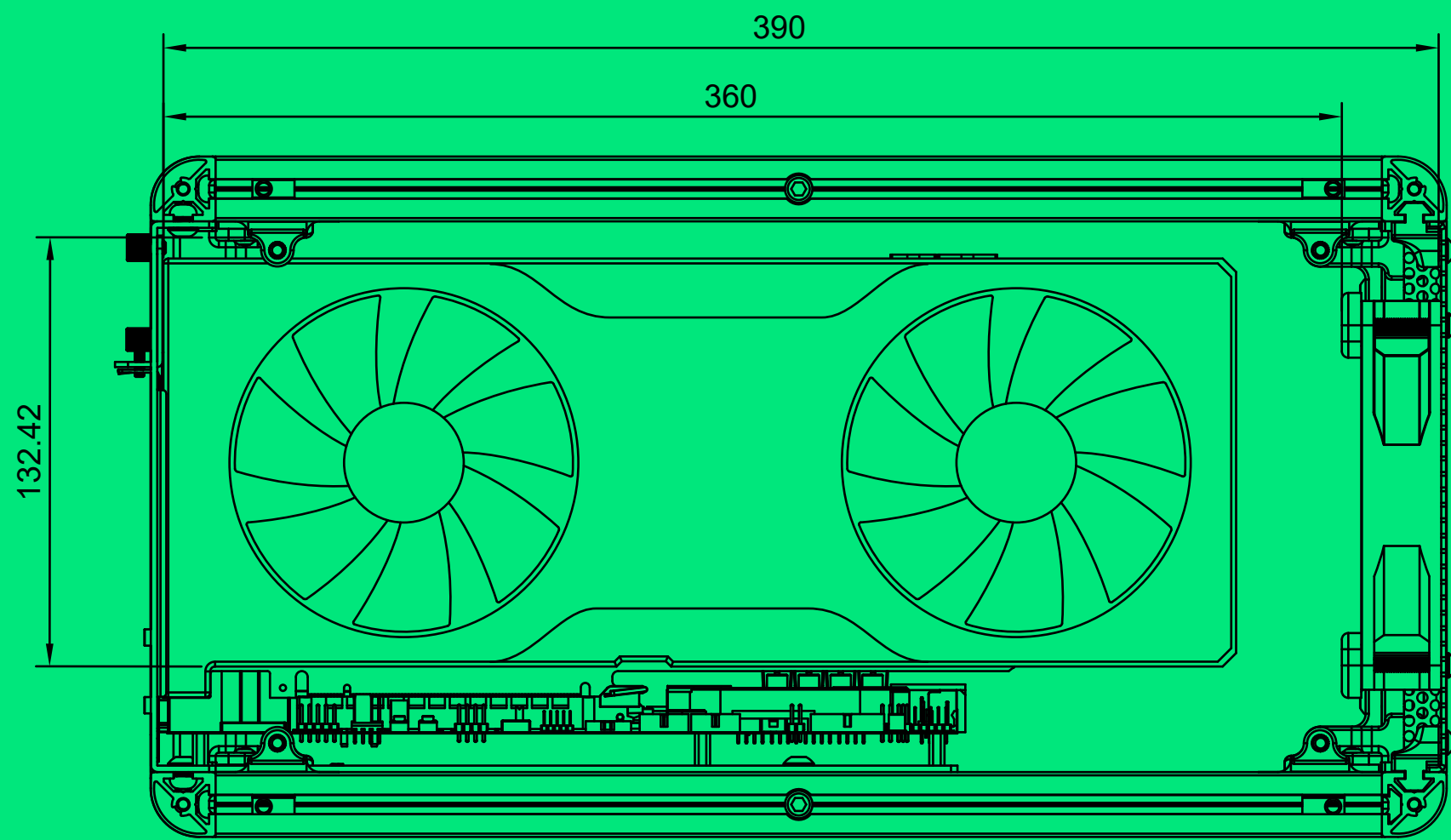
Liquid-cooling support

Up to 240 mm

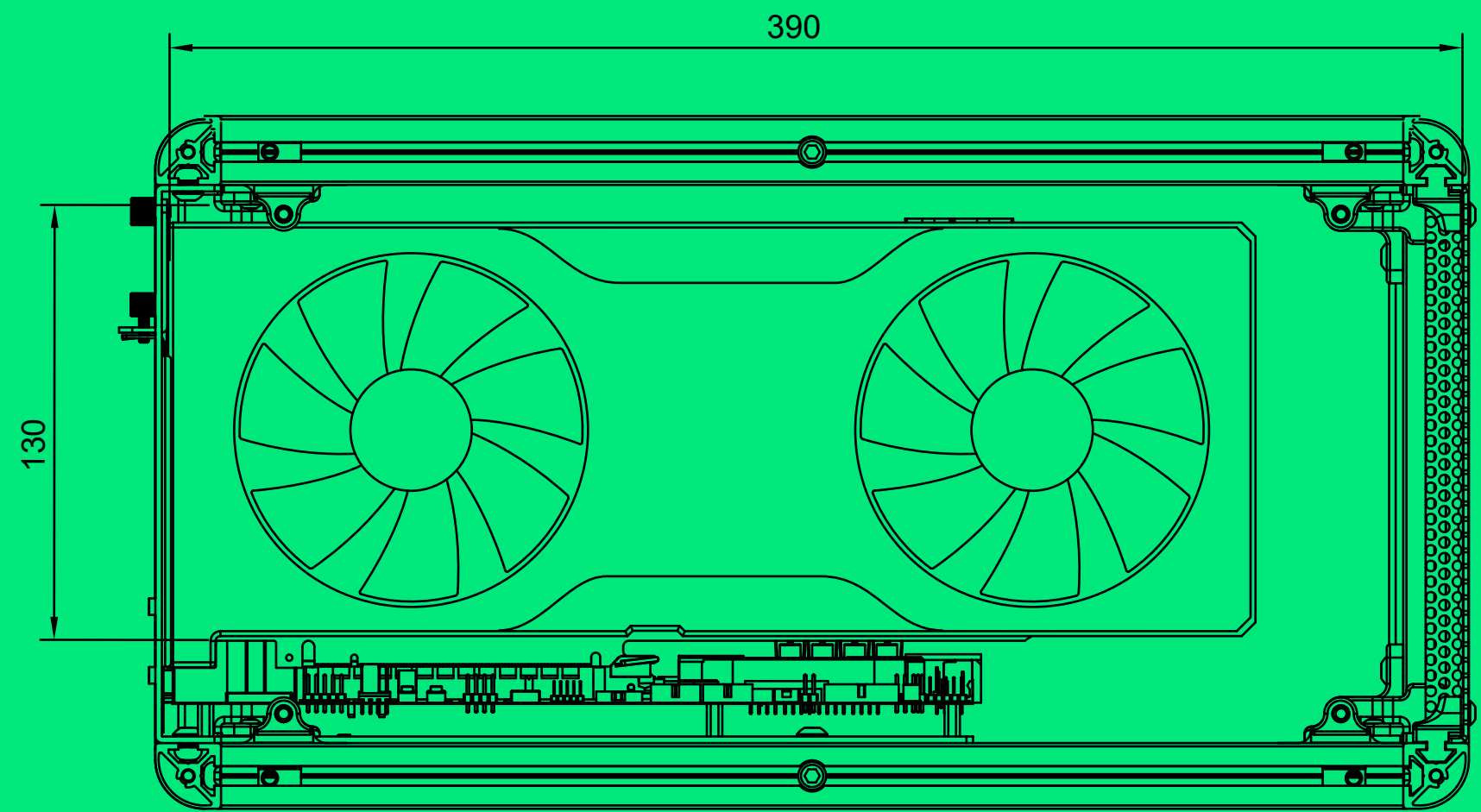
GRAPHICS BOARD SPECIFICATION



A / front liquid-cooling 340mm(L) x 130mm (H)

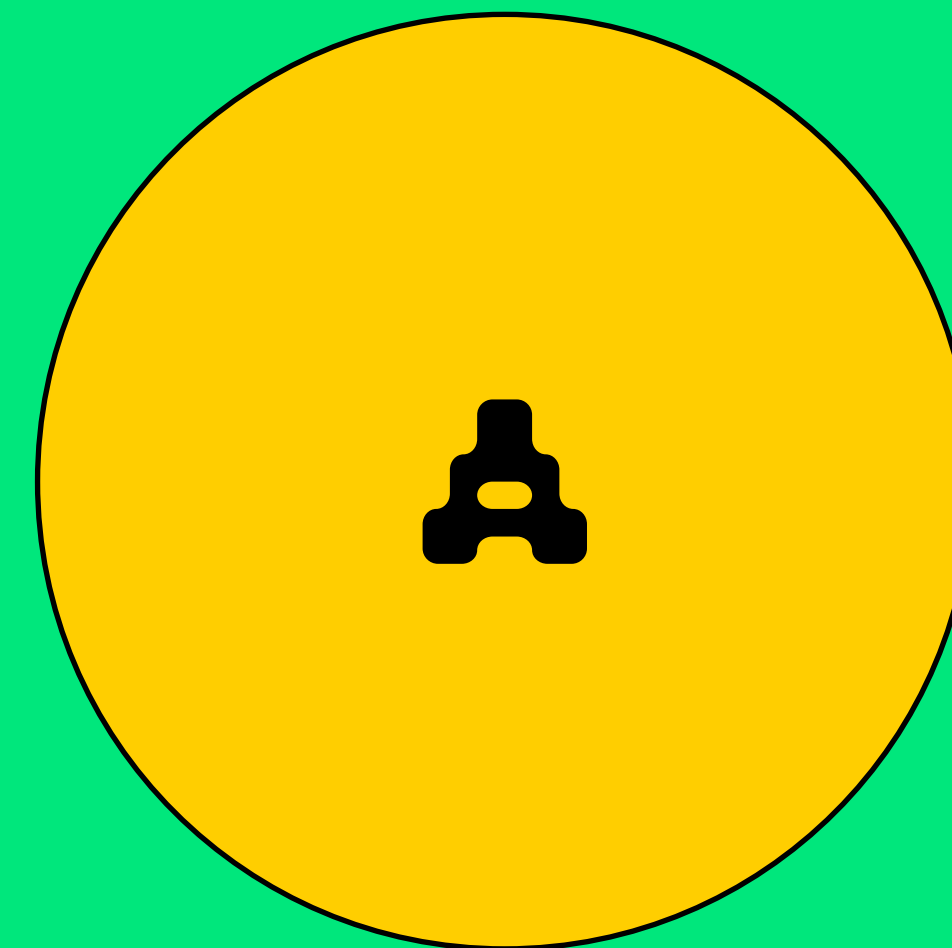


B / front with 12cm fan - 360mm(L) x 130mm (H)

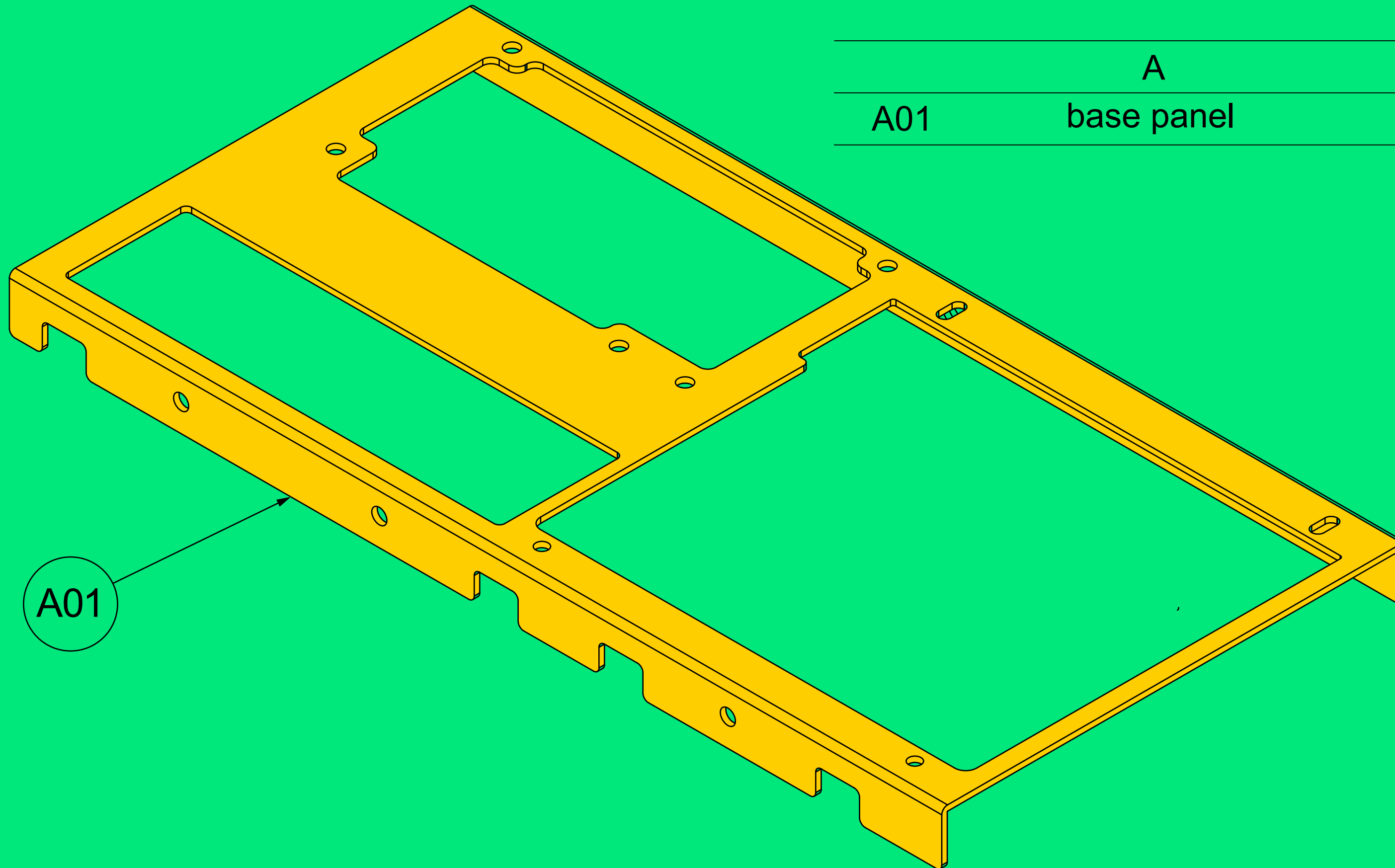
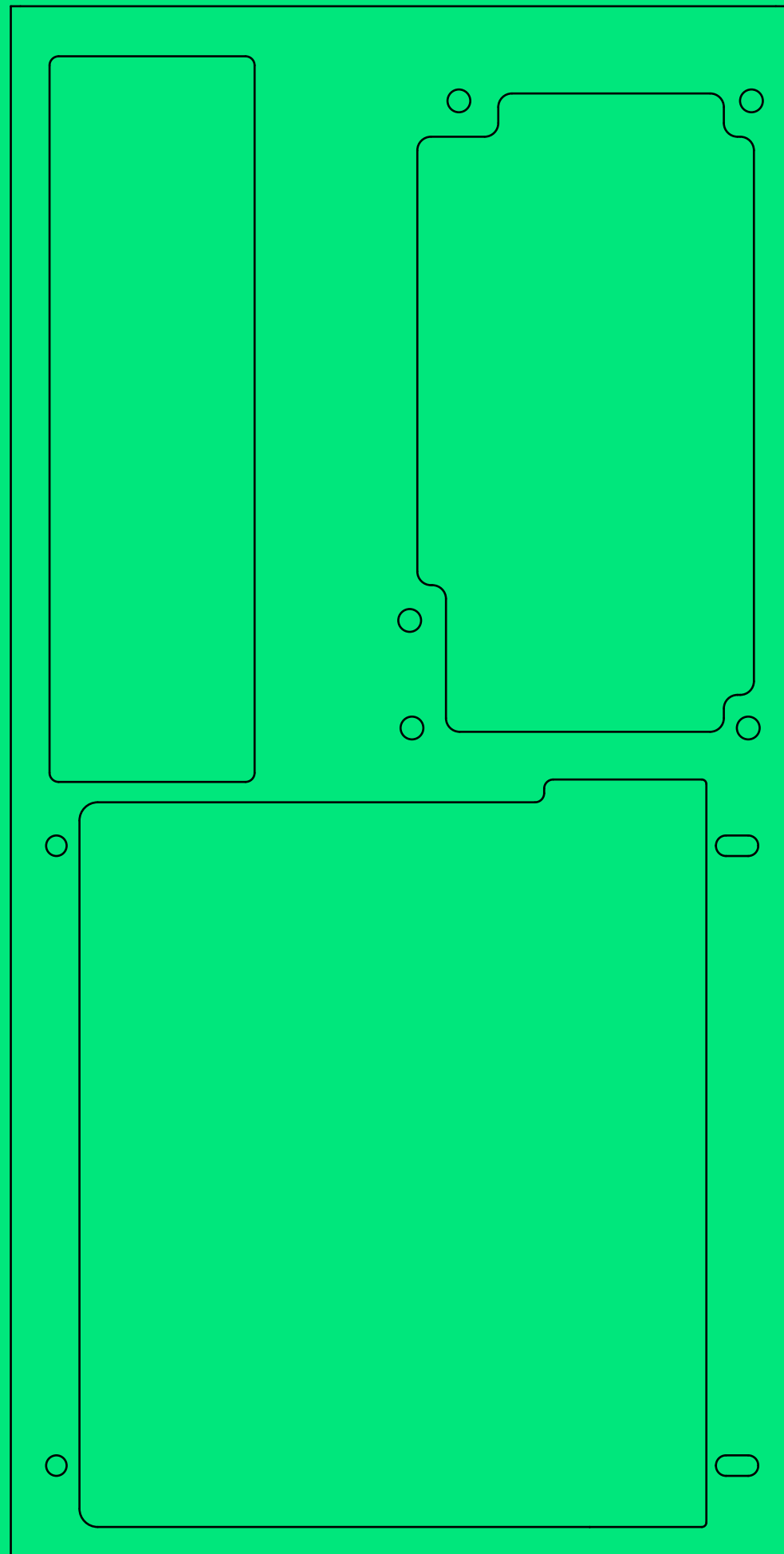
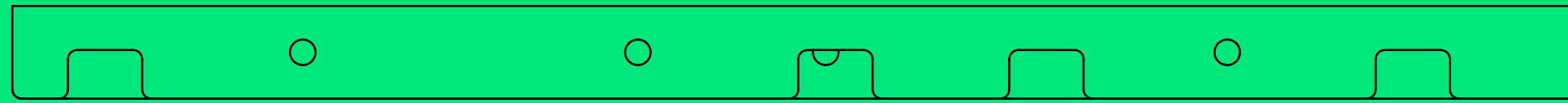


C / front no fan - 370mm(L) x 130mm (H)

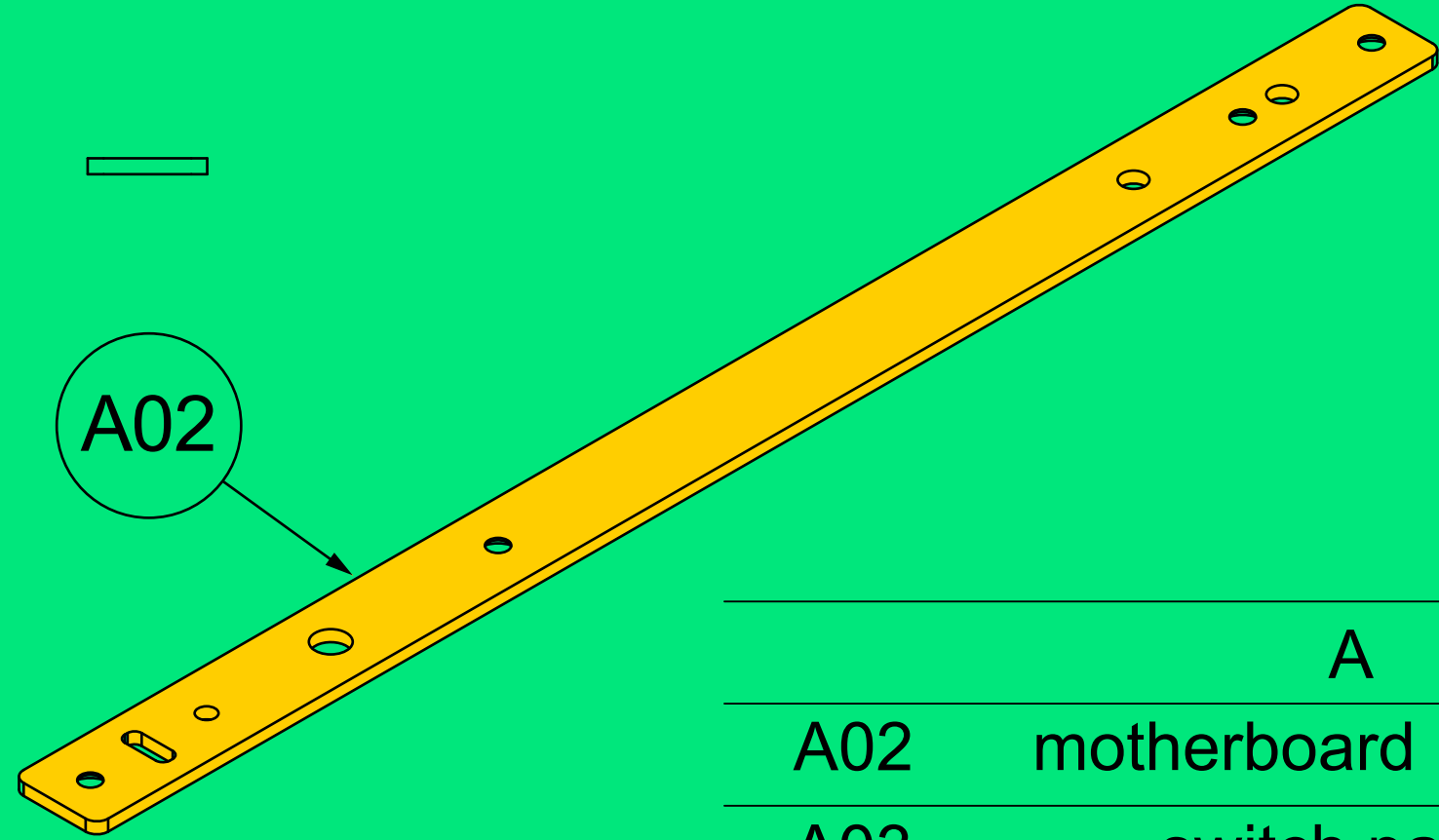
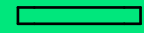
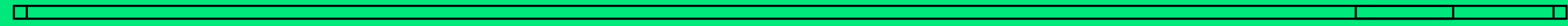
PARTS LIST AND DETAILS



