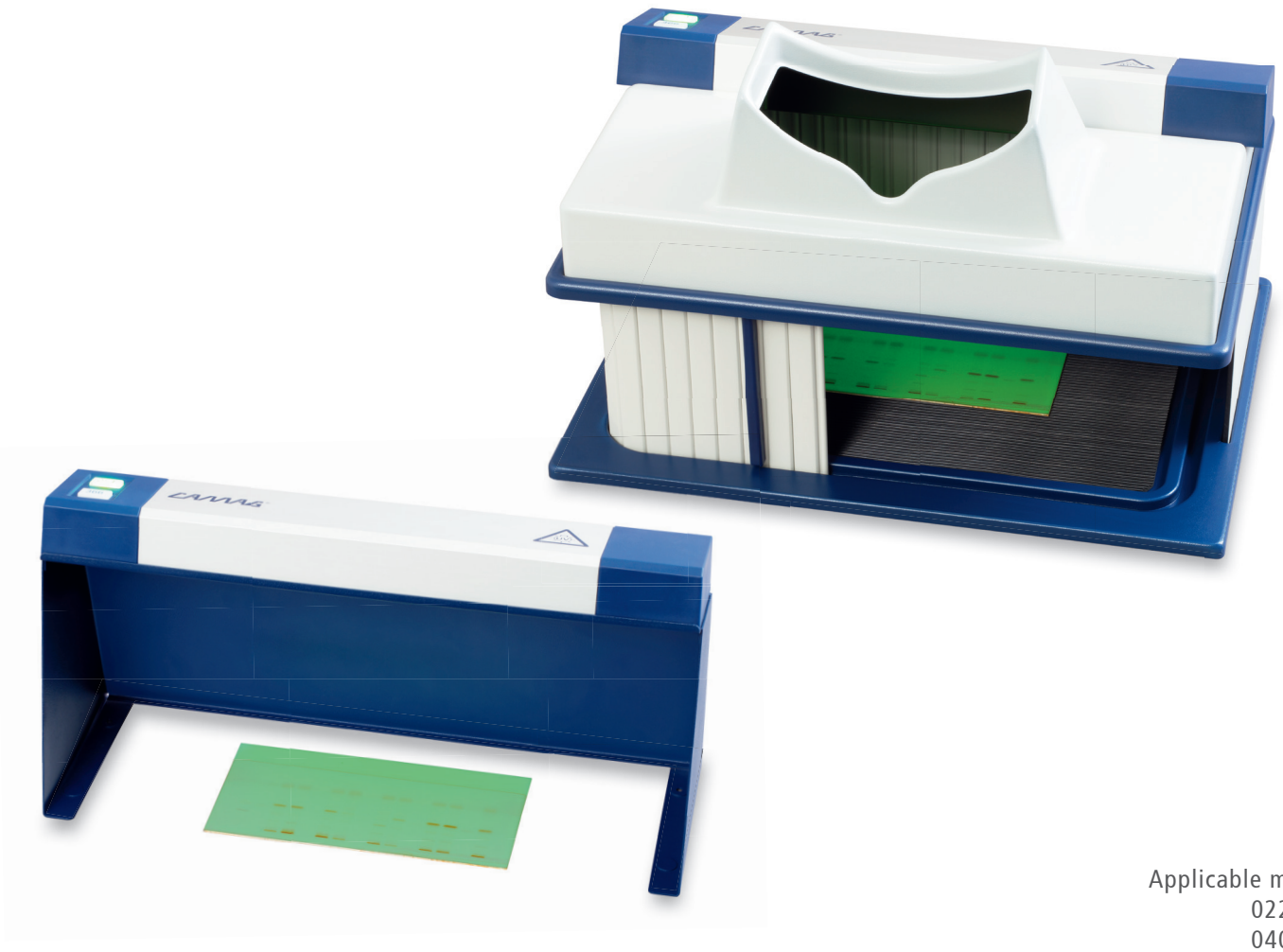
CAMAG®



Applicable models:
022.9160
040.2000

Service Manual
CAMAG UV Lamp 4
CAMAG UV Cabinet 4

Zertifiziertes Managementsystem SQS ISO 9001

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1 Introduction

The UV lamp 4 can be used as stand alone or in combination with the UV Cabinet 4 or the UV Stand 4.