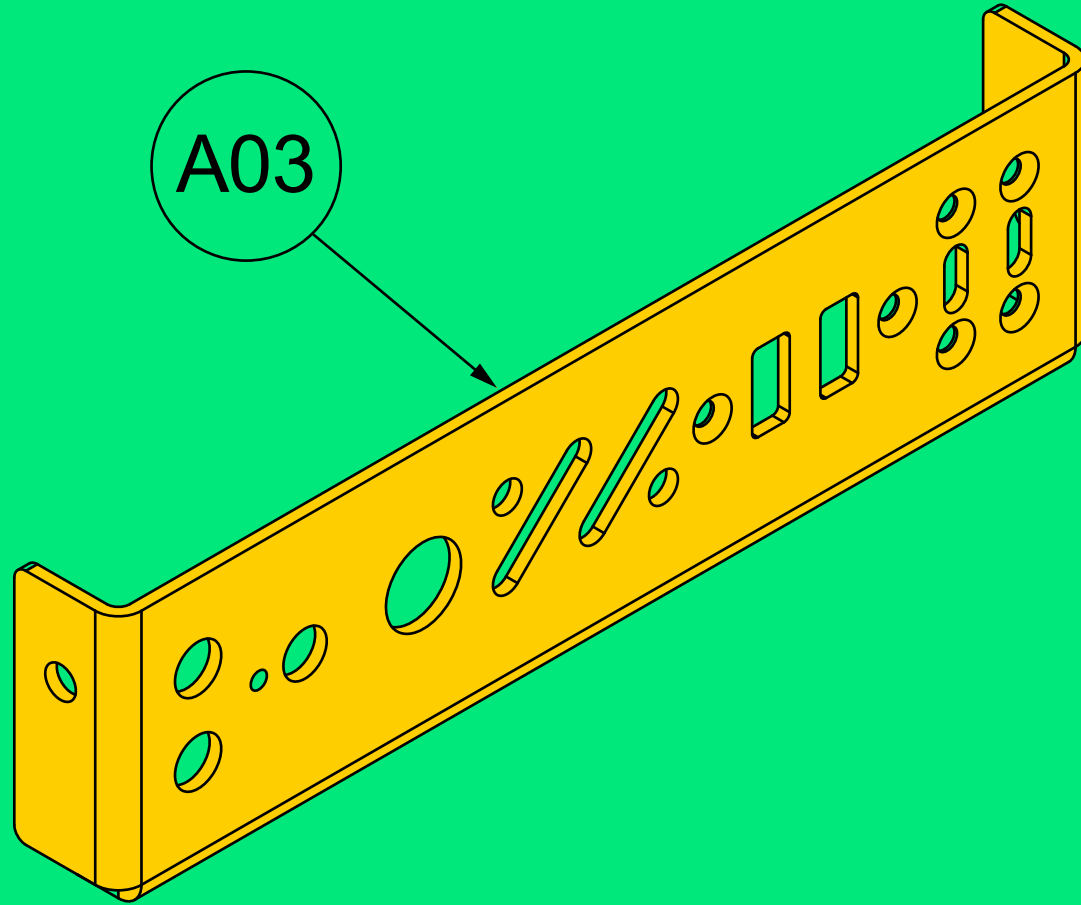
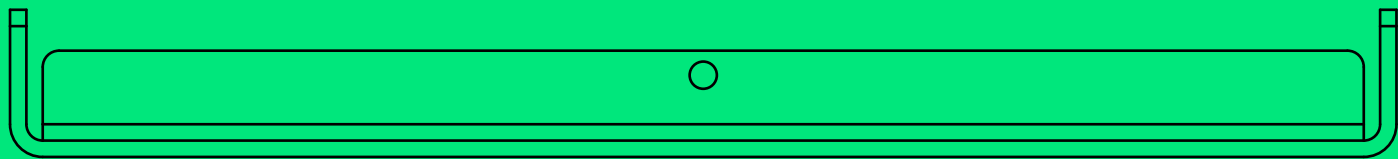
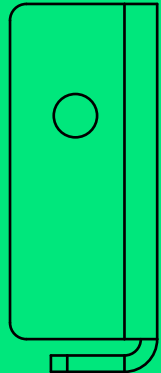
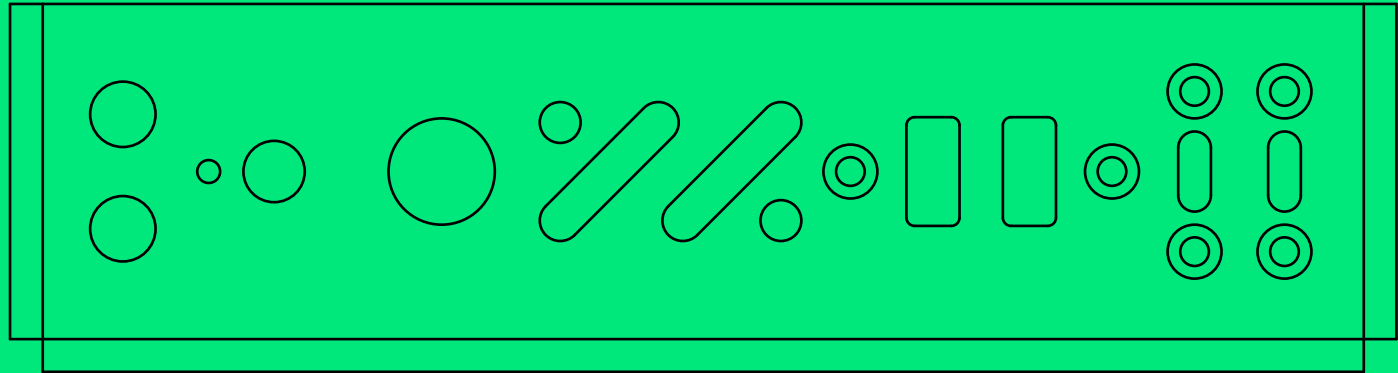
SHEETMETAL

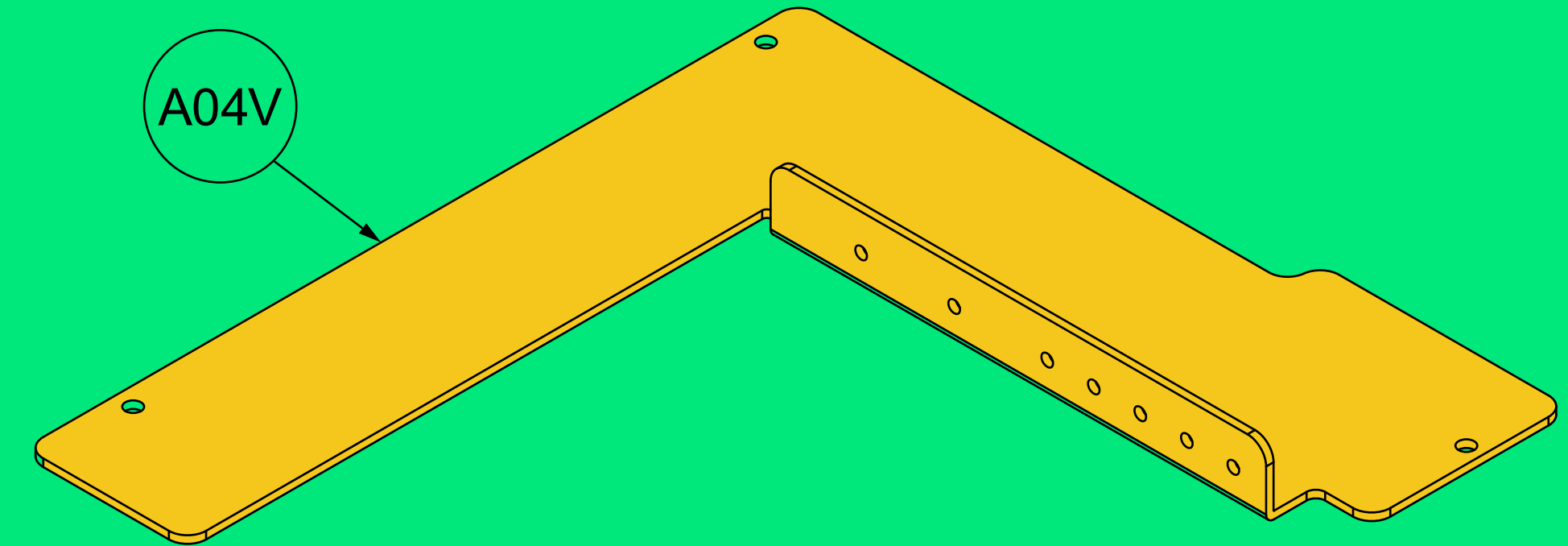
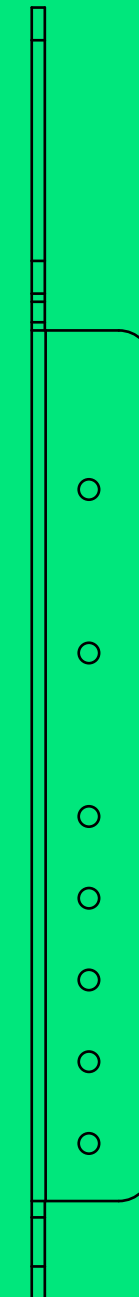
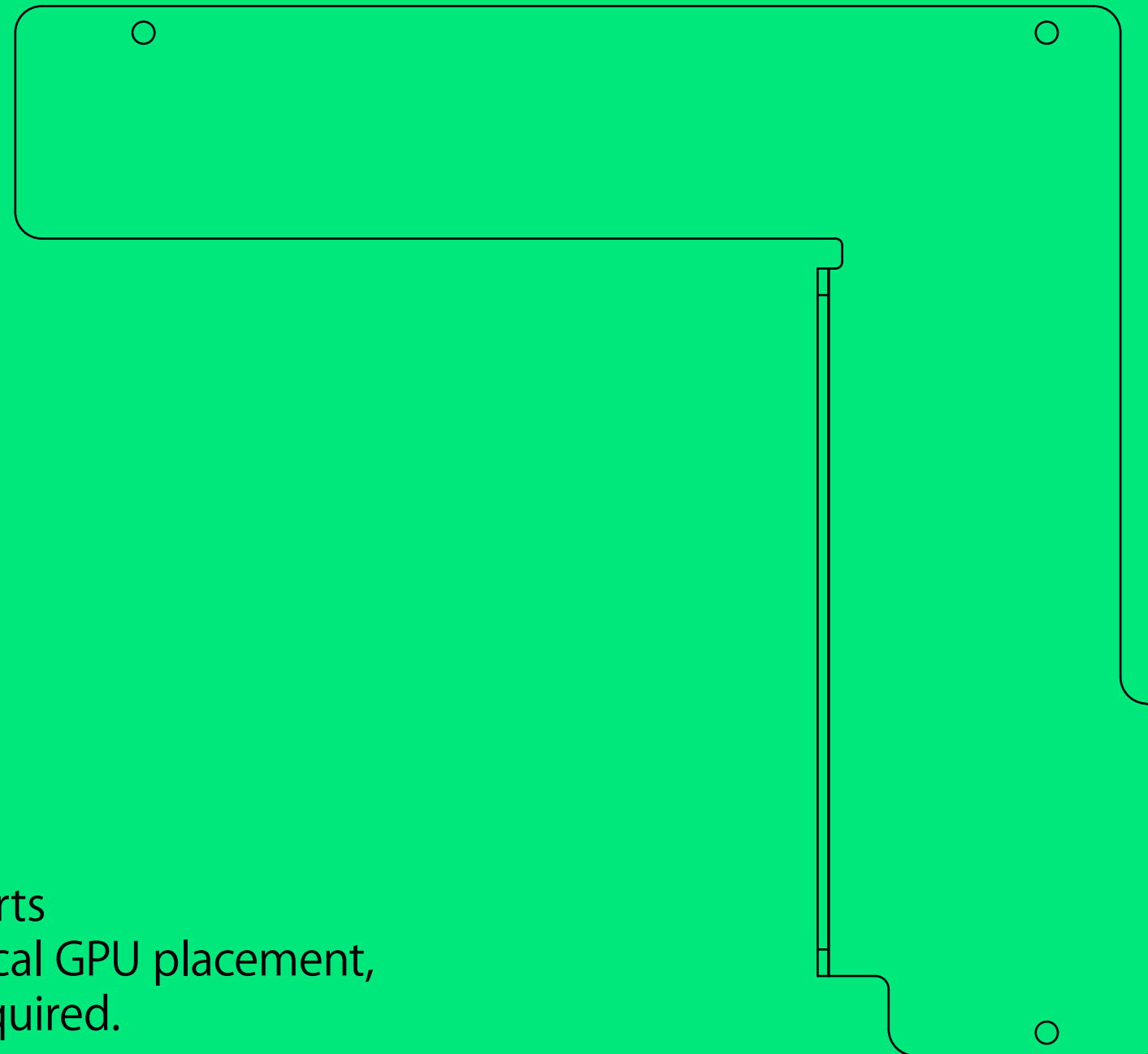
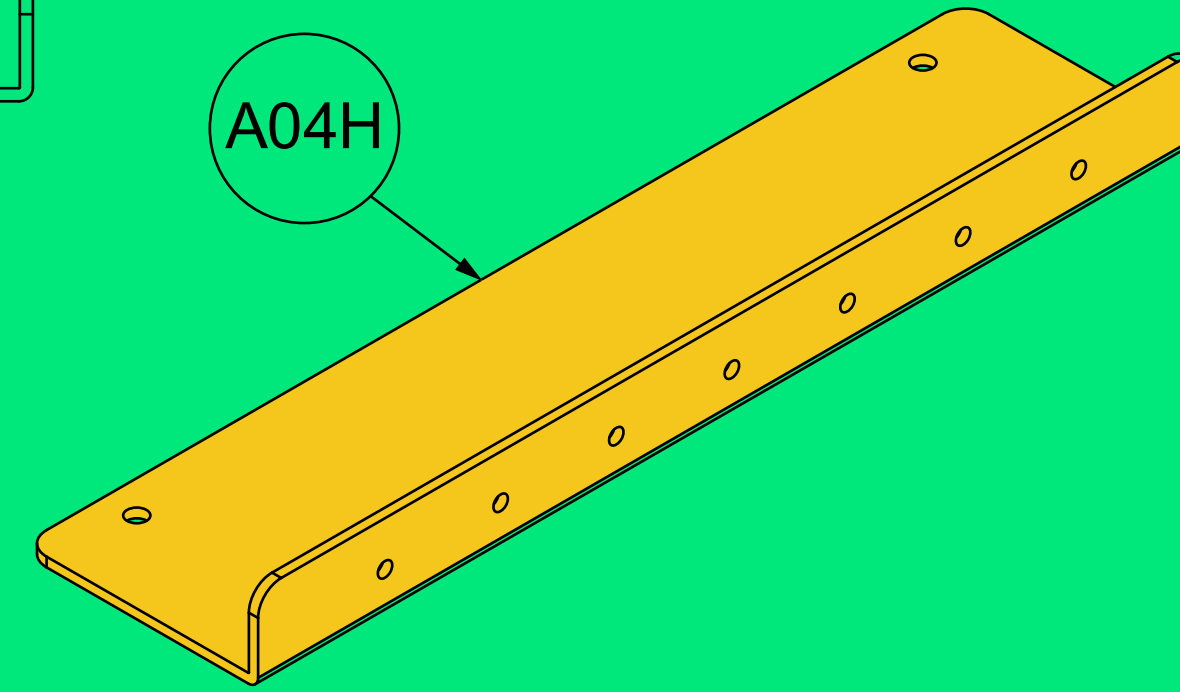
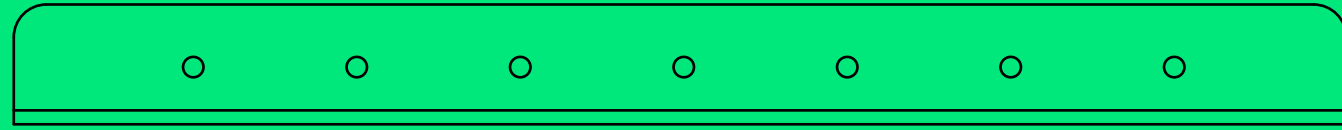


A		
A01	base panel	x1



A		
A02	motherboard bracket	x3
A03	switch panel	x1

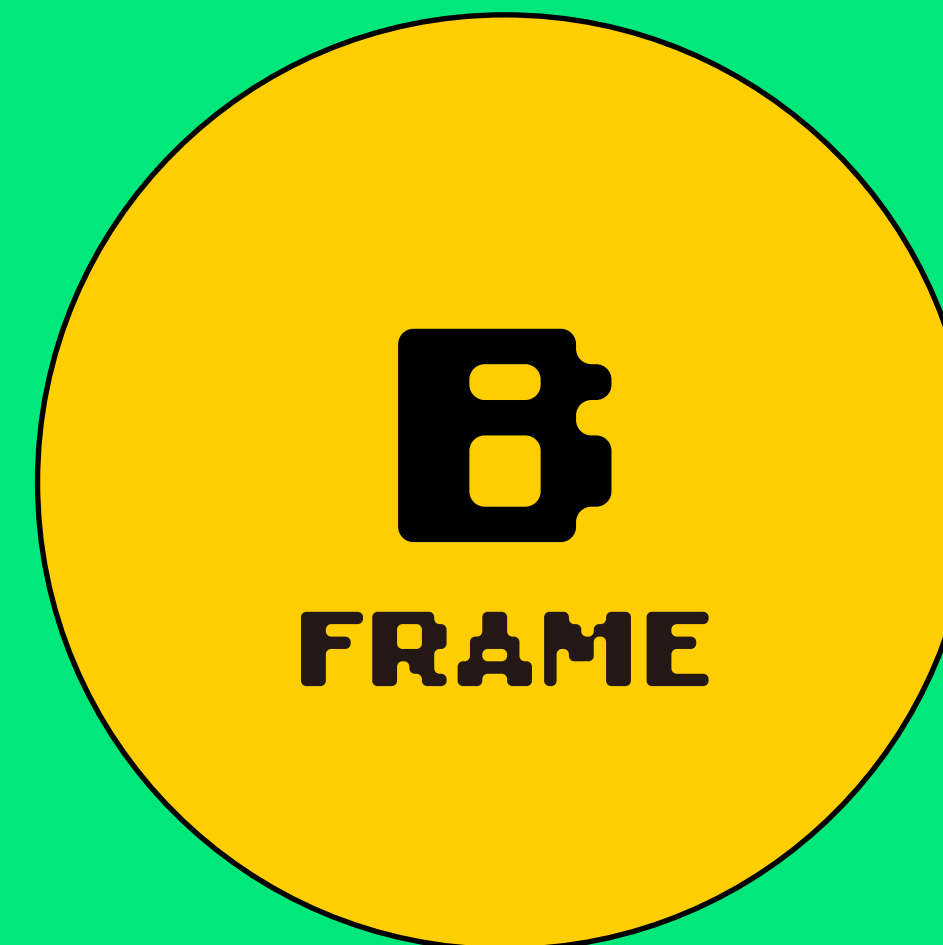


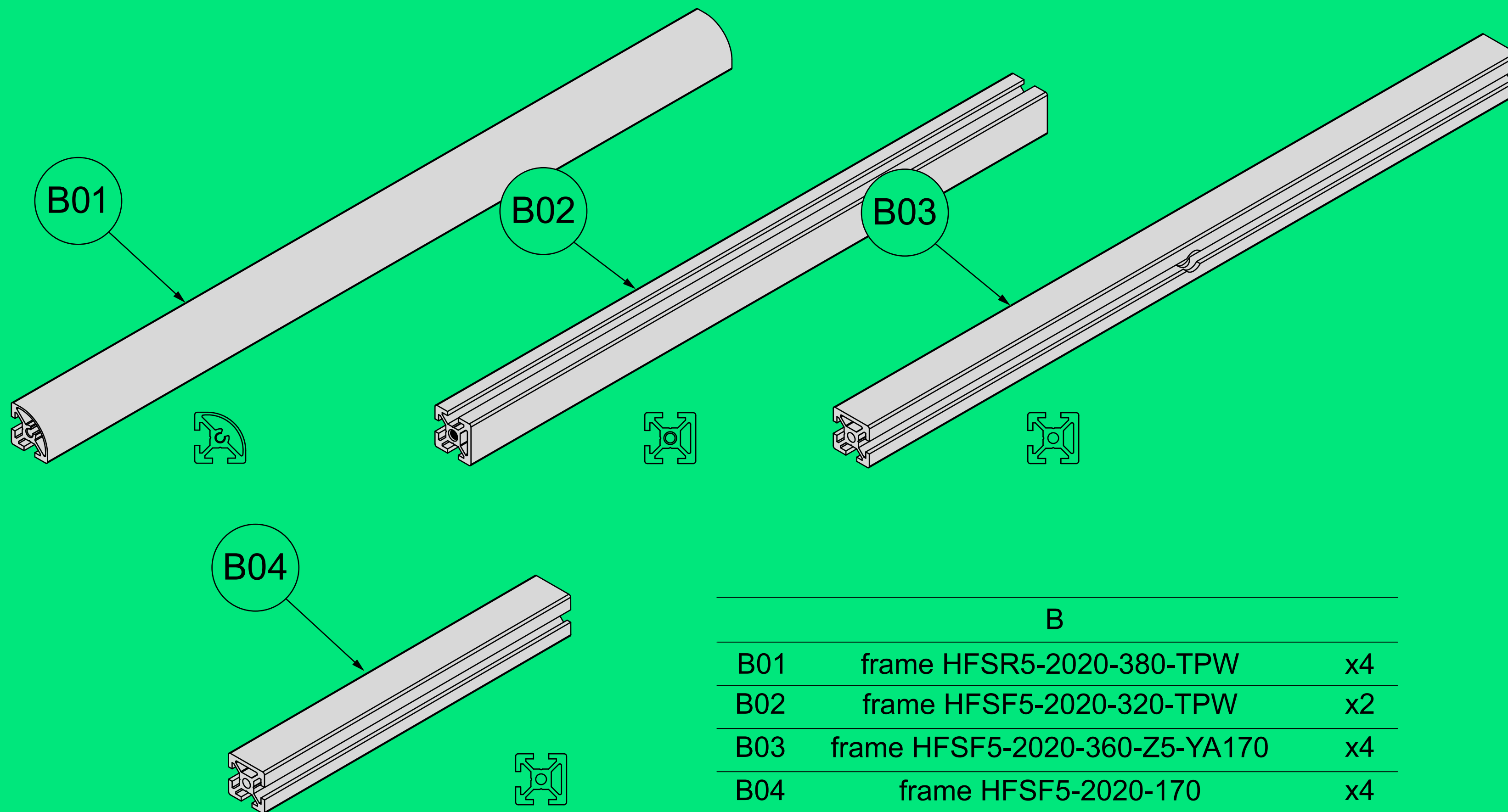


A' is Optional Parts
Bracket for vertical GPU placement,
not normally required.

A		
A04H	gpu bracket H	x1
A04V	gpu bracket V	x1

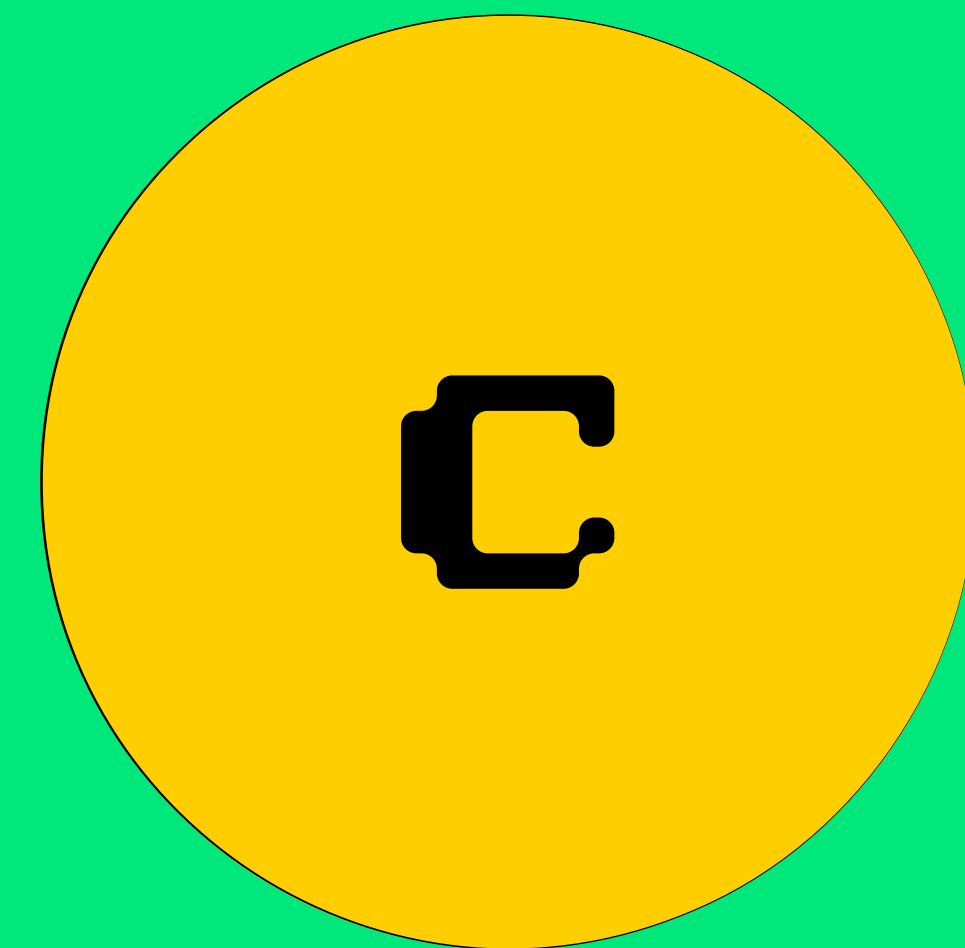
PARTS LIST AND DETAILS



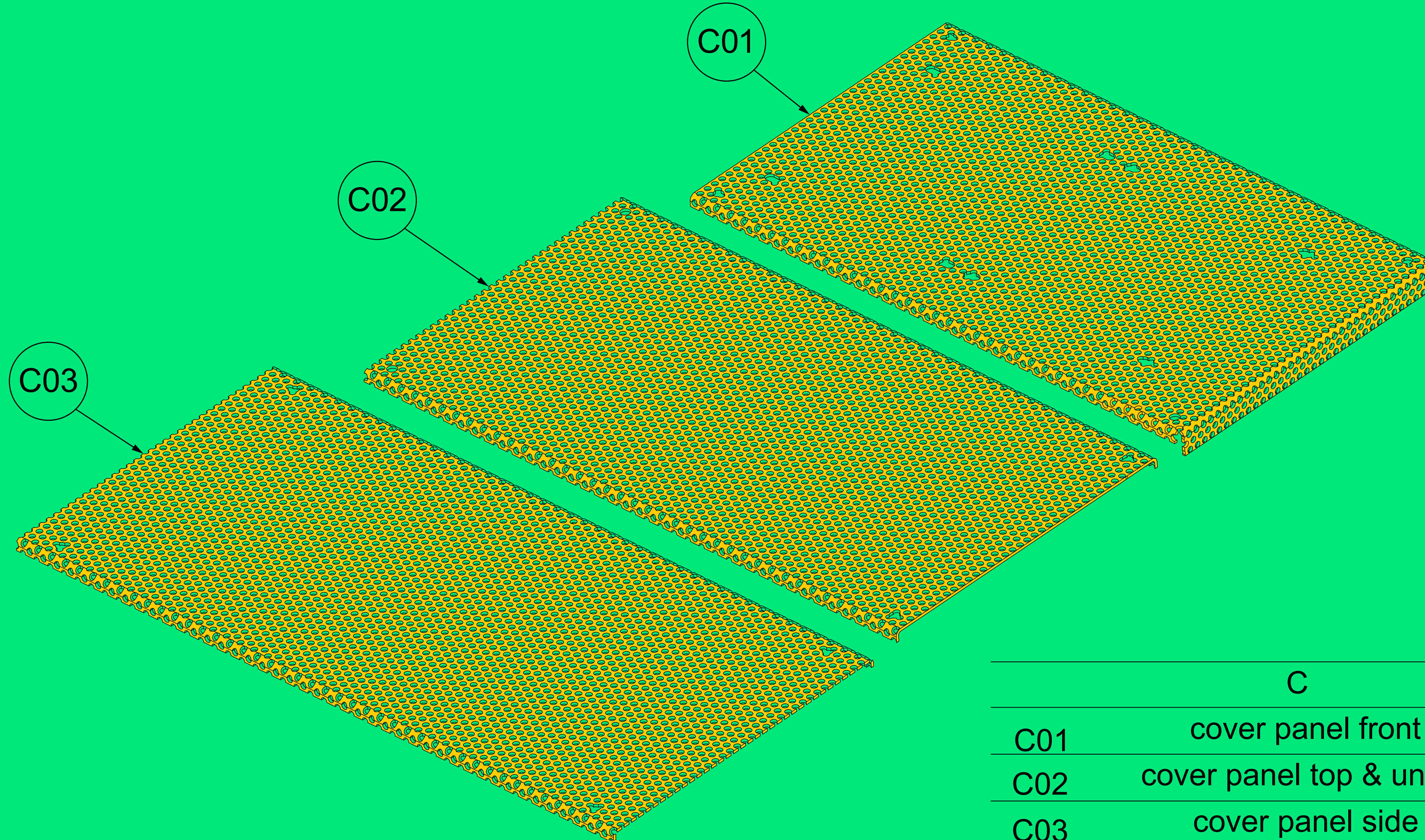


B		
B01	frame HFSR5-2020-380-TPW	x4
B02	frame HFSF5-2020-320-TPW	x2
B03	frame HFSF5-2020-360-Z5-YA170	x4
B04	frame HFSF5-2020-170	x4

PARTS LIST AND DETAILS

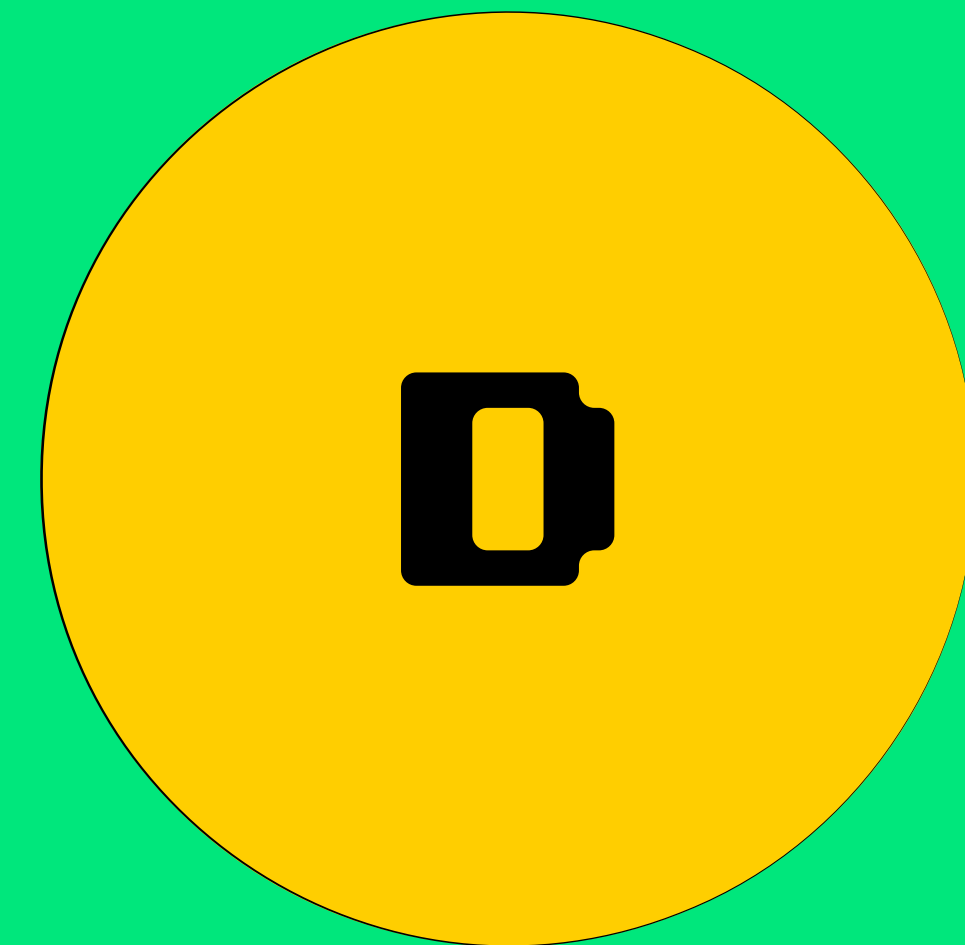


COVERPANEL

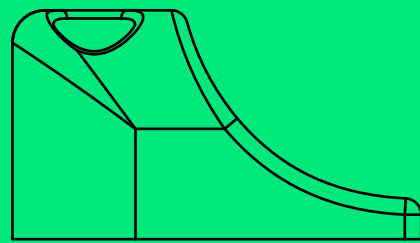
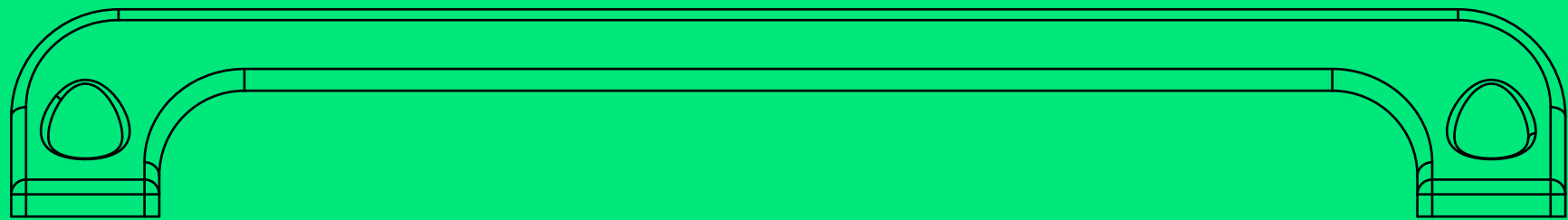


C		
C01	cover panel front	x1
C02	cover panel top & under	x2
C03	cover panel side	x4

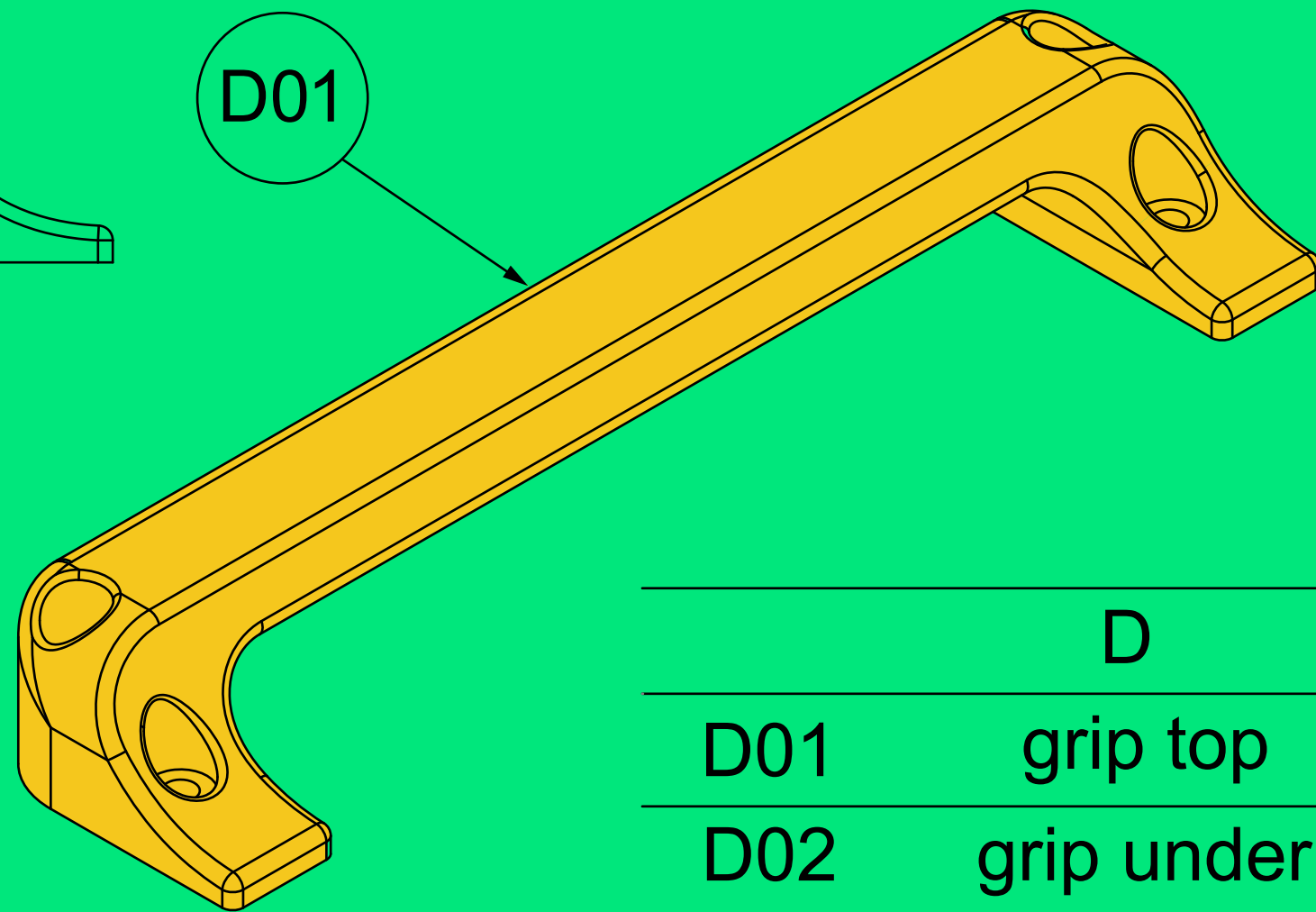
PARTS LIST AND DETAILS



PRINTPARTS



D01



D

D01

grip top

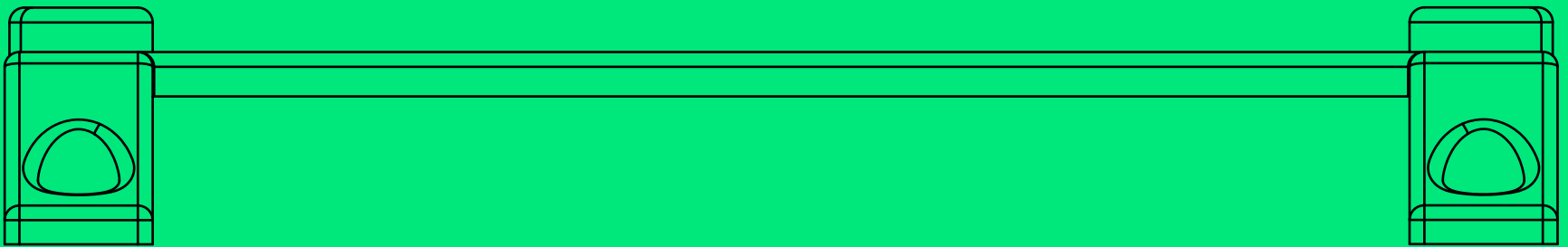
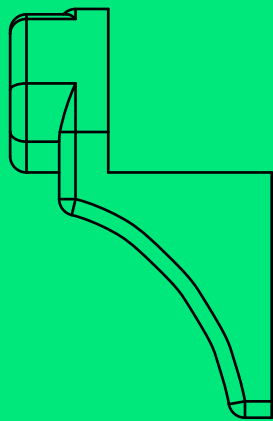
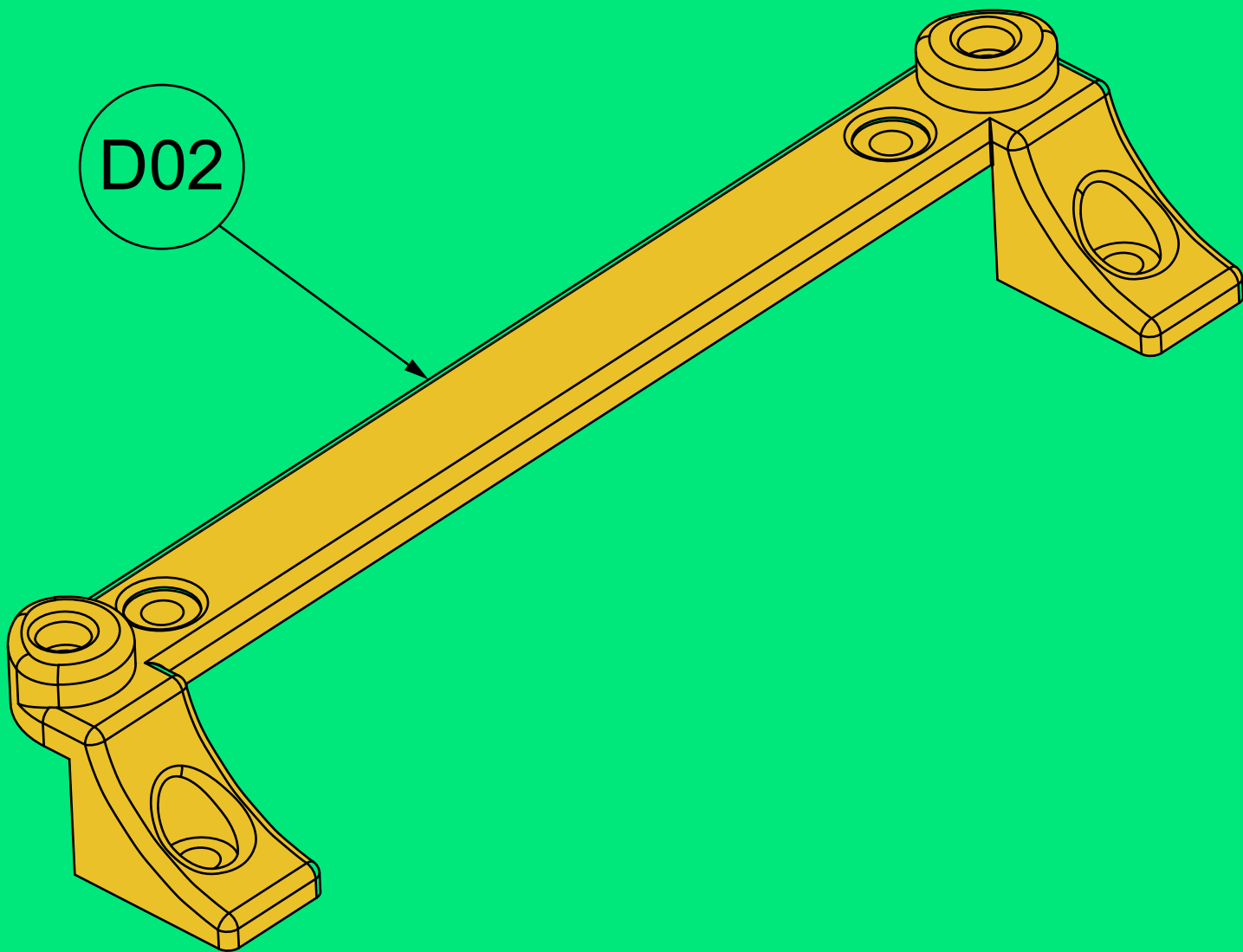
x2

D02

grip under

x2

D02



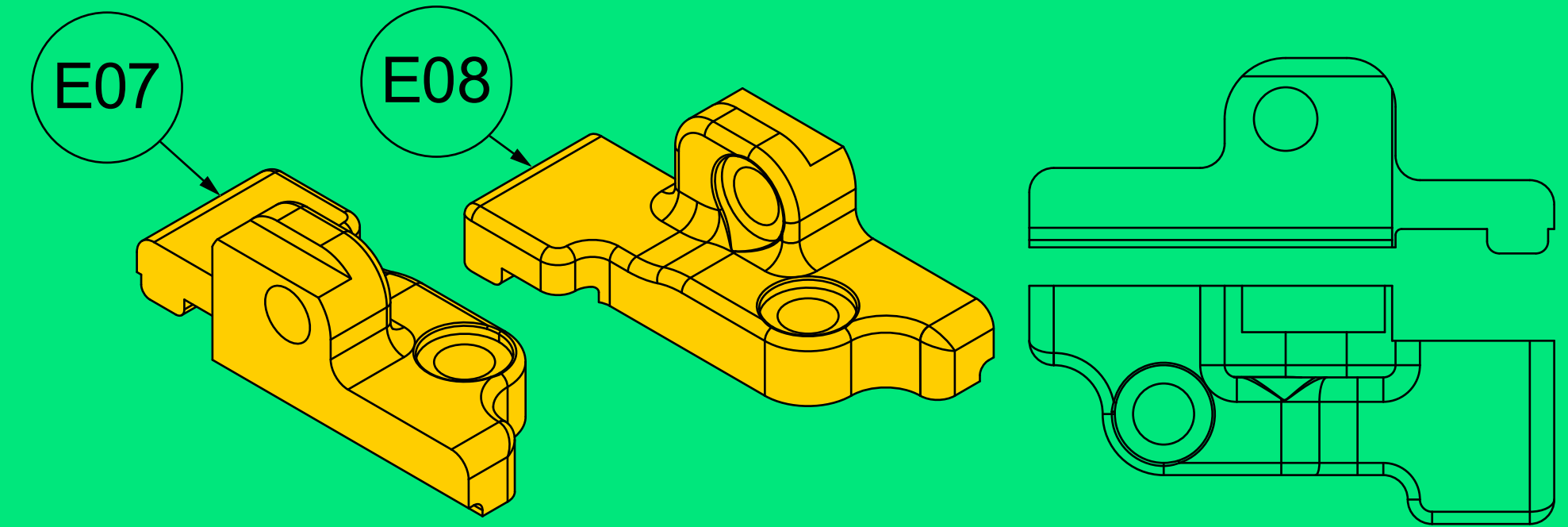
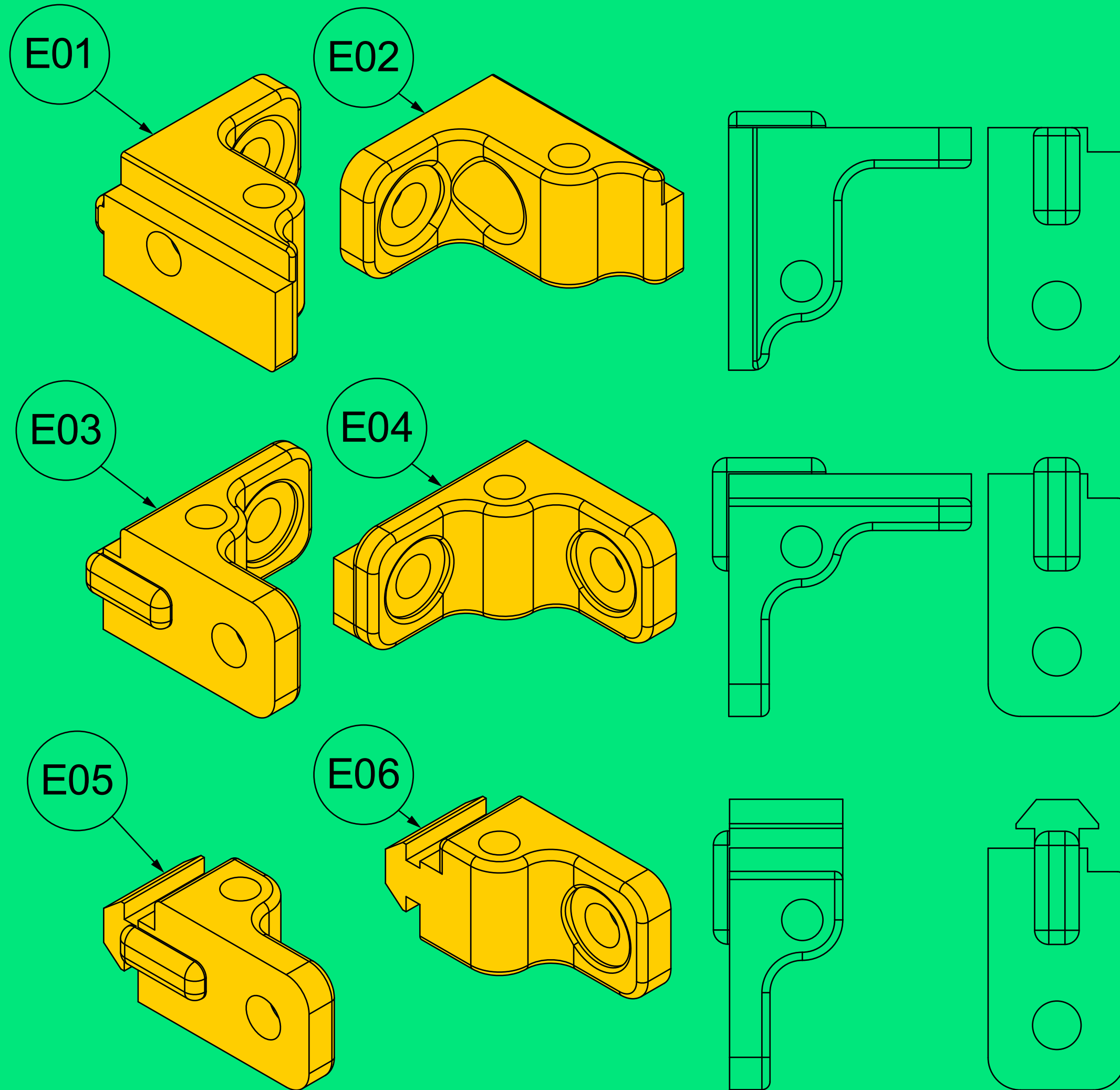
PARTS LIST AND DETAILS