The CAMAG UV Lamp 4 is designed for use in the TLC laboratory. It is likewise suitable for many other applications such as checking authenticity of documents, banknotes, to identify invisibly labelled objects in criminology, for mineralogical investigations and much more.

1.1 Precaution

The CAMAG UV lamp is connected to an isolated voltage source. It is designed for indoor applications (IP20).



Attention

- *Before using the lamp for the first time check that the voltage indicated on the mains adapter supplied matches that of your local mains outlet*
- *The lamp must not be used in rooms where there is an explosion hazard*
- *Before opening the lamp, as for example to replace a burnt out tube, you must first remove the power cable. It is forbidden to work with an opened lamp that is under voltage. Always follow the instructions given in the maintenance section of this manual*



- *When working with short-wave UV light never look directly into the source of radiation. Use adequate protection equipment to protect your eyes . Failure to observe this precaution will inevitably result in irritation and inflammation of the eyes. See section “Radiation intensities of the UV lamps:” in this manual*



- *Use adequate protection equipment to protect your skin. Prolonged exposure of skin to UV light can lead to irritation and skin damage. See section “Radiation intensities of the UV lamps:” in this manual*
- *Children and uninstructed adults are not allowed to use the lamp*
- *Use only original accessories and spare parts*



- *This symbol indicates that this equipment must not be disposed as unsorted municipal waste but is to be collected separately as electrical and electronic equipment (WEEE-Directive 2002/96/EC). To correctly recycle the instrument or parts of it you are requested to send the equipment back to the distributor, producer or an adequate collection system at the end of its life. This will have potential effects on the environment and human health.*

1.2 Parts supplied

UV Lamp

Part no	Description
022.9160	UV Lamp 4 (1 x UV 254 nm & 1 x UV 366 nm, each 8W)
372.0030	Switching Power Supply
	AC Power Cord
B.022.9160E	Instruction Manual

Table 1

UV Cabinet 4

Part no	Description
022.9060	UV Cabinet 4

Table 2

Stand for UV Lamp 4

Part no	Description
022.9165	Stand for UV Lamp 4

Table 3

1.3 Spare Parts (for user)

Part no	Description
352.0010	UV tube short-wave (254 nm) 8W, d=16mm, l=288mm
352.0011	UV tube long-wave (366 nm) 8W, d=16mm, l=288mm
692.0050	UV filter for UV Lamp

Table 4

2 The UV Lamp operation

2.1 Operation

The lamp is switched on/off with the corresponding (254/366) button.

The 10min timer can be disabled by pressing the button for more than 3 seconds. (Button LED is blinking)

Lamp	Button
UV C (254 nm) / Timer active	press button 254 (t ≤ 3 sec)
UV C (254 nm) / Timer off	press button 254 (t > 3 sec)
UV A (366 nm) / Timer active	press button 366 (t ≤ 3 sec)
UV A (366 nm) / Timer off	press button 366 (t > 3 sec)

Table 5

3 Preventive maintenance

3.1 User maintenance

Regular user maintenance is mandatory to receive correct, reproducible and comparable results.

User maintenance includes the following steps:

- Cleaning the cabinet and lamp with a lint free cloth
- Cleaning the viewing compartment

4 Troubleshooting

4.1 Safety Mode

The Lamp has a built in safety mode which is active when either the lamp is tilted more than 30° or when the lamp temperature reaches a certain limit.

It is indicated by blinking of the green or blue LED depending on the active tube.

The Safety Mode will be deactivated as soon as the normal operating conditions are met again.

4.2 Error Mode

The Lamp has a built in error mode which is active when either an over current or an over temperature is detected. It is indicated by alternating blinking of the green and blue LED.