PRINTPARTS



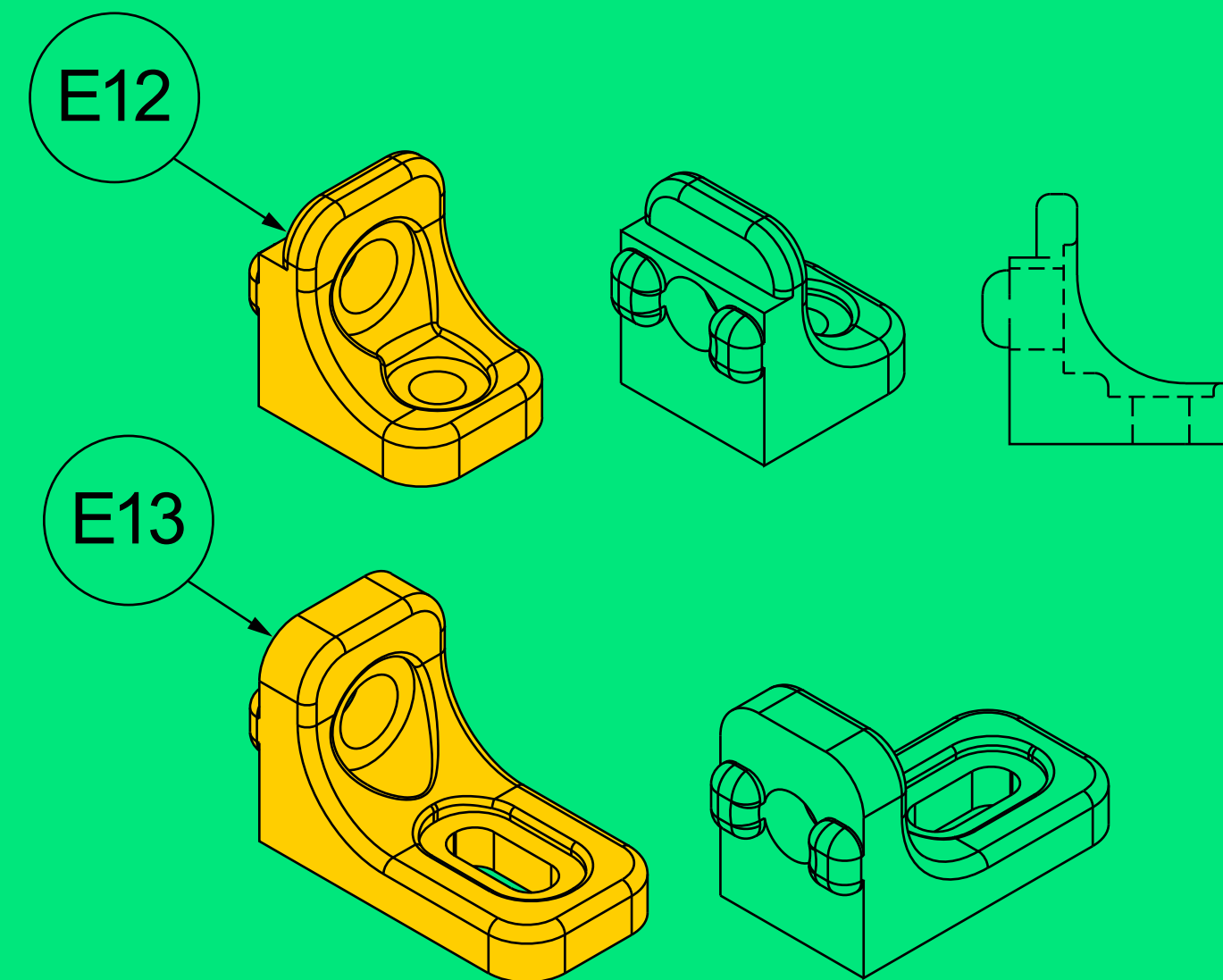
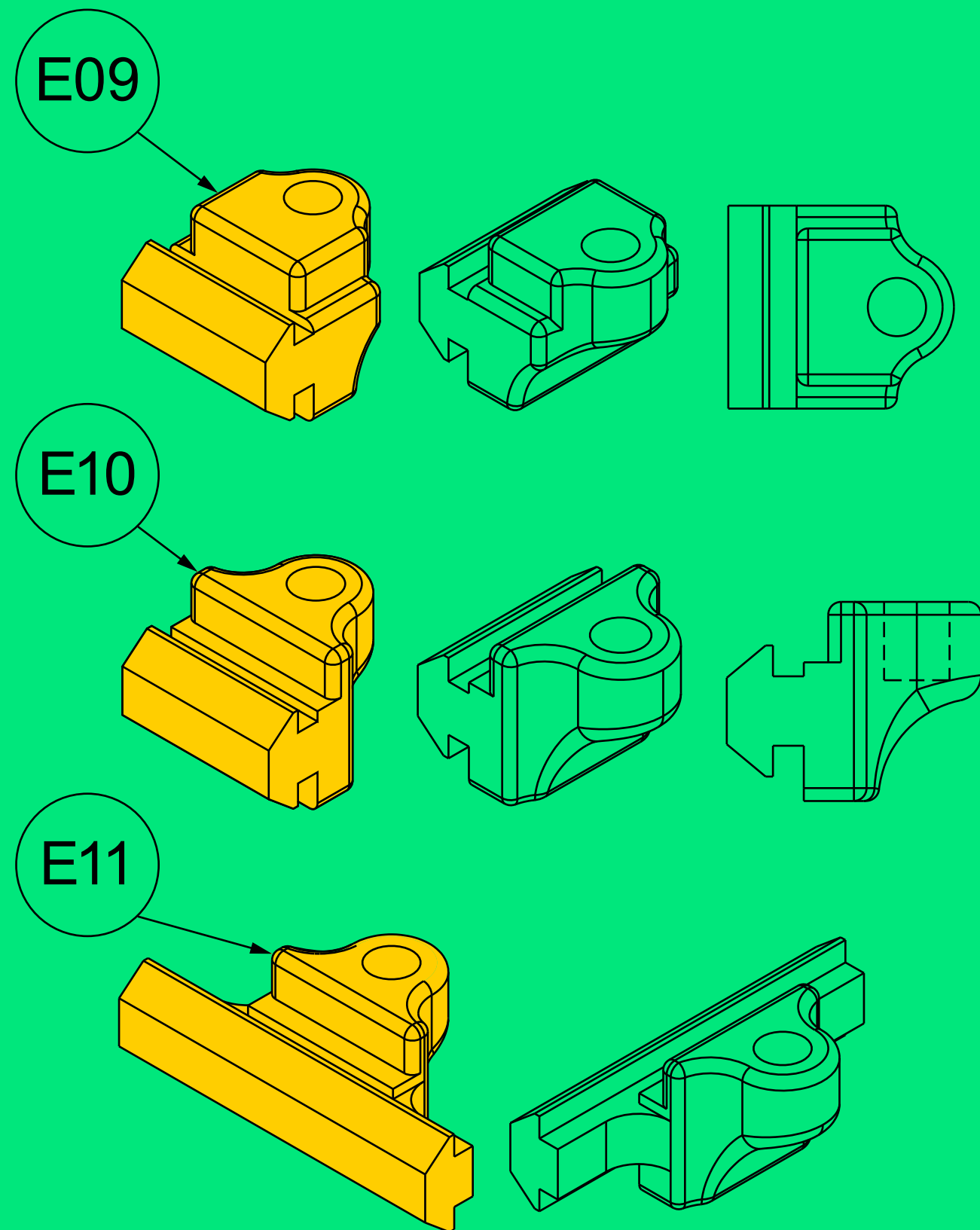
E

E



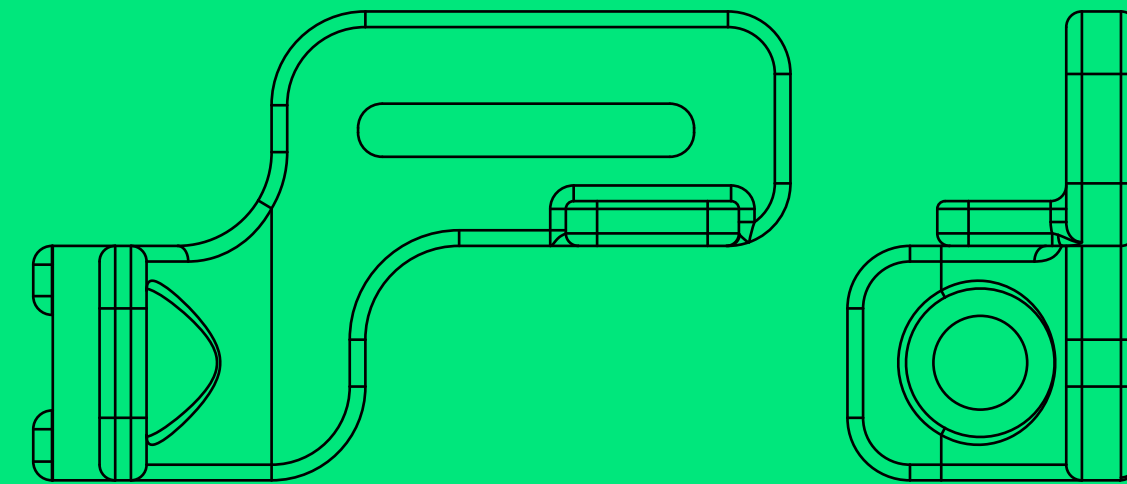
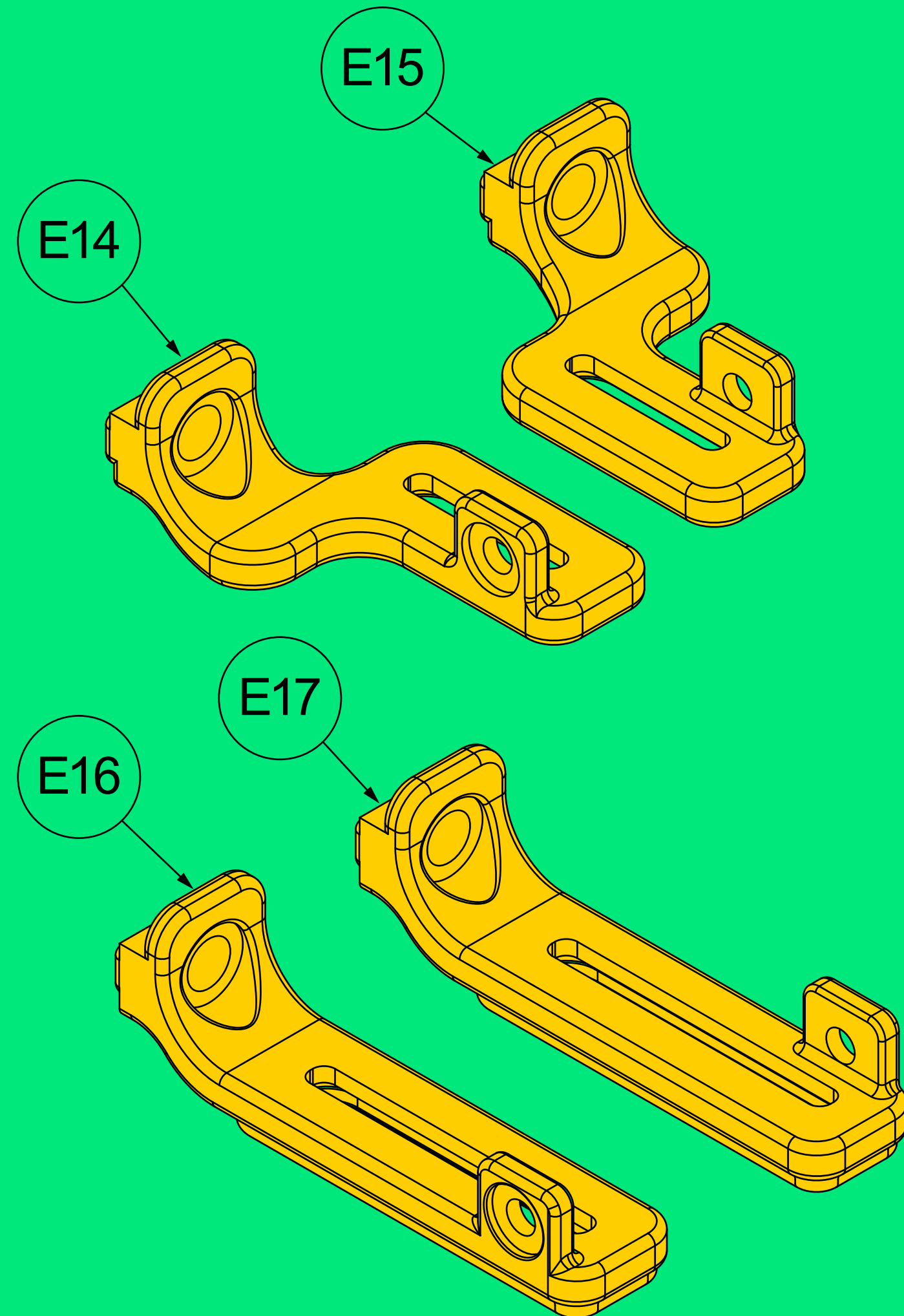
E		
E01	frame conector top	x2
E02	frame conector top mirror	x2
E03	frame conector side A	x3
E04	frame conector side A mirror	x3
E05	frame conector side B	x1
E06	frame conector side B mirror	x1
E07	frame conector joint	x2
E08	frame conector joint mirror	x2

E

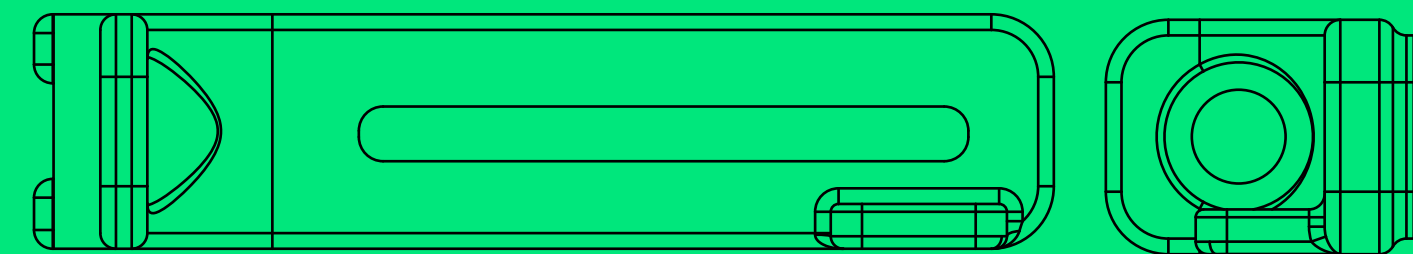


E		
E09	panel conector side	x8
E10	panel conector front	x4
E11	panel conector bottom	x4
E12	motherboard conector S	x1
E13	motherboard conector L	x2

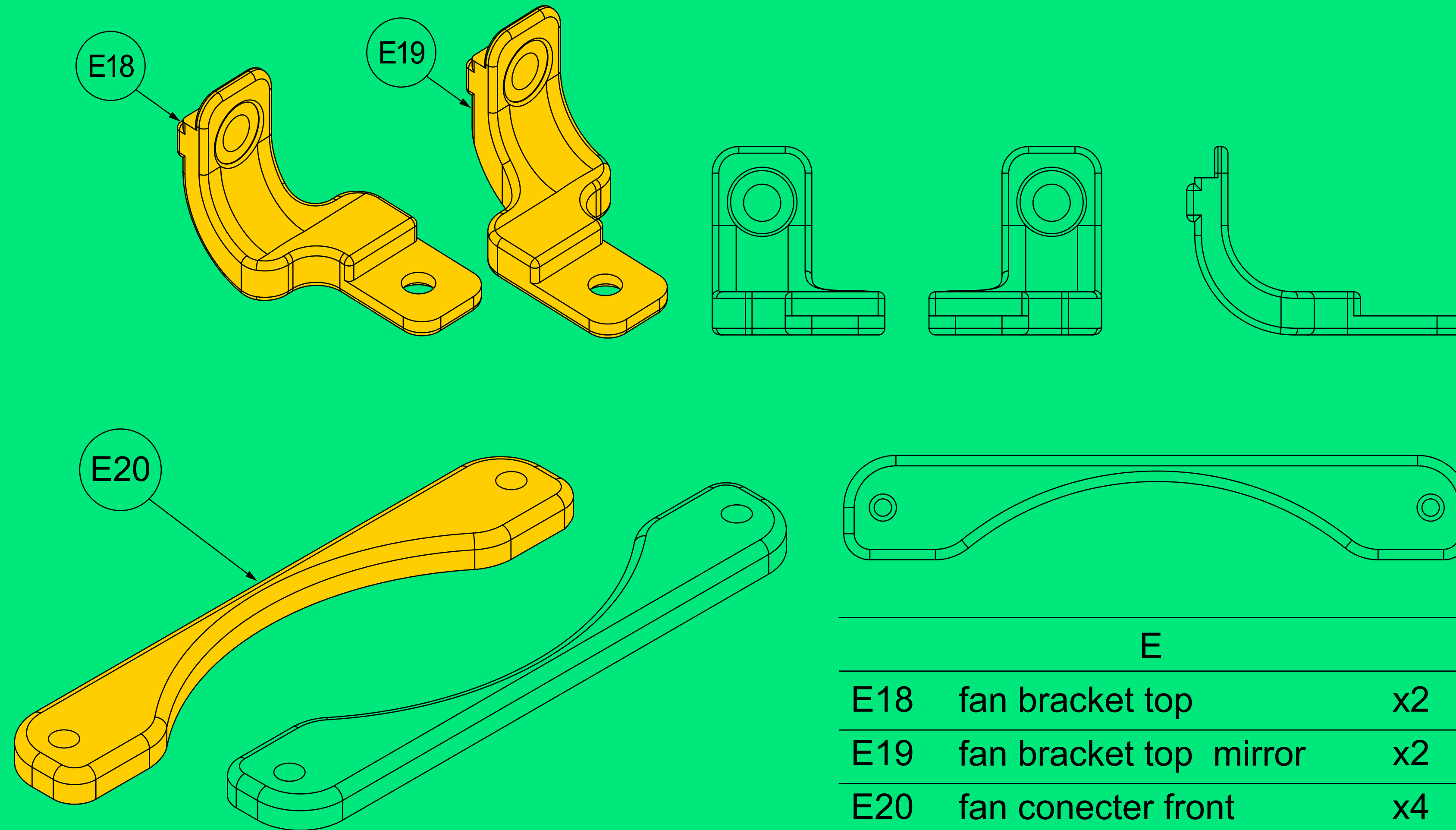
E



E		
E14	hdd bracket S	x1
E15	hdd bracket S mirror	x1
E16	hdd bracket L	x1
E17	hdd bracket L mirror	x1



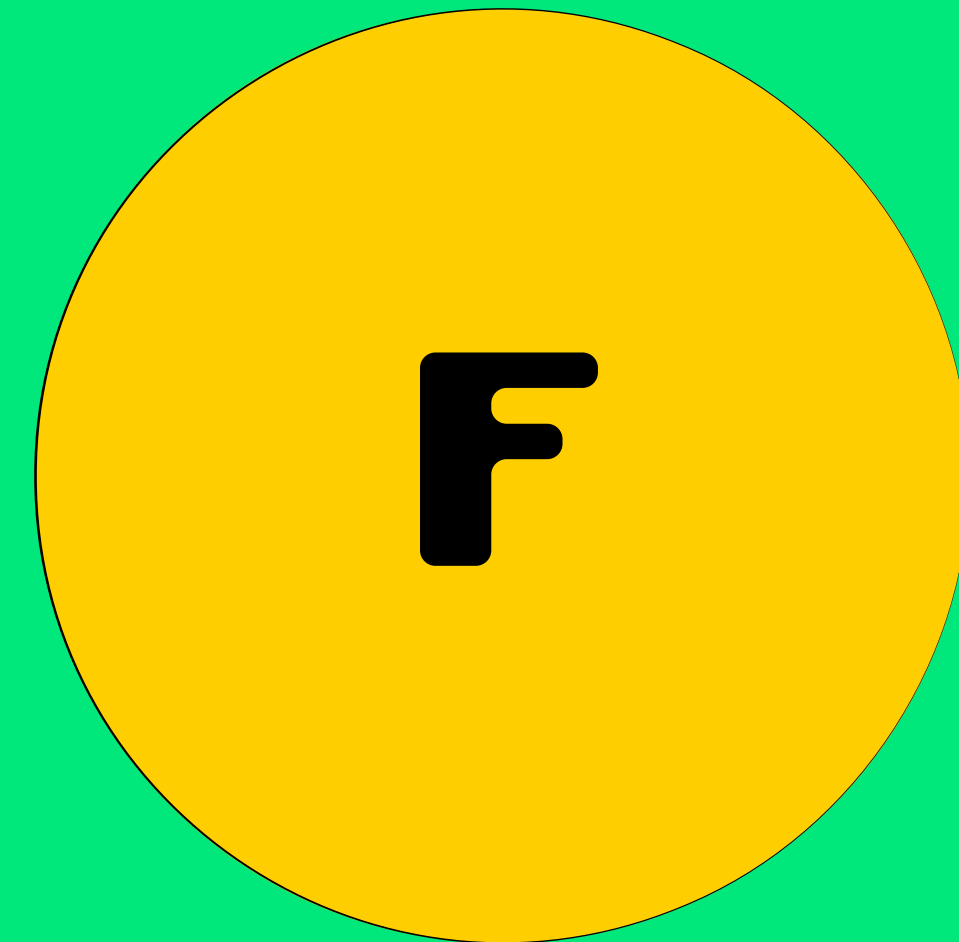
E



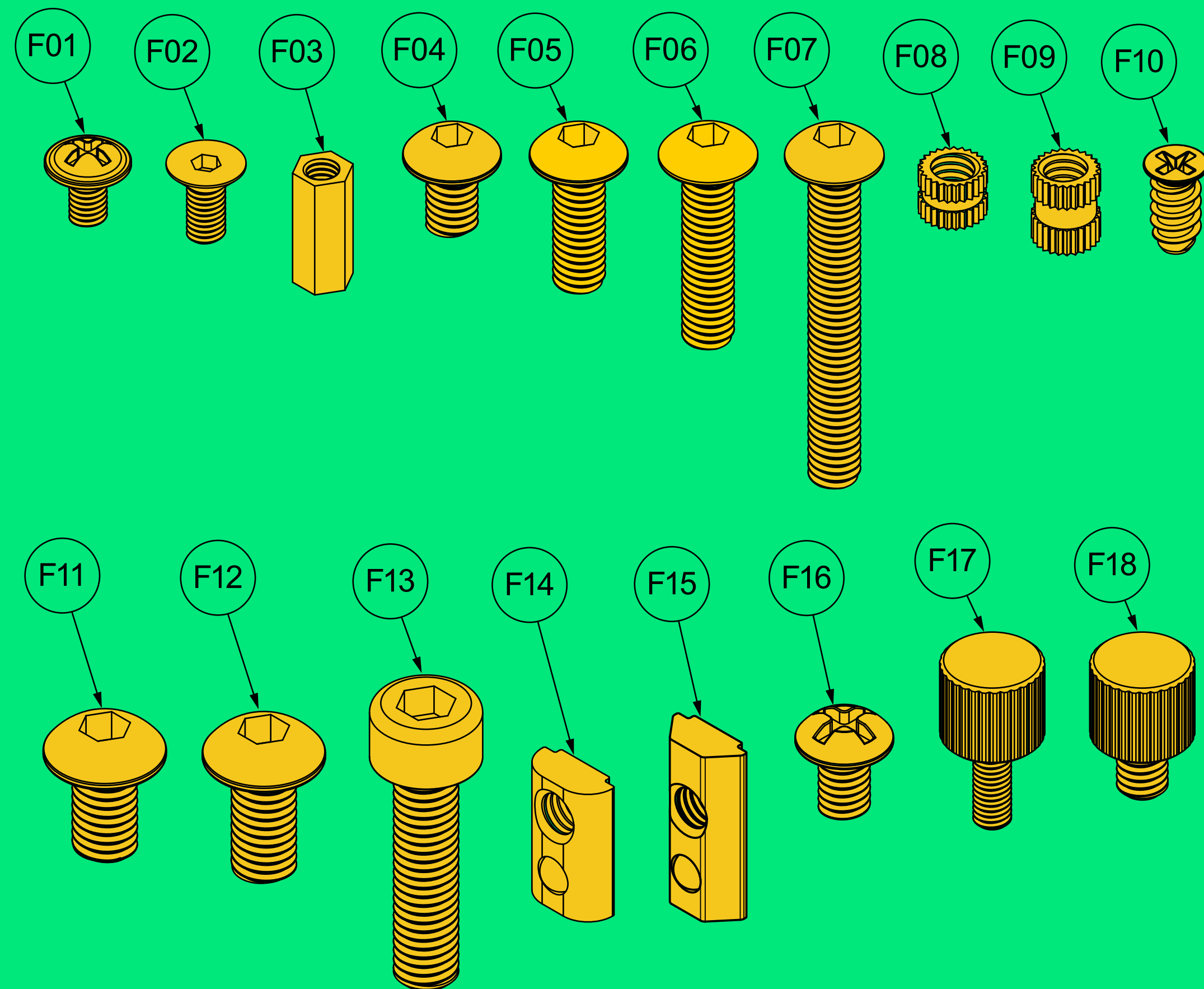
E		
E18	fan bracket top	x2
E19	fan bracket top mirror	x2
E20	fan conector front	x4

PARTS LIST AND DETAILS

BOLTNUT



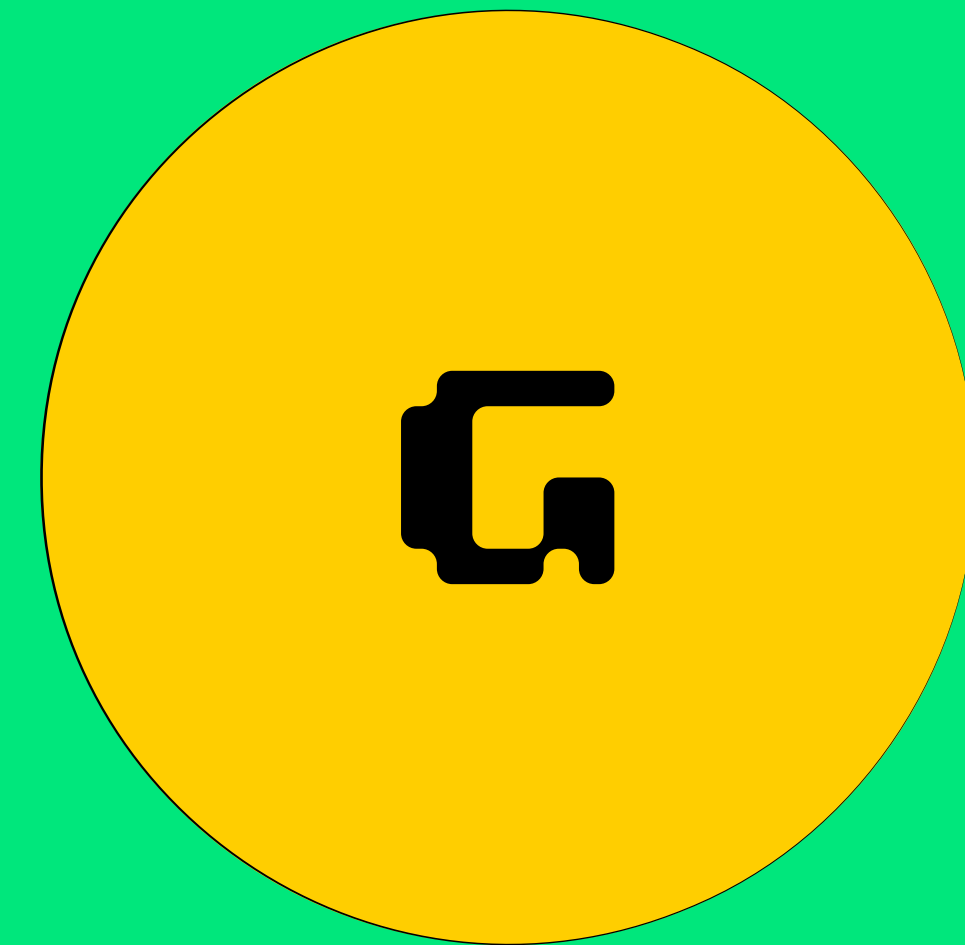
F

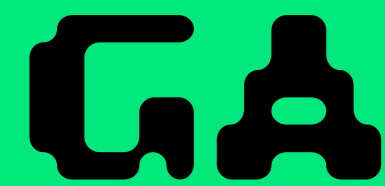


F			
F01	fixing screw	M3 5mm	x9
F02	flat head socket cap	M3 8mm	x15
F03	hexago spacer	M3 10mm	x9
F04	Hexagon button head	M4 6mm	x32
F05	/	M4 10mm	x8
F06	/	M4 16mm	x8
F07	/	M4 30mm	x8
F08	insert nut5.2	M4 4mm	x8
F09	/	M4 6mm	x44
F10	fan screws	M5 8mm	x8
F11	hexagon button head	M5 8mm	x11
F12	/	M5 10mm	x52
F13	hexagon socket head cap	M5 20mm	x4
F14	half round spring nut	M5 2020	x56
F15	half round spring nut later	M5 2020	x8
F16	inch screw threads	6#32 6mm	x4
F17	hand screw	M3 8mm	x3
F18	/	M4 5mm	x2

PARTS LIST AND DETAILS

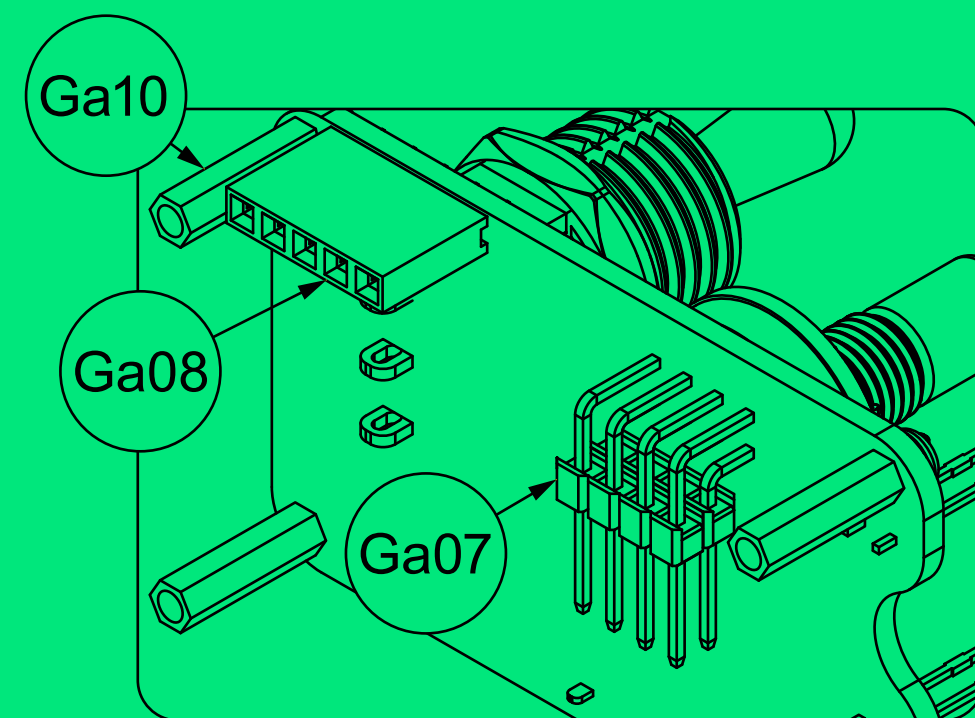
SWITCHPANEL



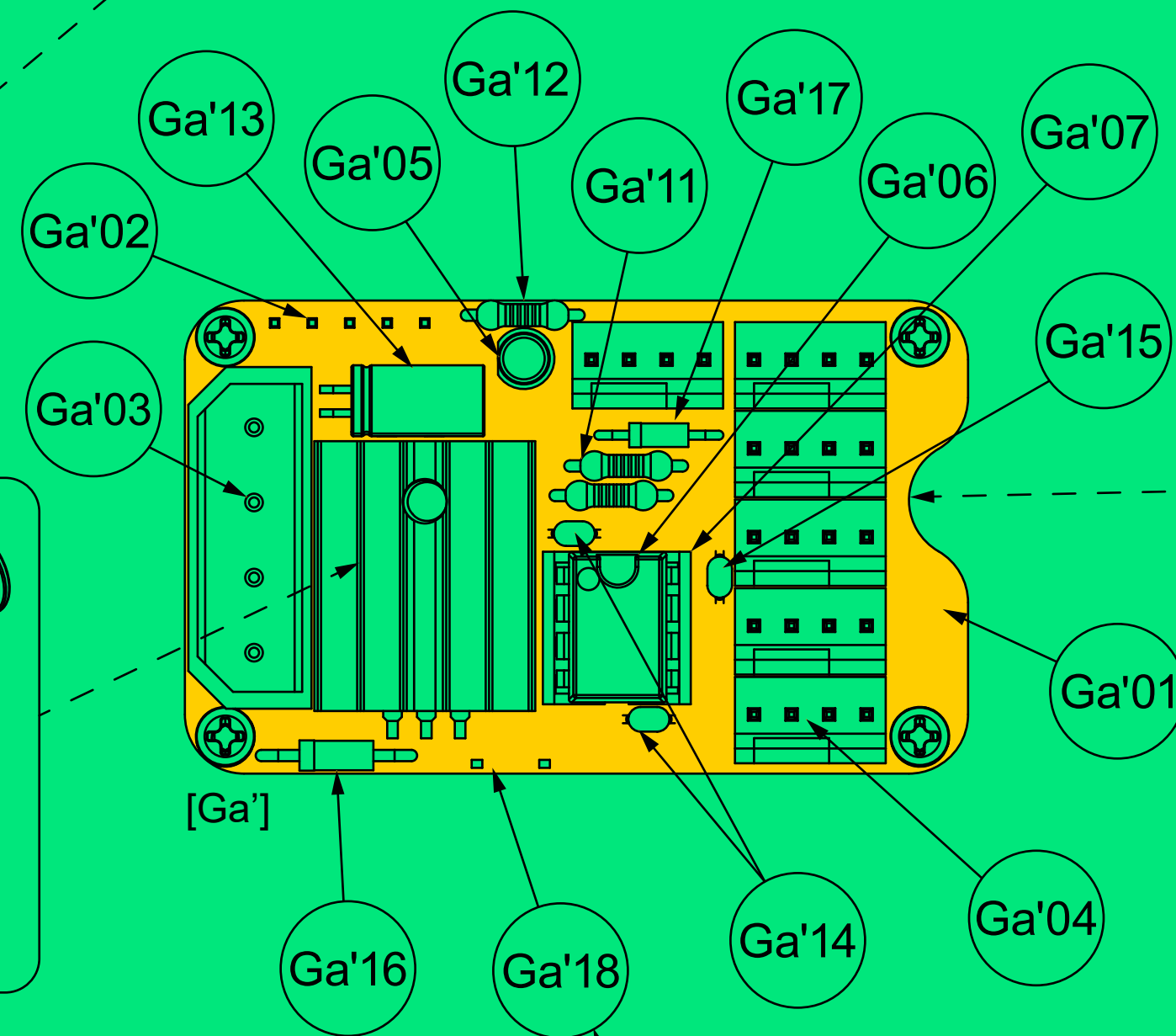
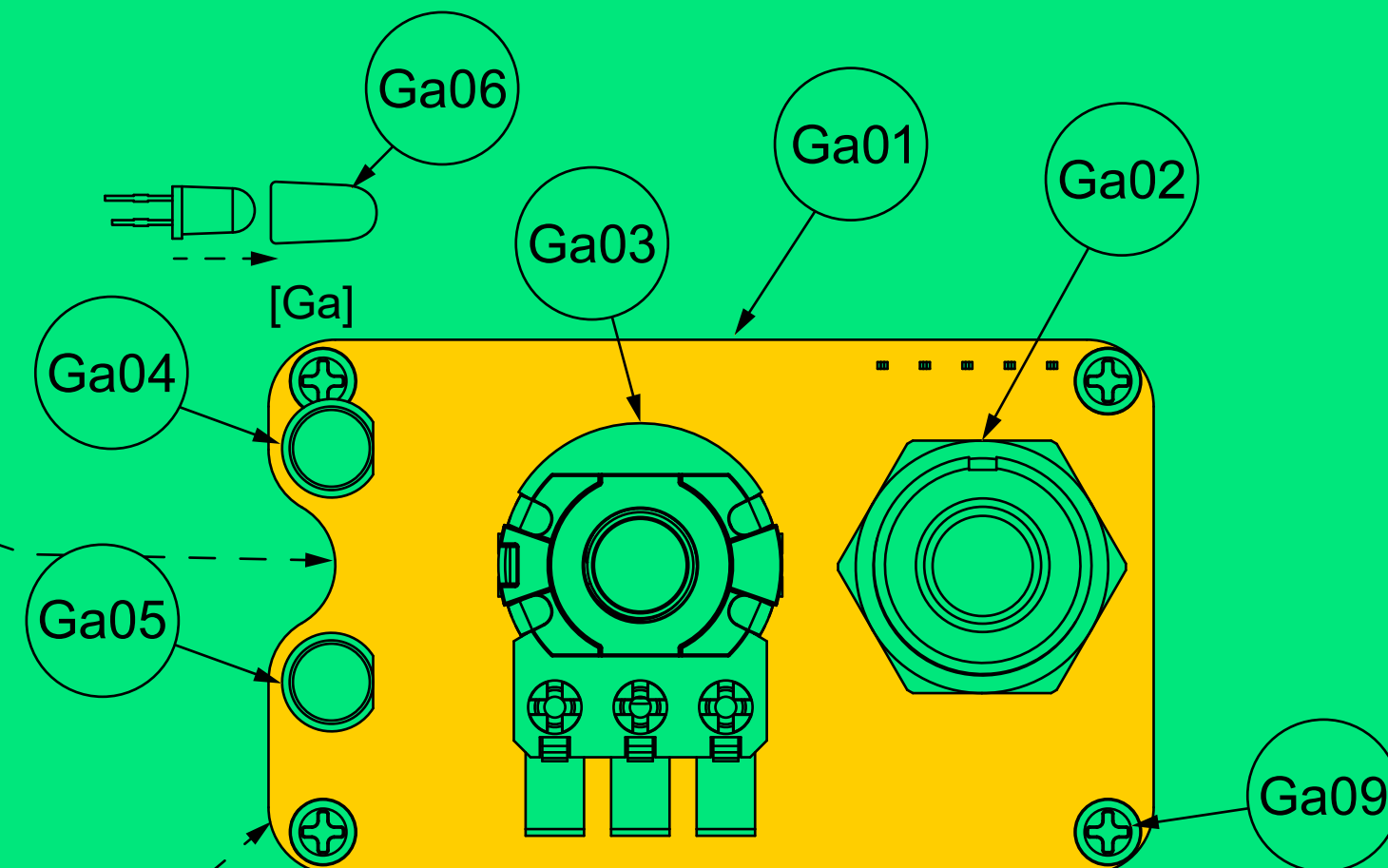
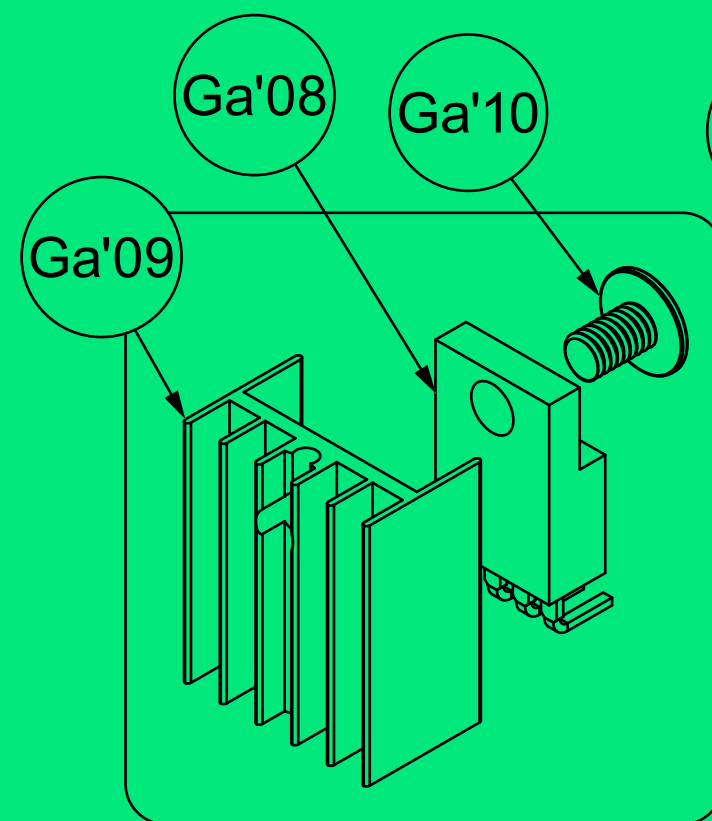


fan controller & switch panel

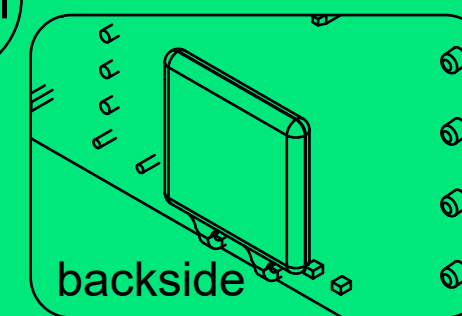
Ga			
Ga01	pcb switch		x1
Ga02	momentary lever switch	MOM-OFF-MOM	x1
Ga03	potentiometer with switch	B500K	x1
Ga04	led 5mm	green	x1
Ga05	led 5mm	blue	x1
Ga06	led rubber cap cover	white	x2
Ga07	pin double low angle	2x4P	x1
Ga08	pin header 2.54mm	5P	x1
Ga09	sclew	M2x4mm	x8
Ga10	hexagon spacer	M2X11mm	x4



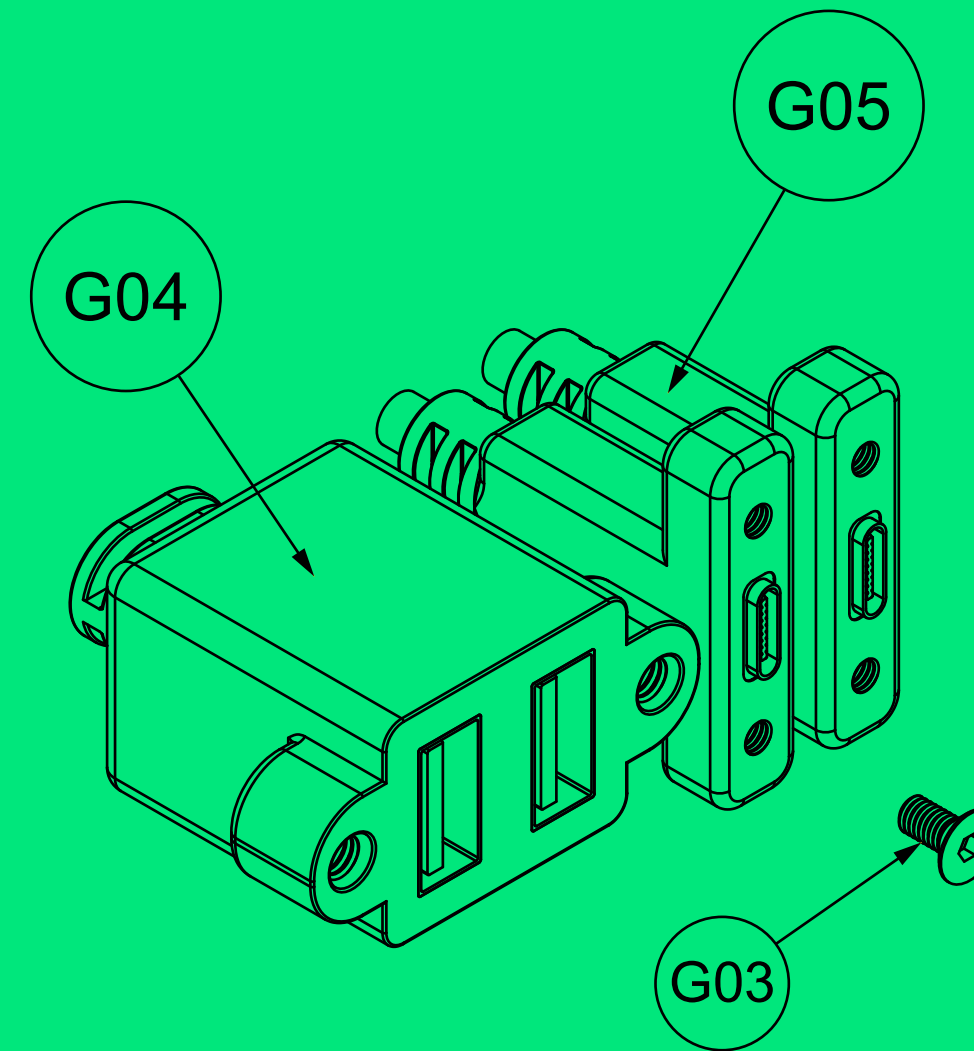
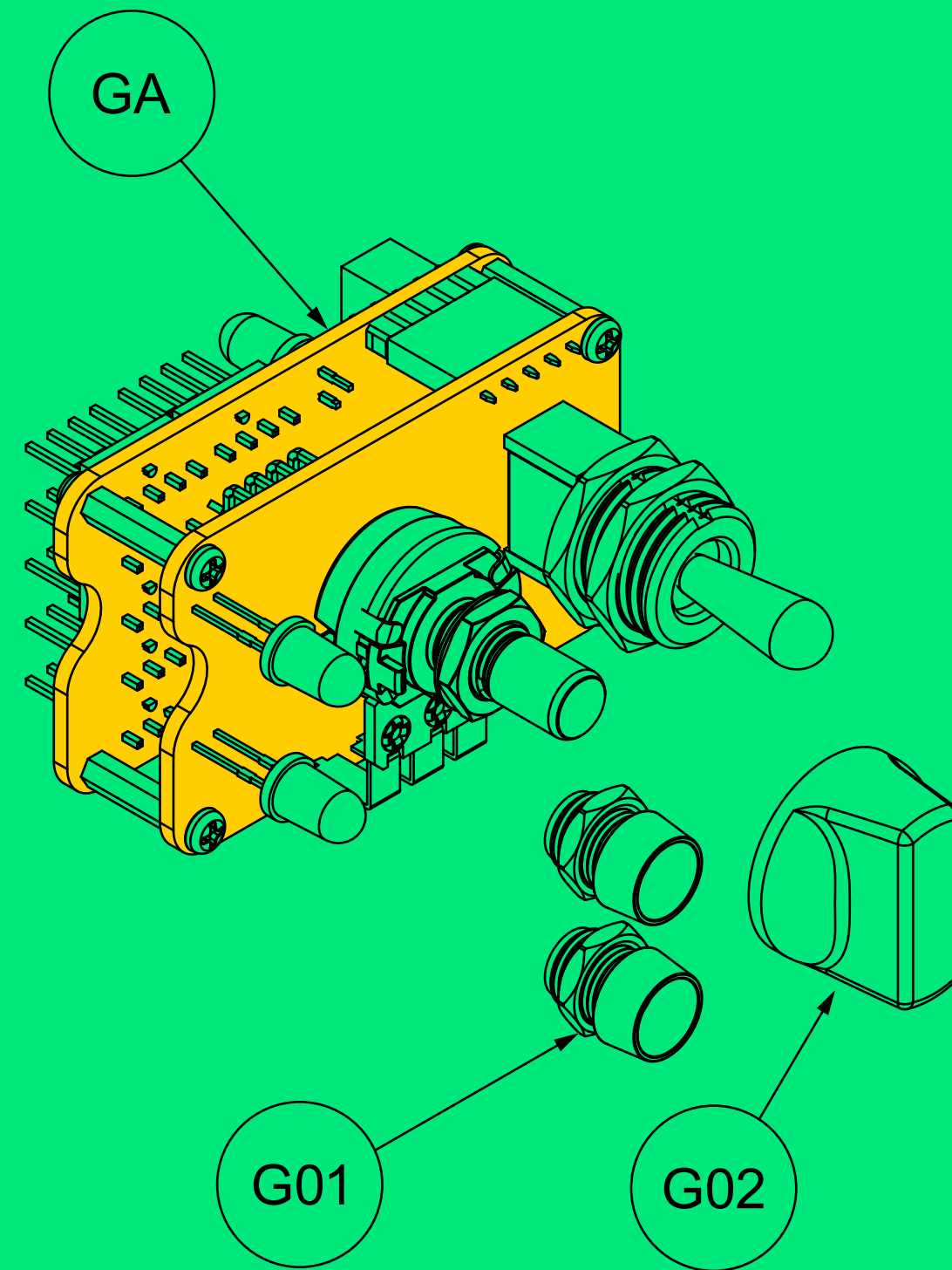
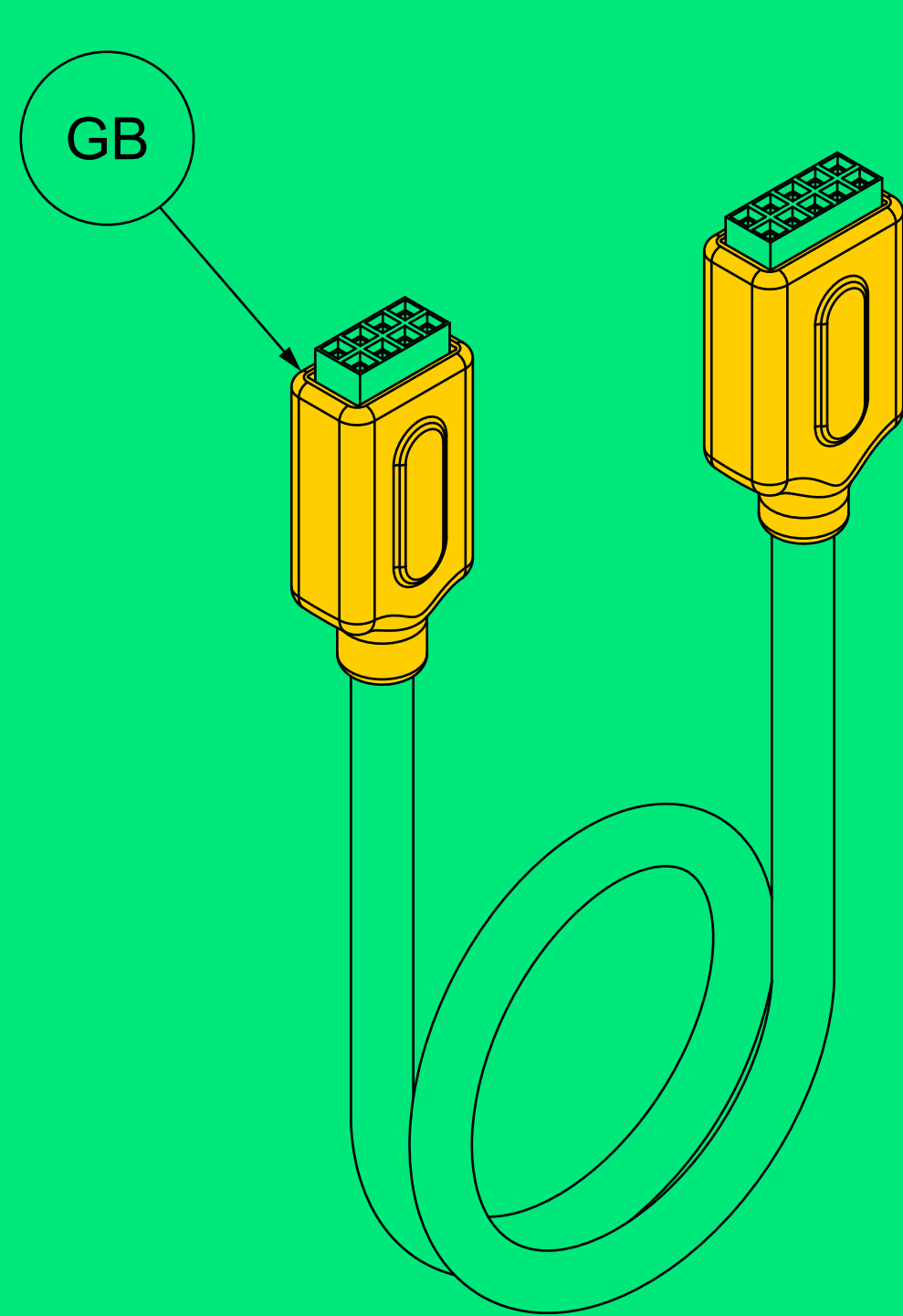
[Ga] backside