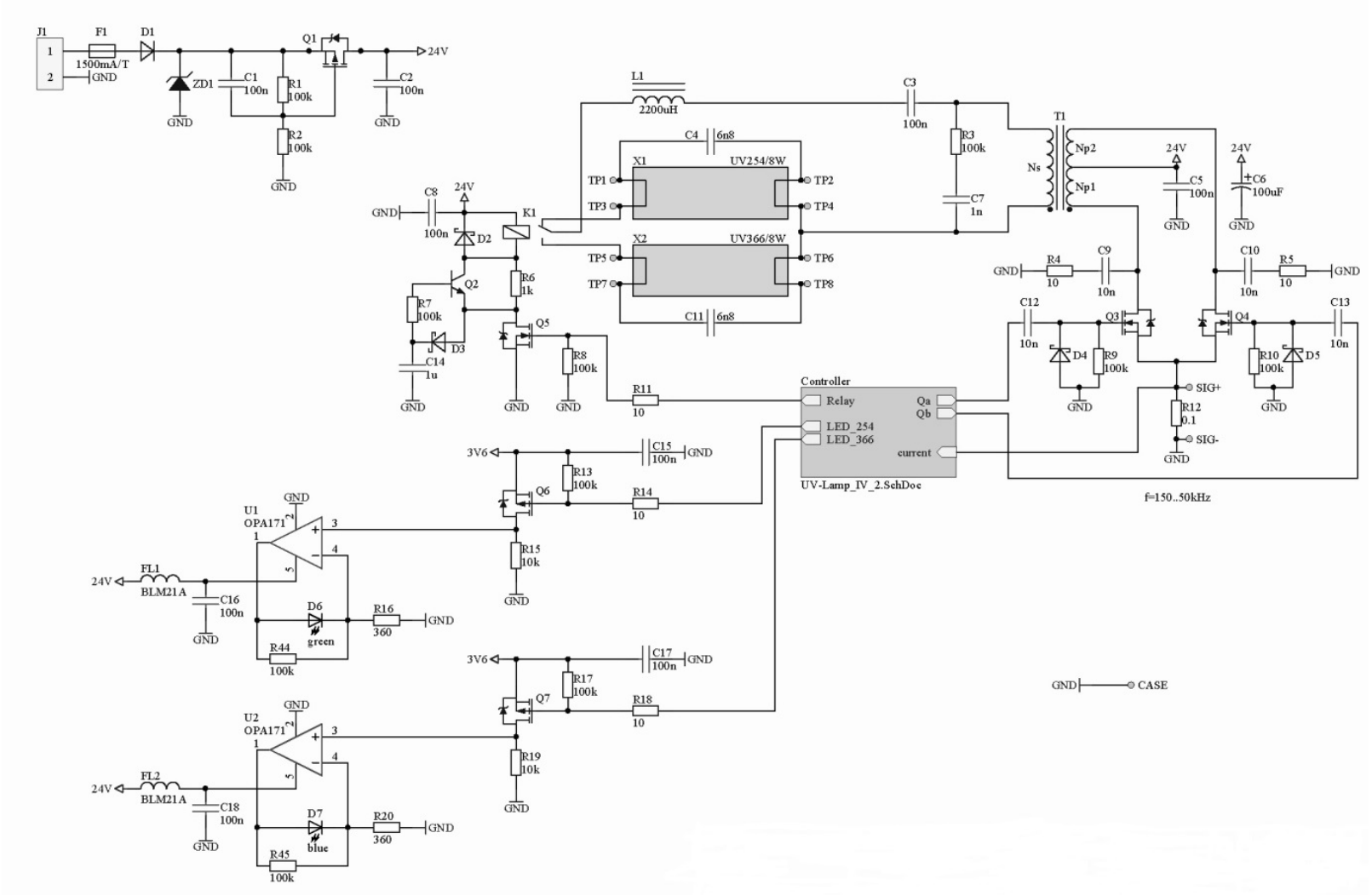
The Error Mode will be deactivated by simultaneously pressing the 254 nm and 366 nm button or a power on reset.