Ga'			
Ga'01	pcb fancon		x1
Ga'02	pin socket 2.54mm	5P	x1
Ga'03	power 4pin female	molex	x1
Ga'04	fan connect 4-pin	KF2510 3+1	x6
Ga'05	led 3mm	blue	x1
Ga'06	IC NJM555D		x1
Ga'07	IC soket		x1
Ga'08	mosfet 2SK2232	60V25A	x1
Ga'09	heat sink	15x10x16mm	x1
Ga'10	bolt	m3x6mm	x1
Ga'11	carbon resisto	10k Ω	x2
Ga'12	carbon resisto	470 Ω	x1
Ga'13	capacitor	10 μ F50V	x1
Ga'14	ceramic capacitor	0.1 μ F50V	x2
Ga'15	ceramic capacitor	47 μ F50V	x1
Ga'16	schottky diode	40V3A	x1
Ga'17	diode	1N4148	x1
Ga'18	poly switch	1.6A	x1



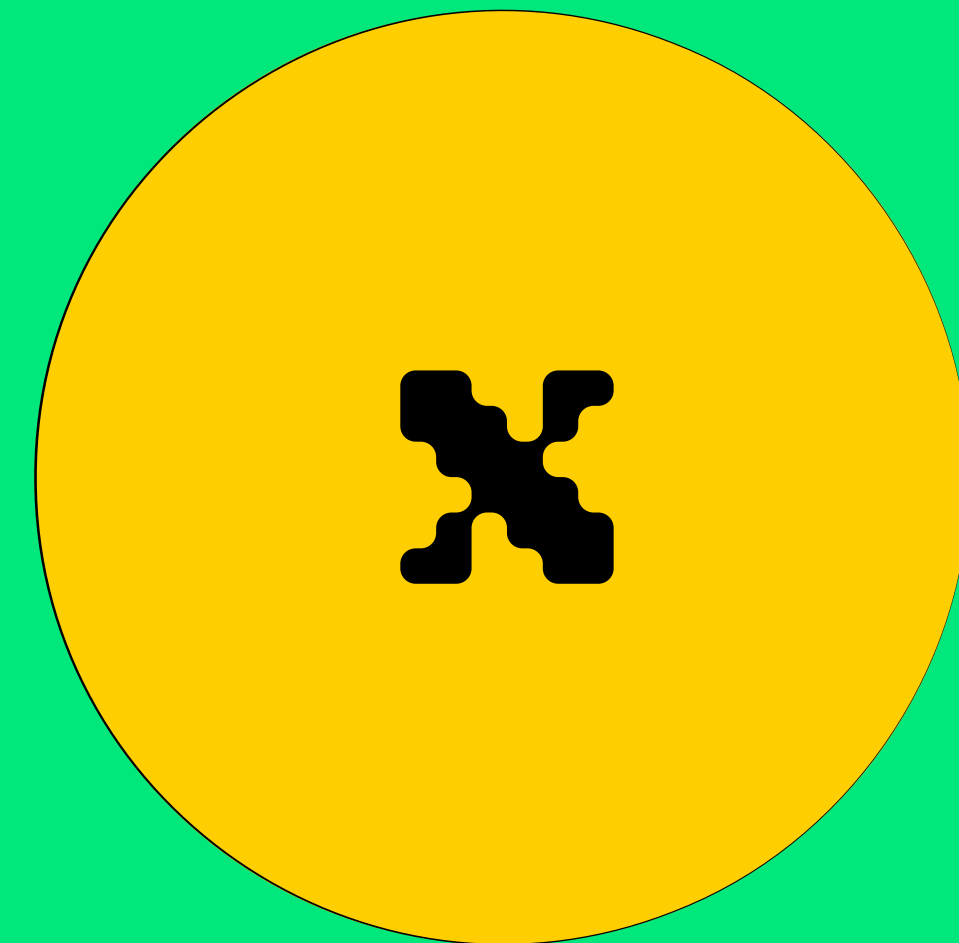
backside

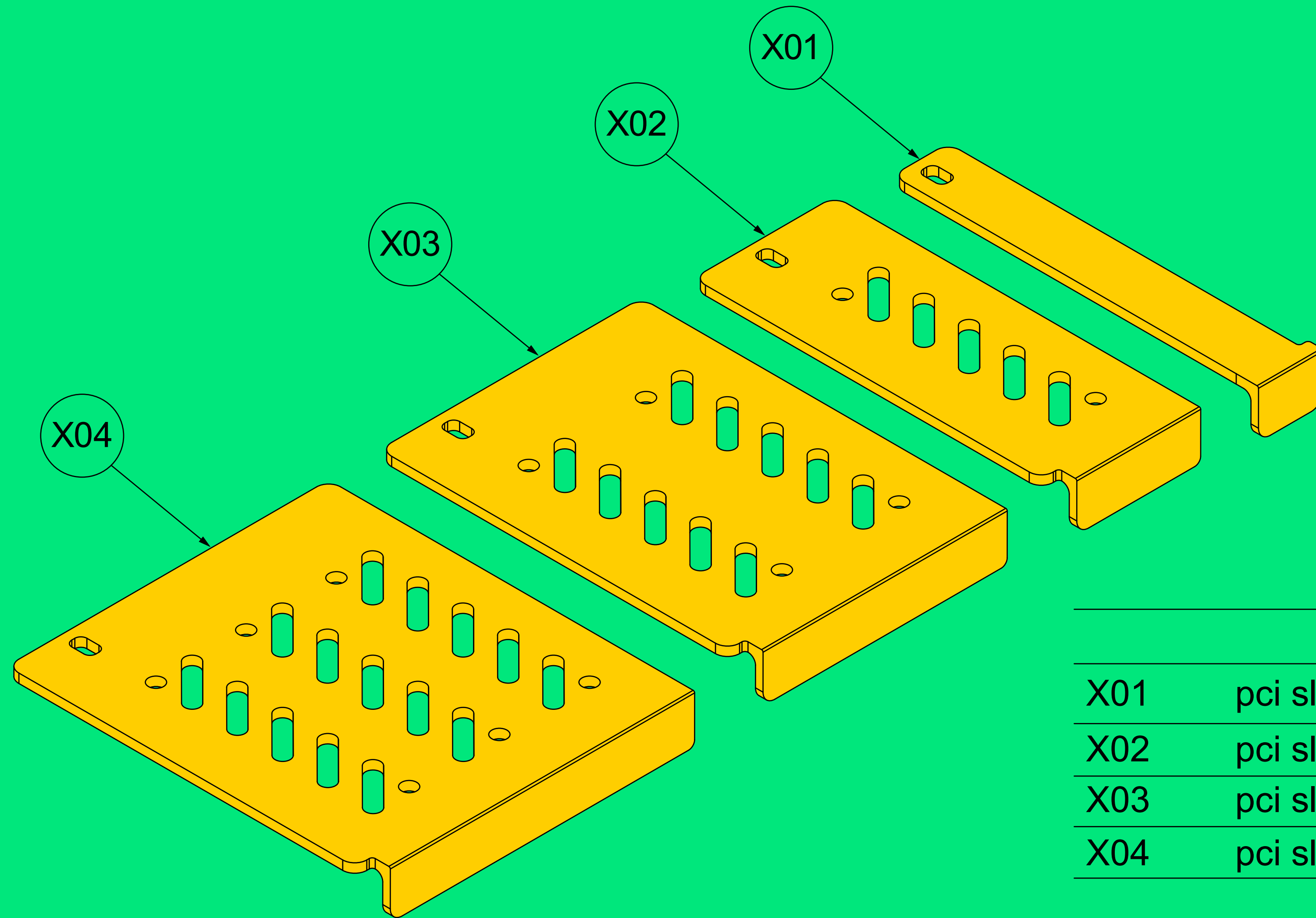


GA	fan controller & switch panel		x1
GB	panel cable		x1
G01	led metal socket	5mm	x2
G02	volume knob		x1
G03	flat head socket cap	M3 8mm	x6
G04	usb 3.0 dual 20pin	50cm	x1
G05	usb 3.1 type-C to type-E	50cm	x2

PARTS LIST AND DETAILS

PCI-COVER



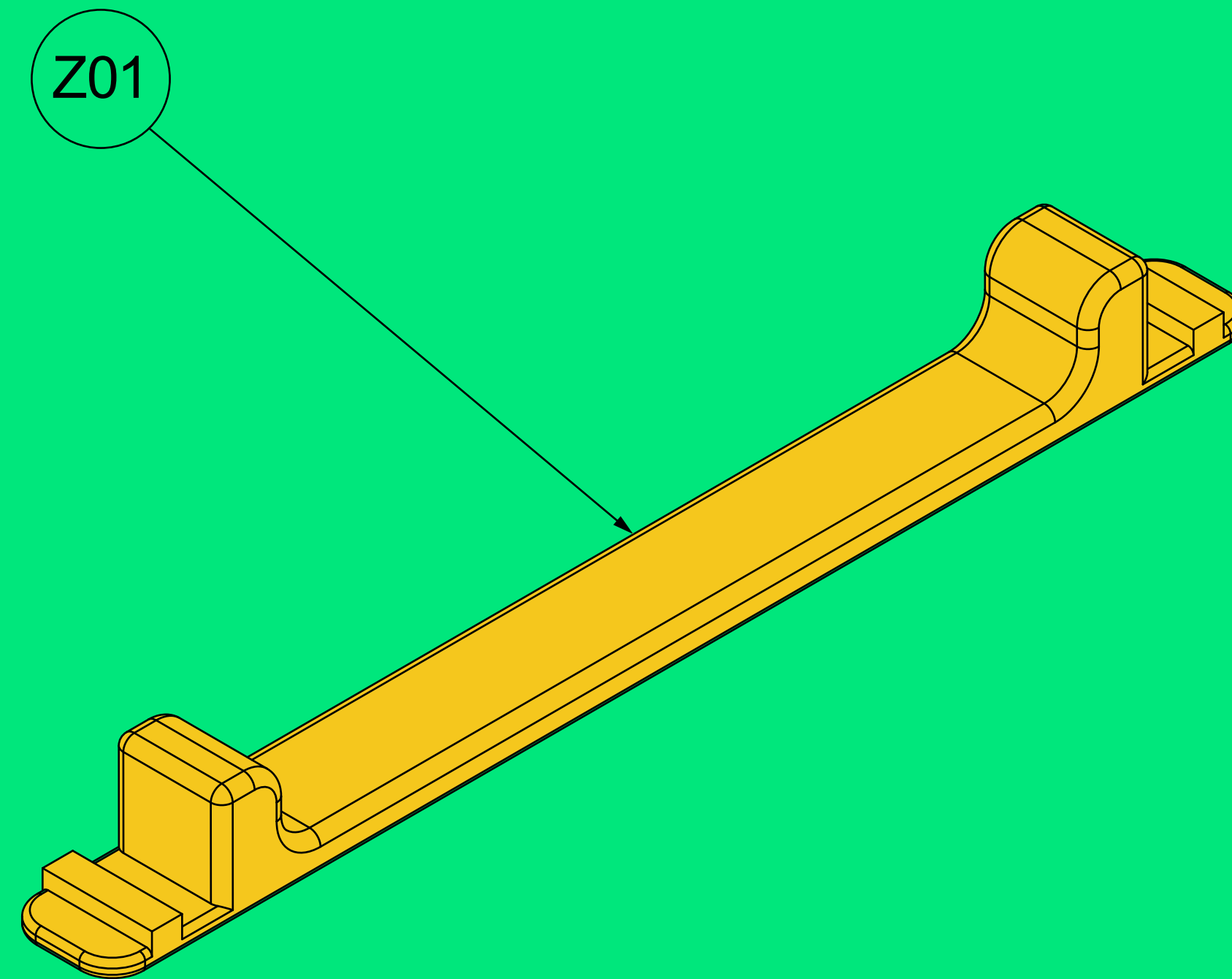


X			
X01	pci slot cover	No.01	x2
X02	pci slot cover	No.02	x1
X03	pci slot cover	No.04	x1
X04	pci slot cover	No.05	x1

PARTS LIST AND DETAILS

TOOL&OTHER

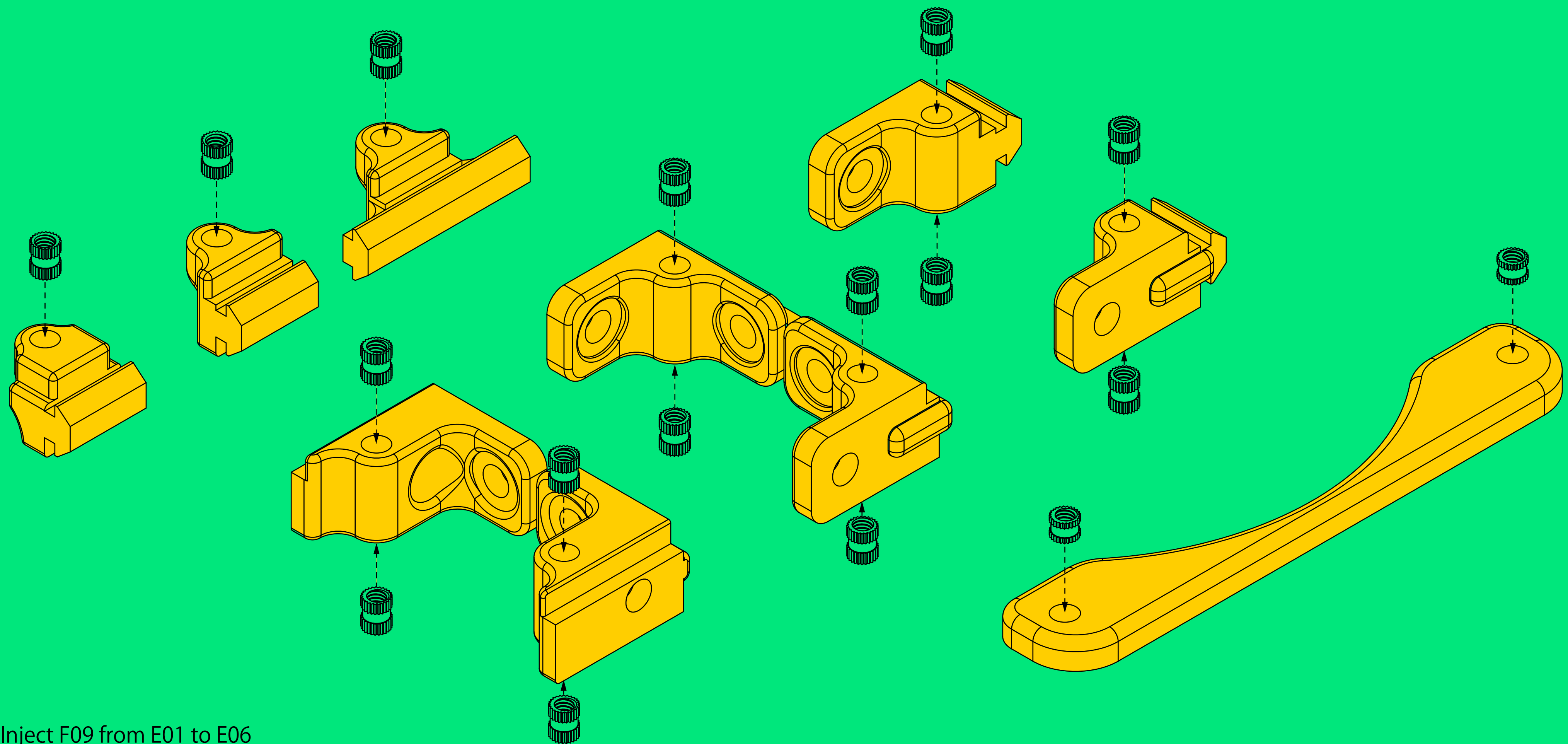
2



These are the parts that support the case when it is assembled. It will not be needed in the end.

PREPARATION FOR ASSEMBLY

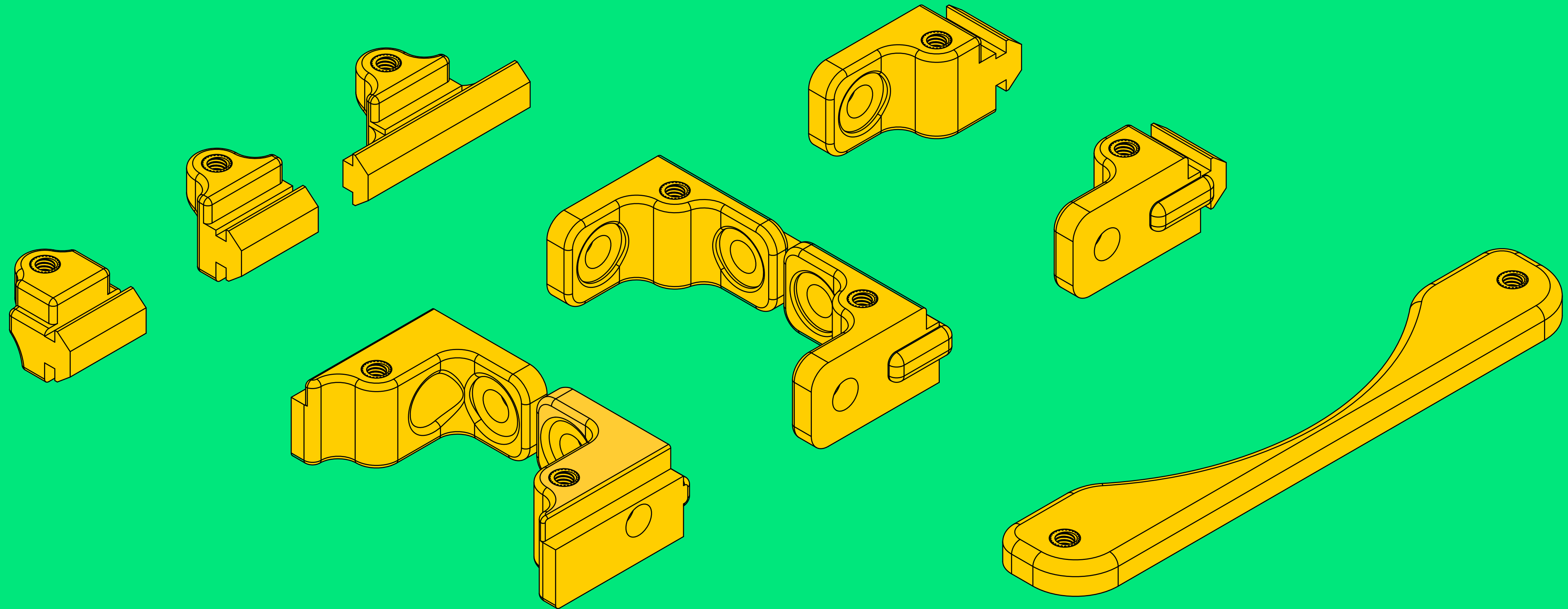


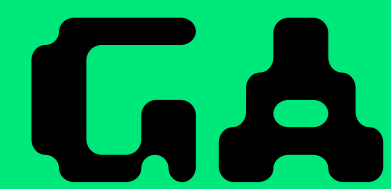


Inject F09 from E01 to E06
 Inject F09 from E09 to E11
 Inject F08 from E20

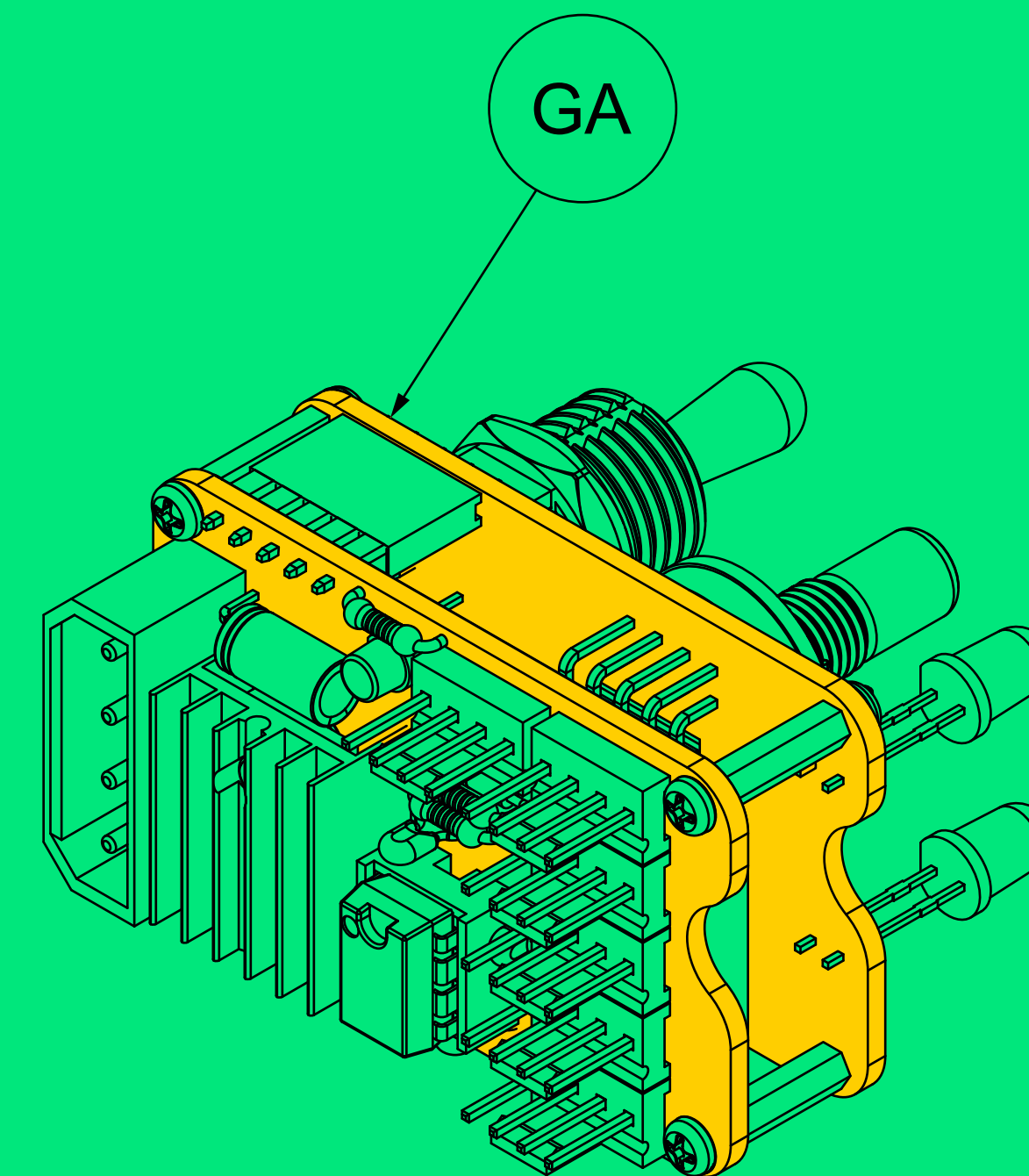
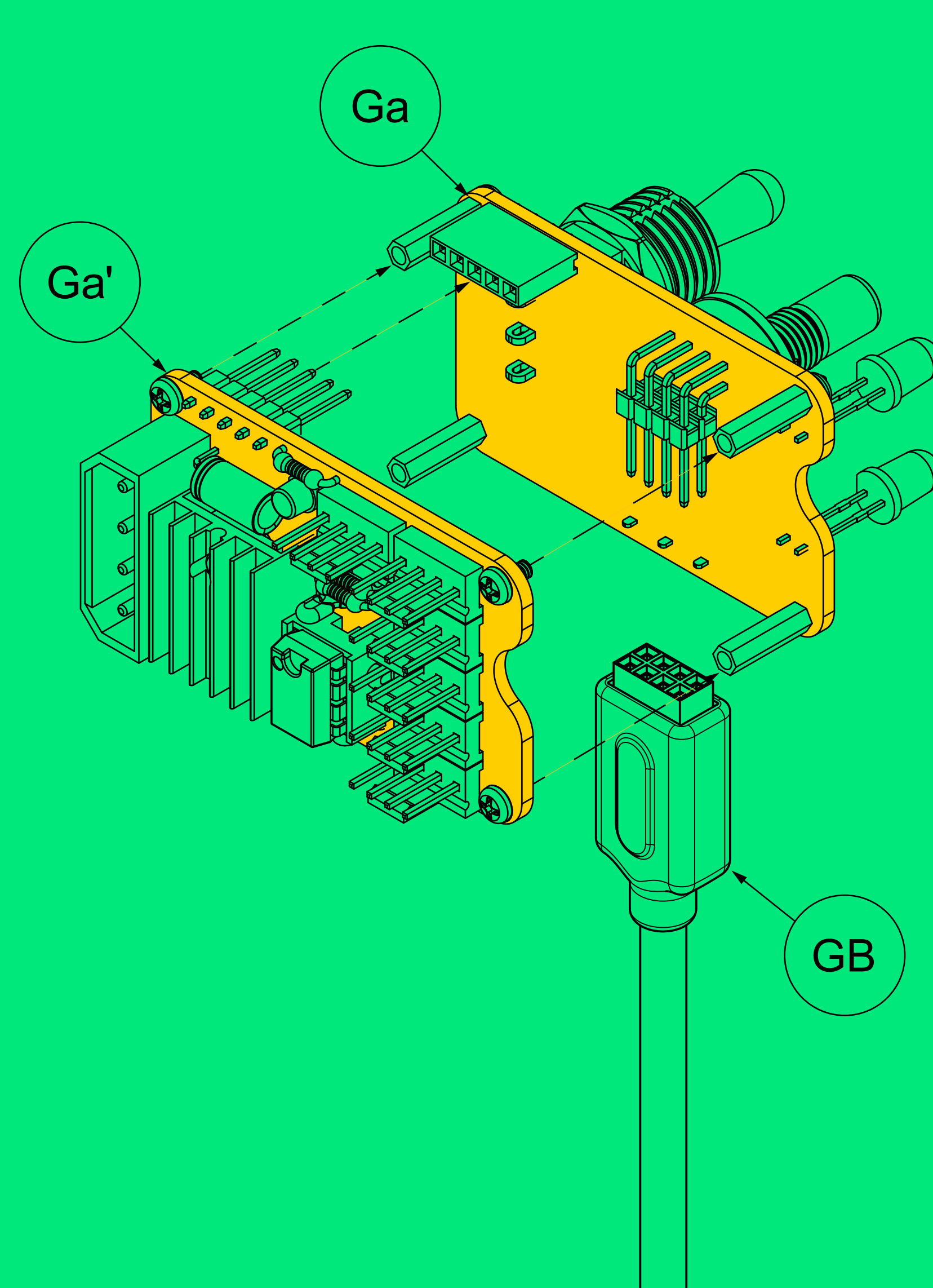
How to embed insert nuts → <https://youtu.be/UWs-cipkLOk?si=y4Sne29TpVYyzob9>

PFA



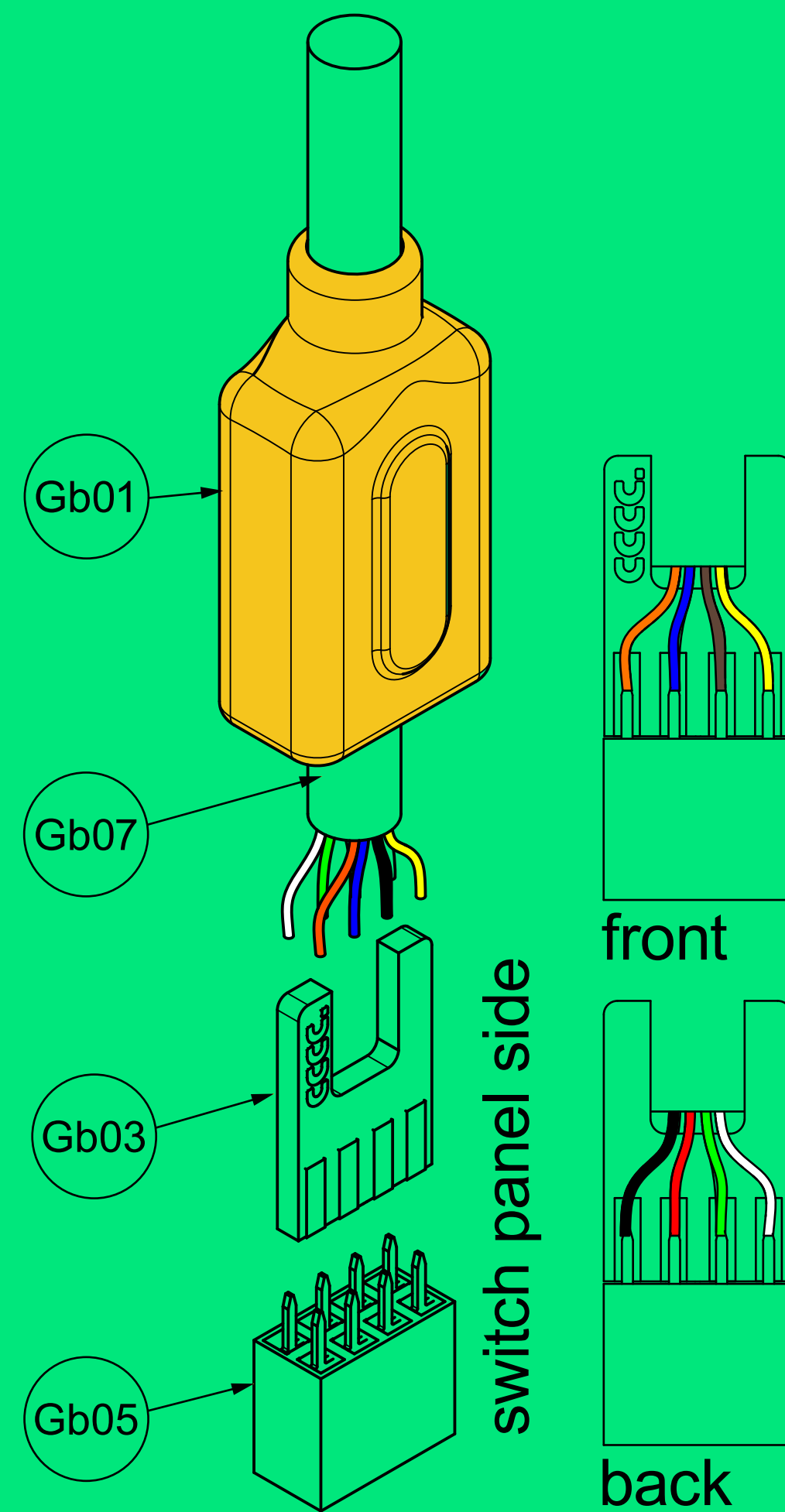
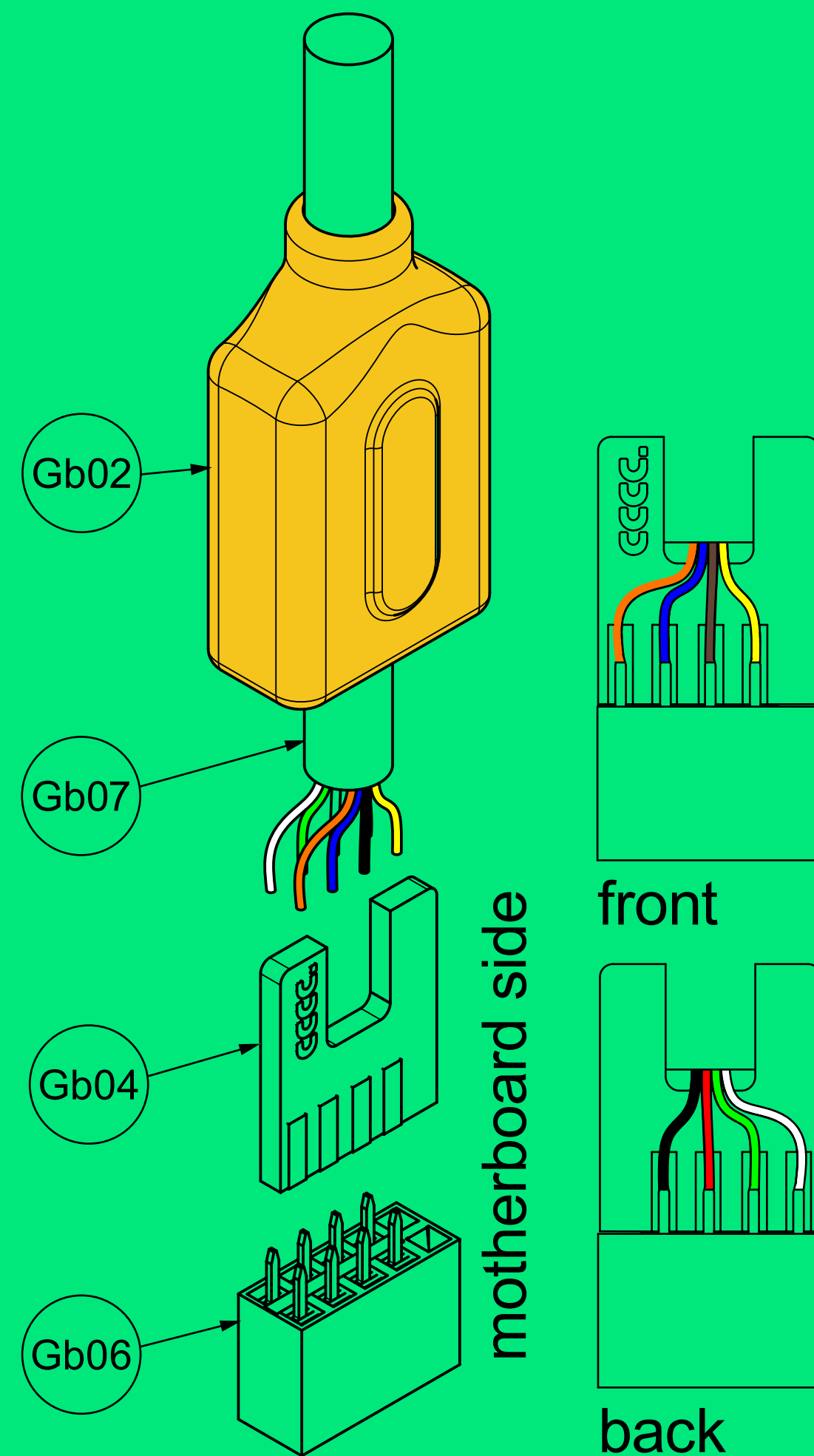


fan controller & switch panel



How to make a fan controller and switch panel manual
https://youtu.be/Q3Vru2_EODU?si=1zYV6ma2-1iHrLv6
<https://youtu.be/WaDV9gSSBks?si=e6xEg-TCmbcfUioN>

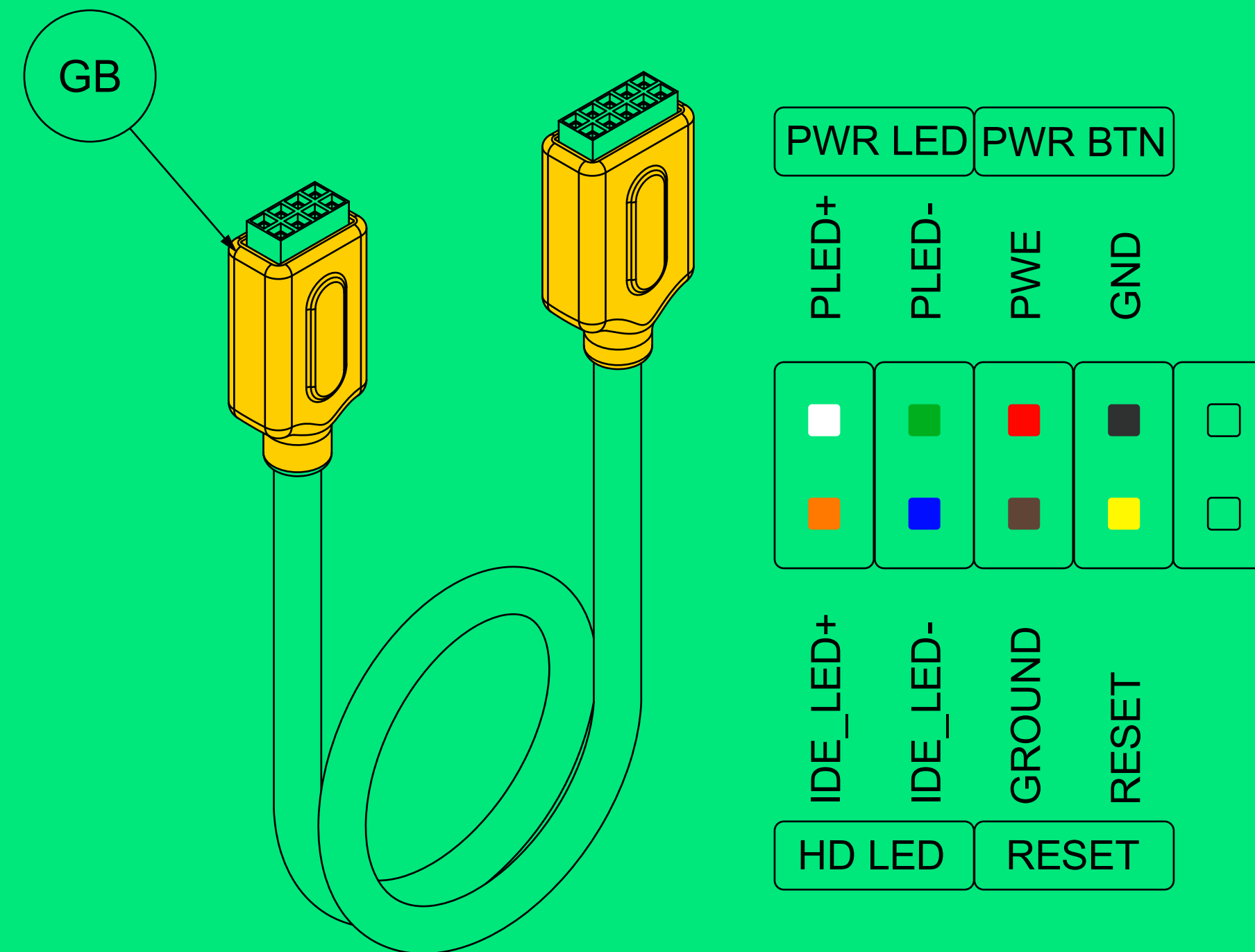
GB panel cable



GB			
Gb01	cable cap	2x4	x1
Gb02	cable cap	2x5	x1
Gb03	pcb cable	2x4	x1
Gb04	pcb cable	2x5	x1
Gb05	pinheader	2x4	x1
Gb06	pinheader	2x5	x1
Gb07	cabel white 8 cores	60cm	x1



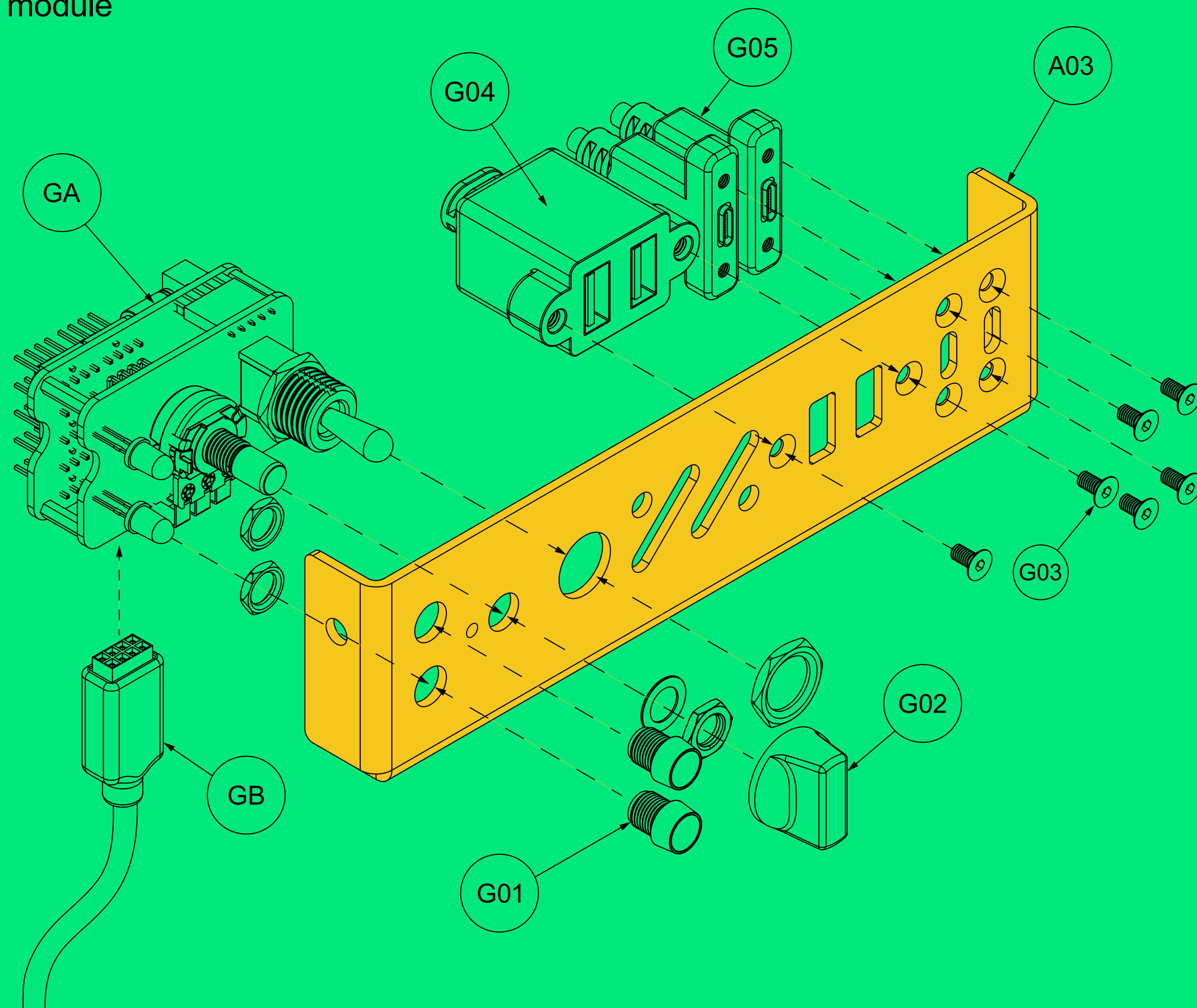
PCB wiring for panel cables



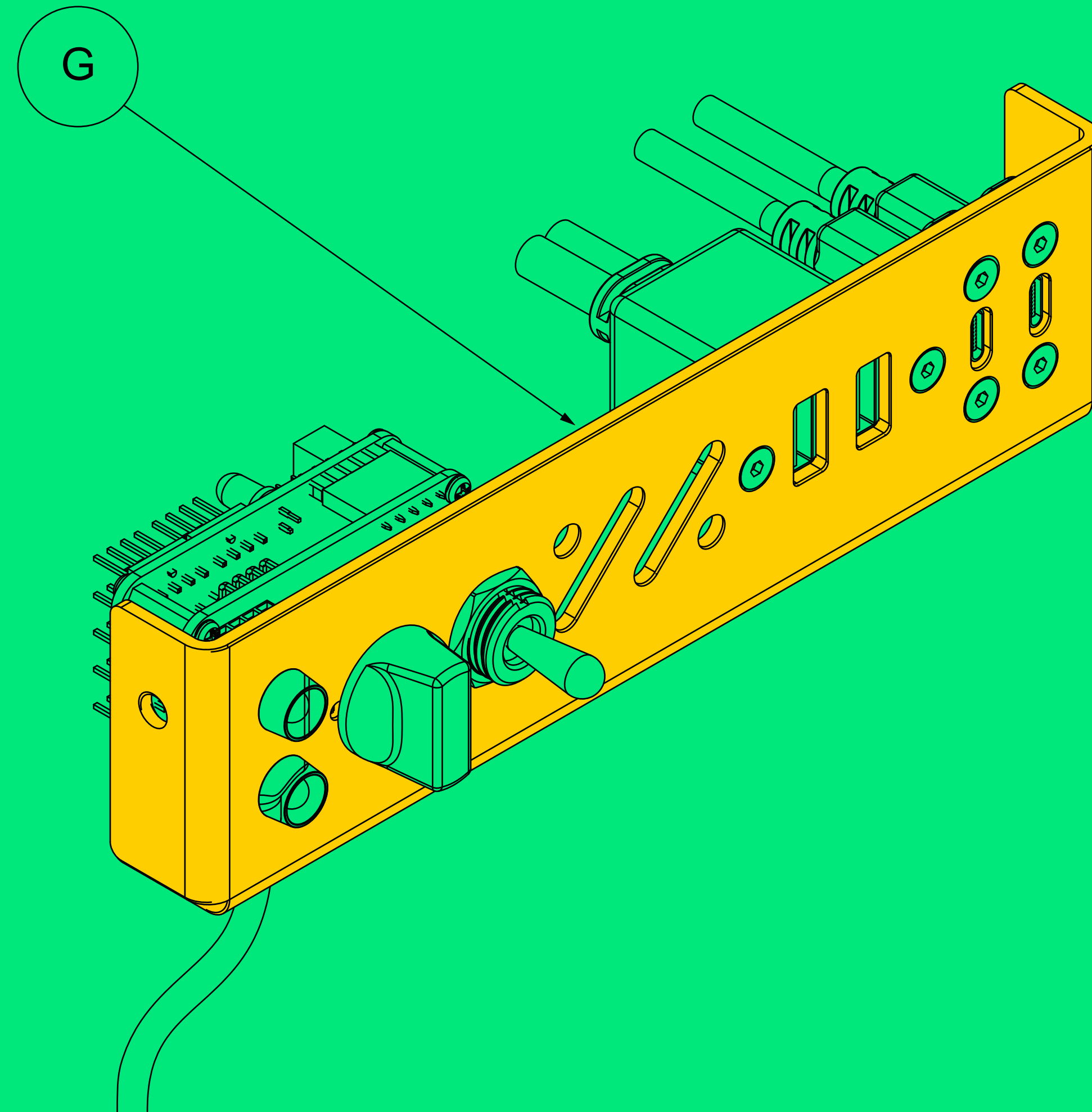
How to Make the Cable

https://youtu.be/u-7gPXjtCM4?si=_k_rrtYj7tgF8jGl

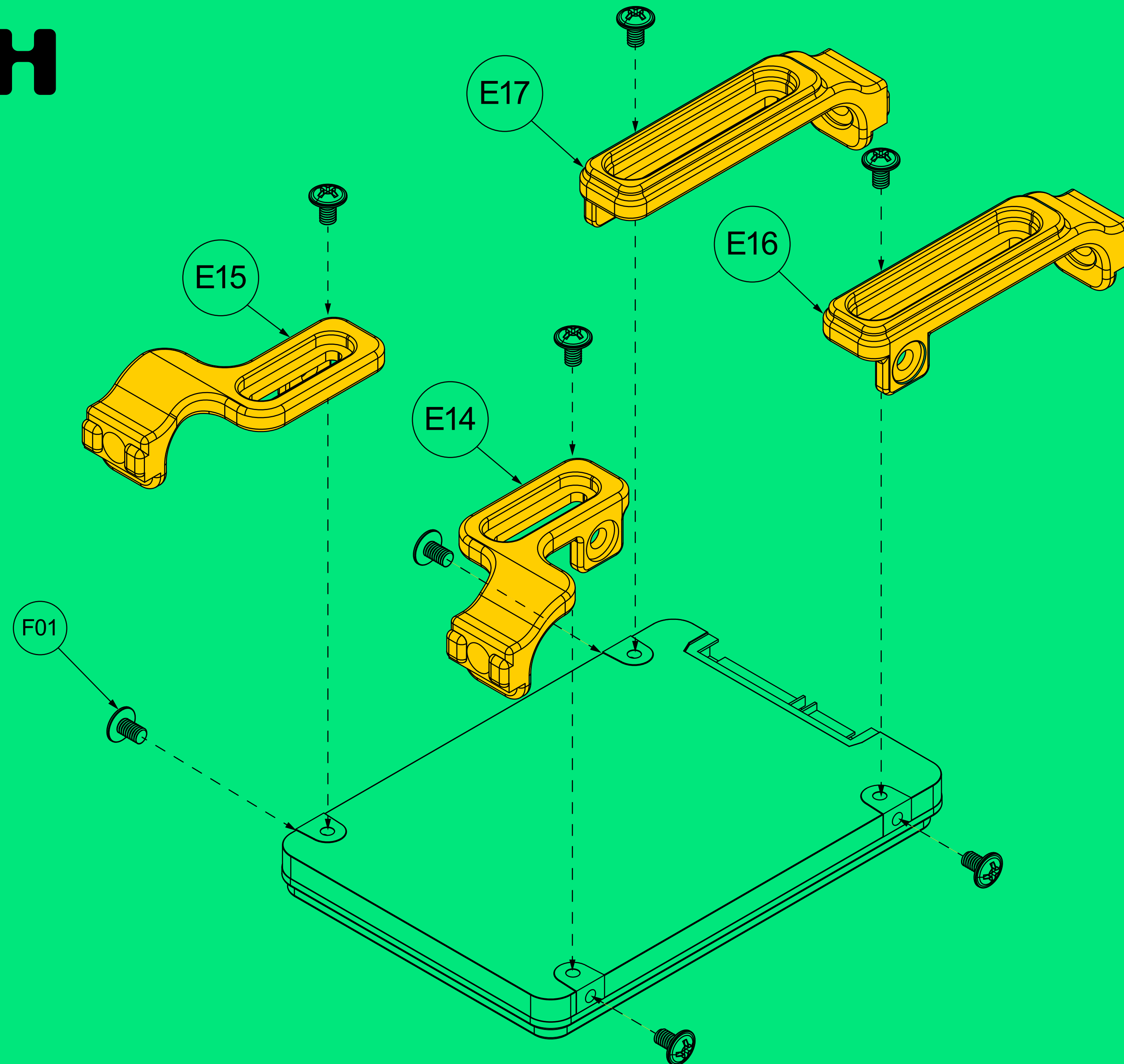
switch panel module



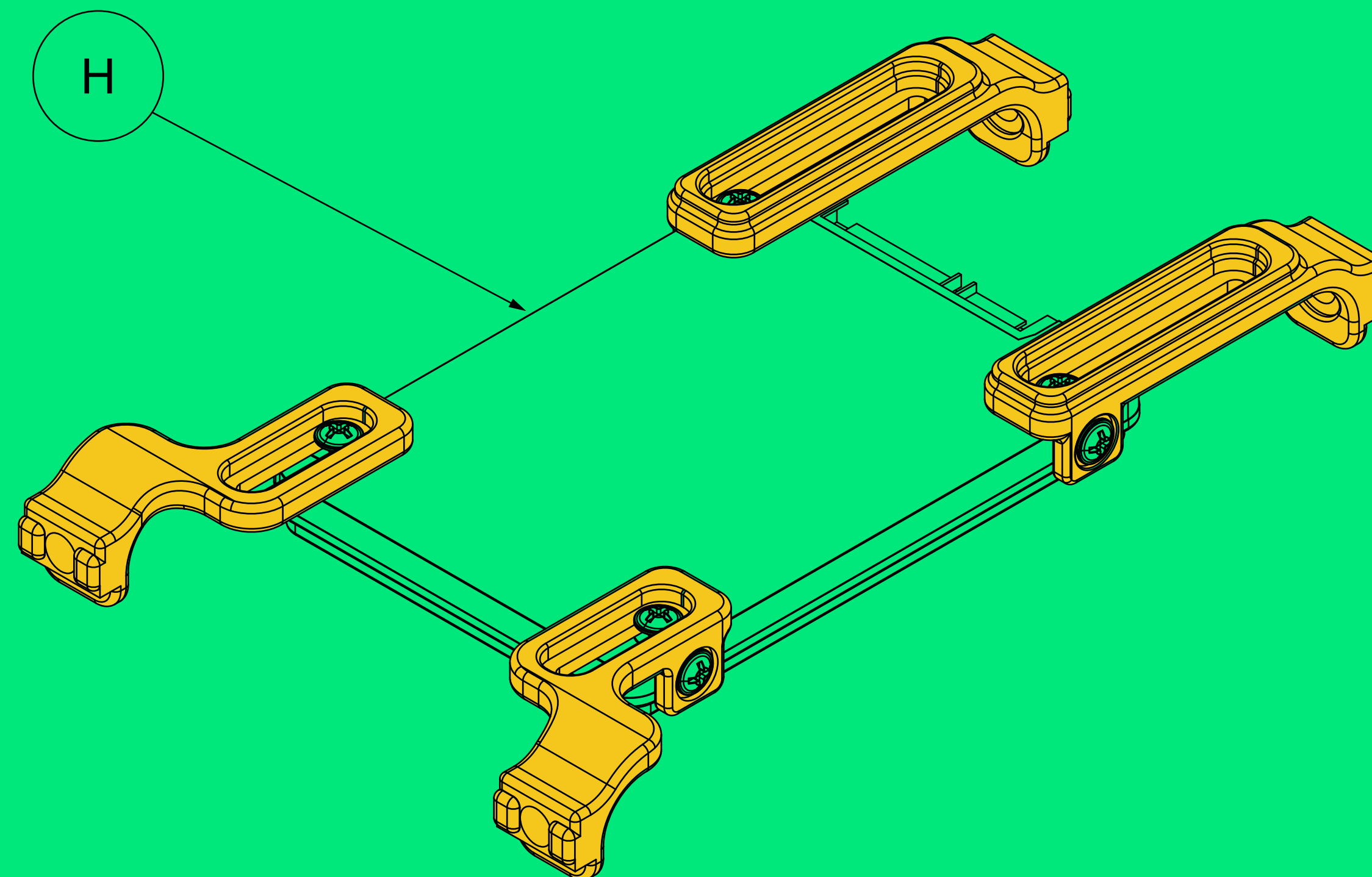
PFA-G



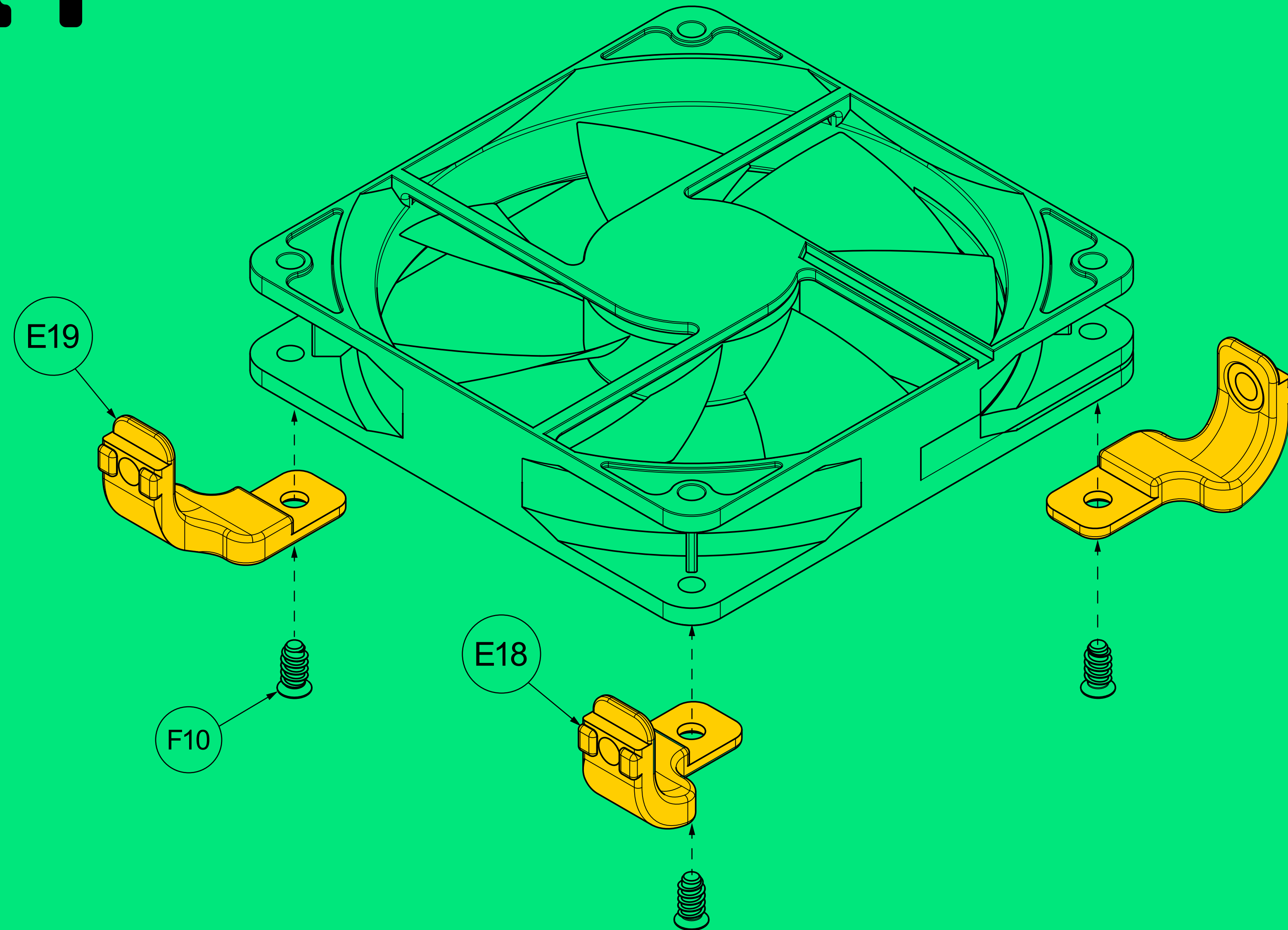
PFA-H



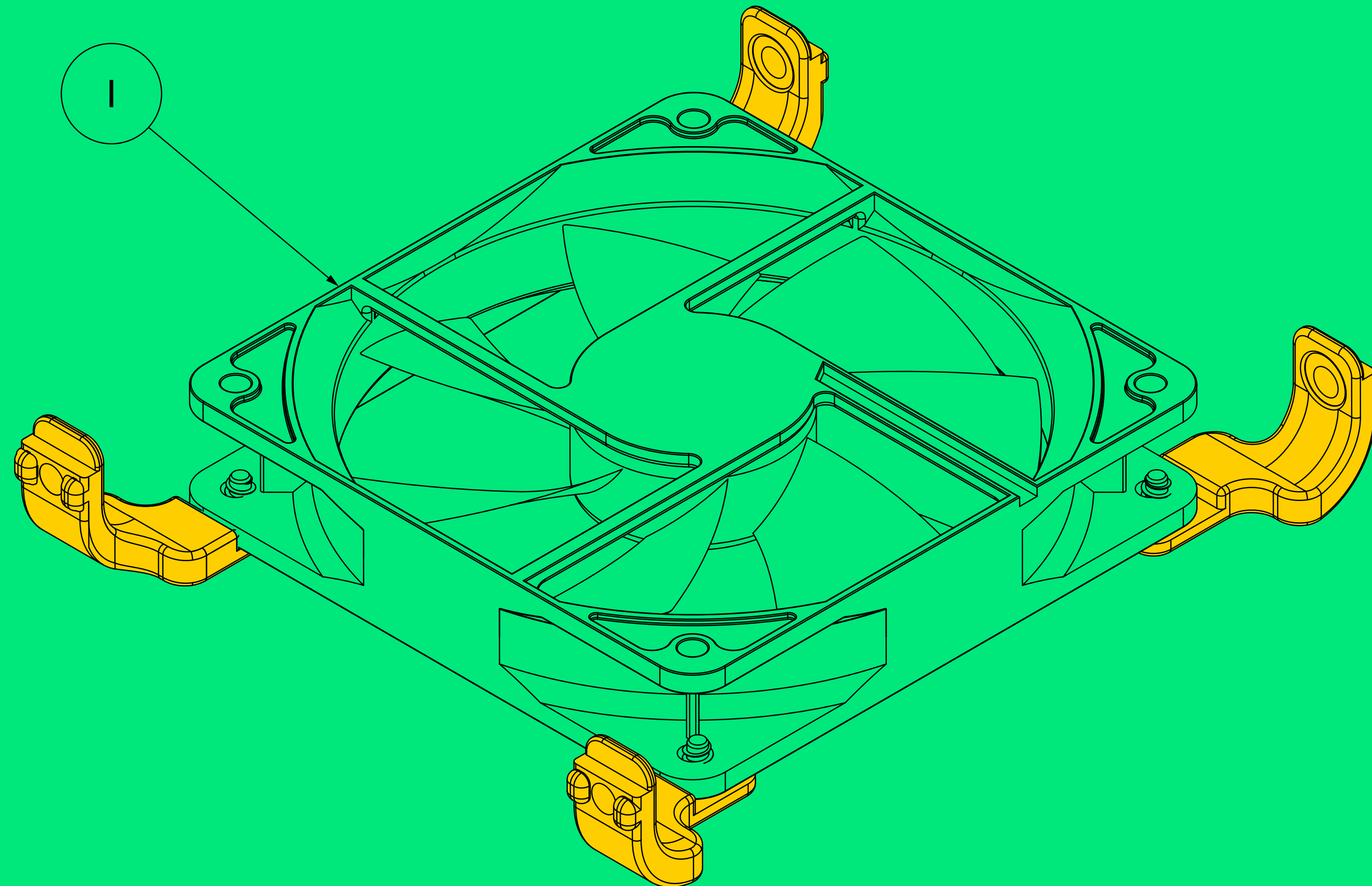
PFA-H



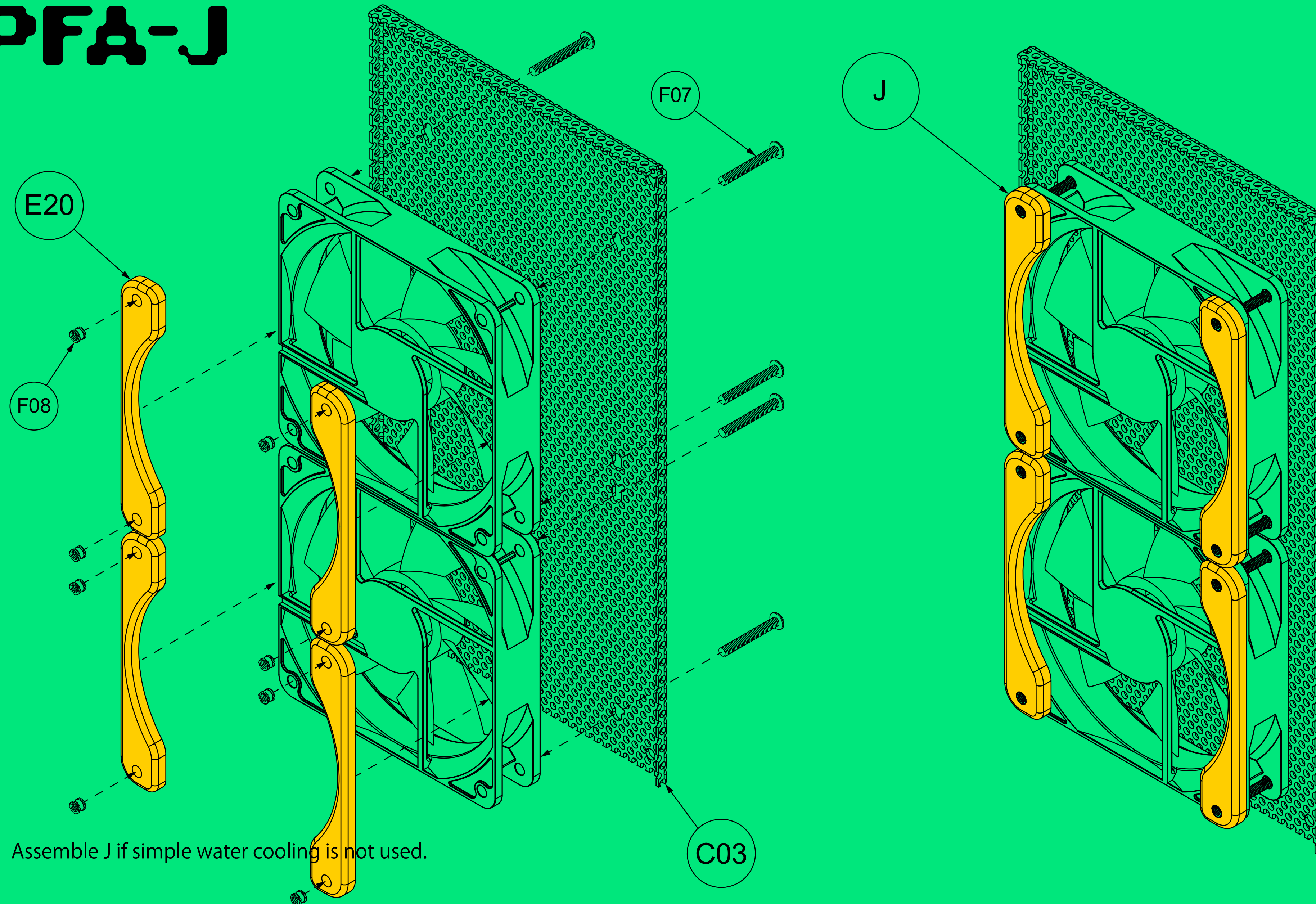
PFA-1

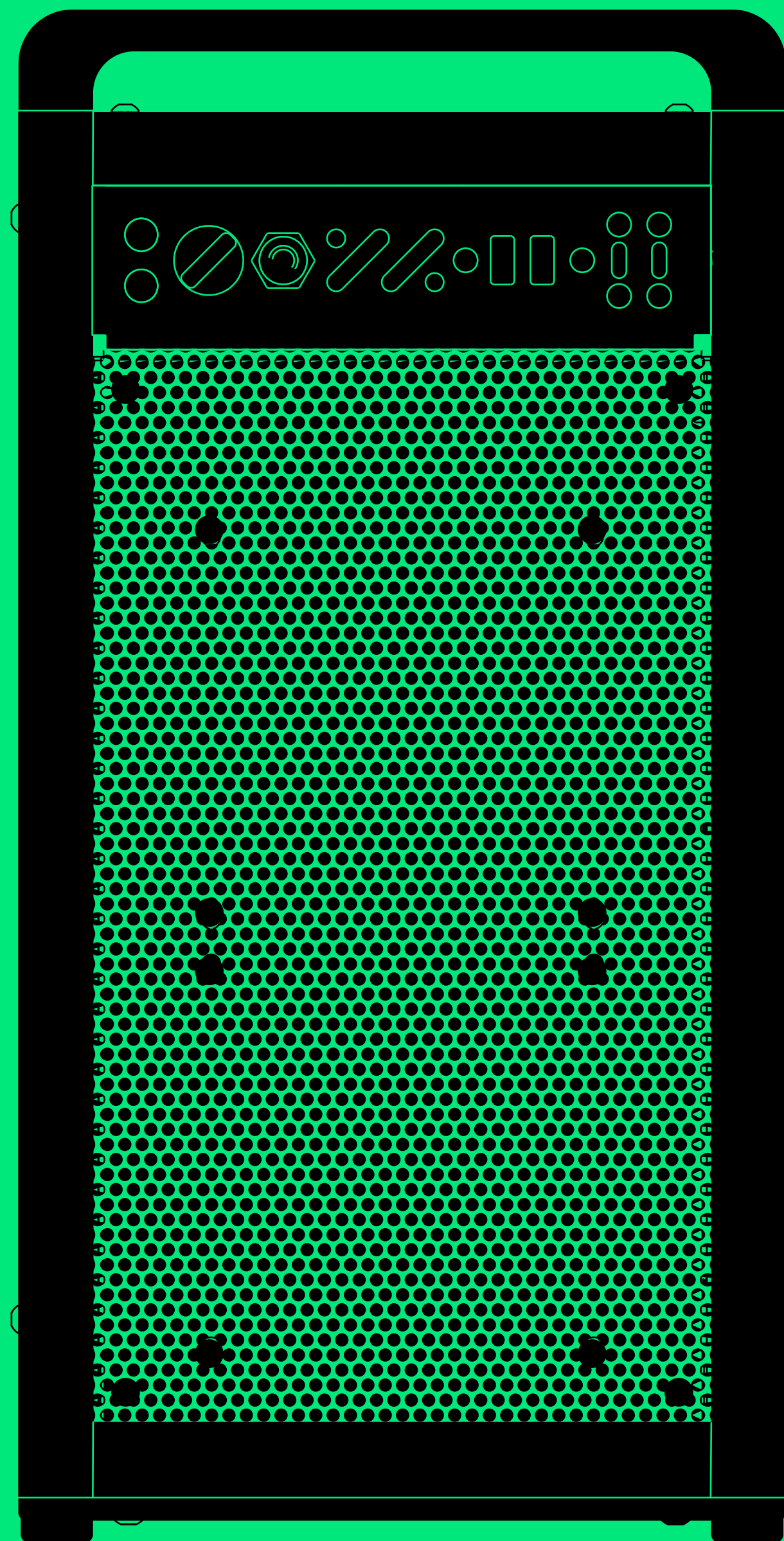


PFA-1



PFA-J





NOW
WE ARE
READY.
NOW
IT'S
TIME
TO
GET
TO
WORK.