5 Modifications

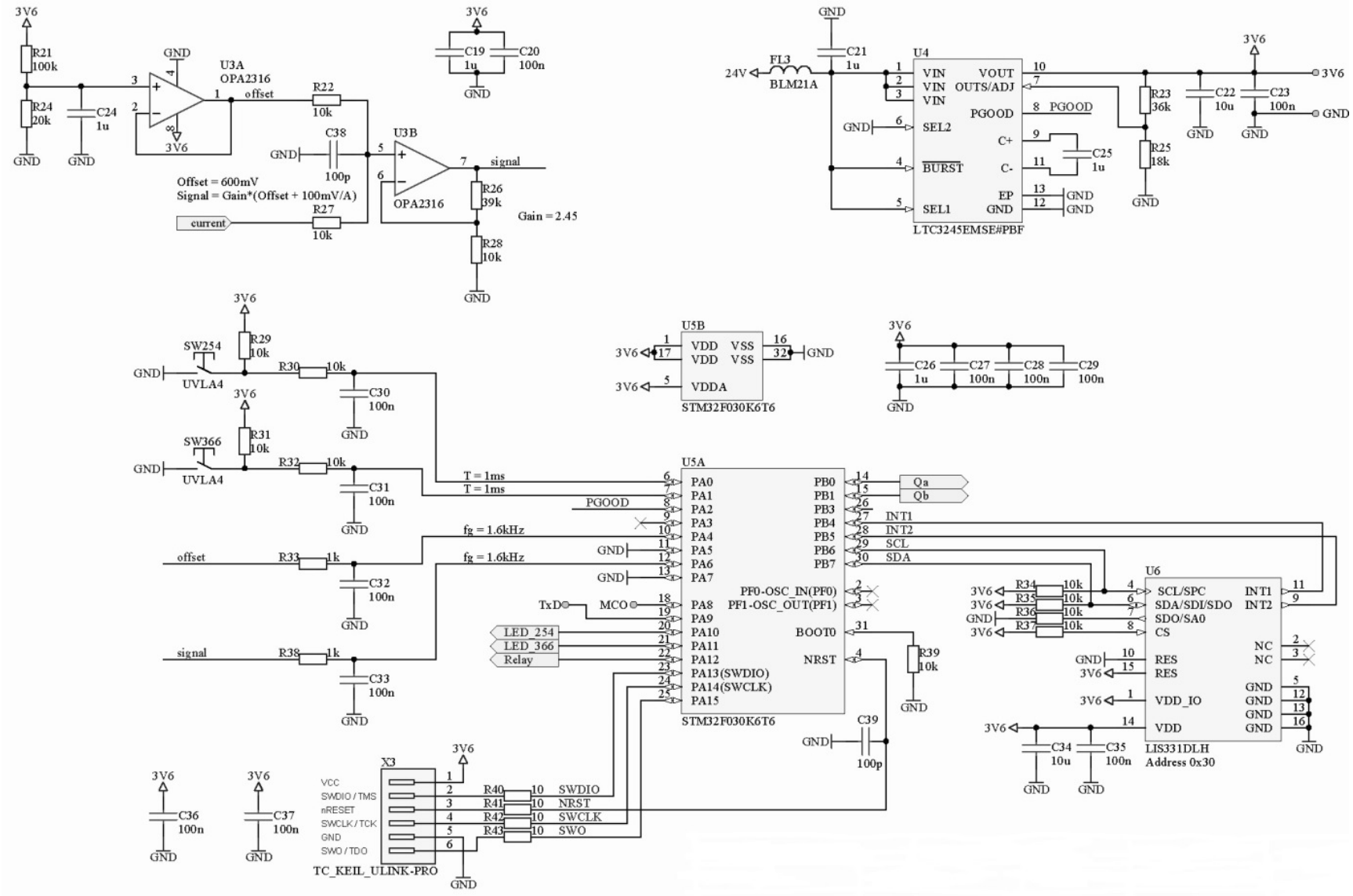
No Modifications so far

6 Electronic drawings

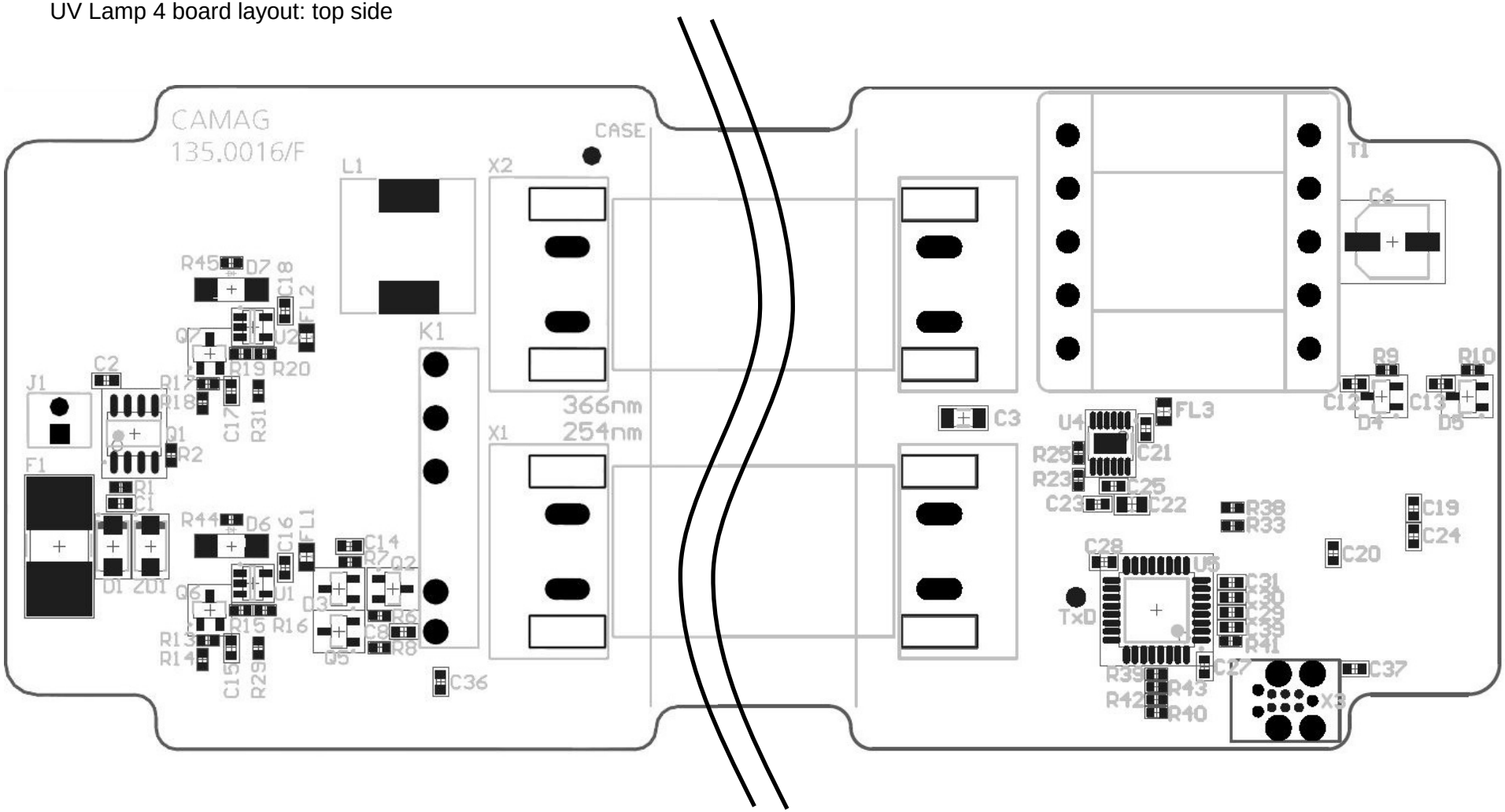
UV Lamp 4 board schematic diagram: power supply and driver section



UV Lamp 4 board schematic diagram: controller section



UV Lamp 4 board layout: top side

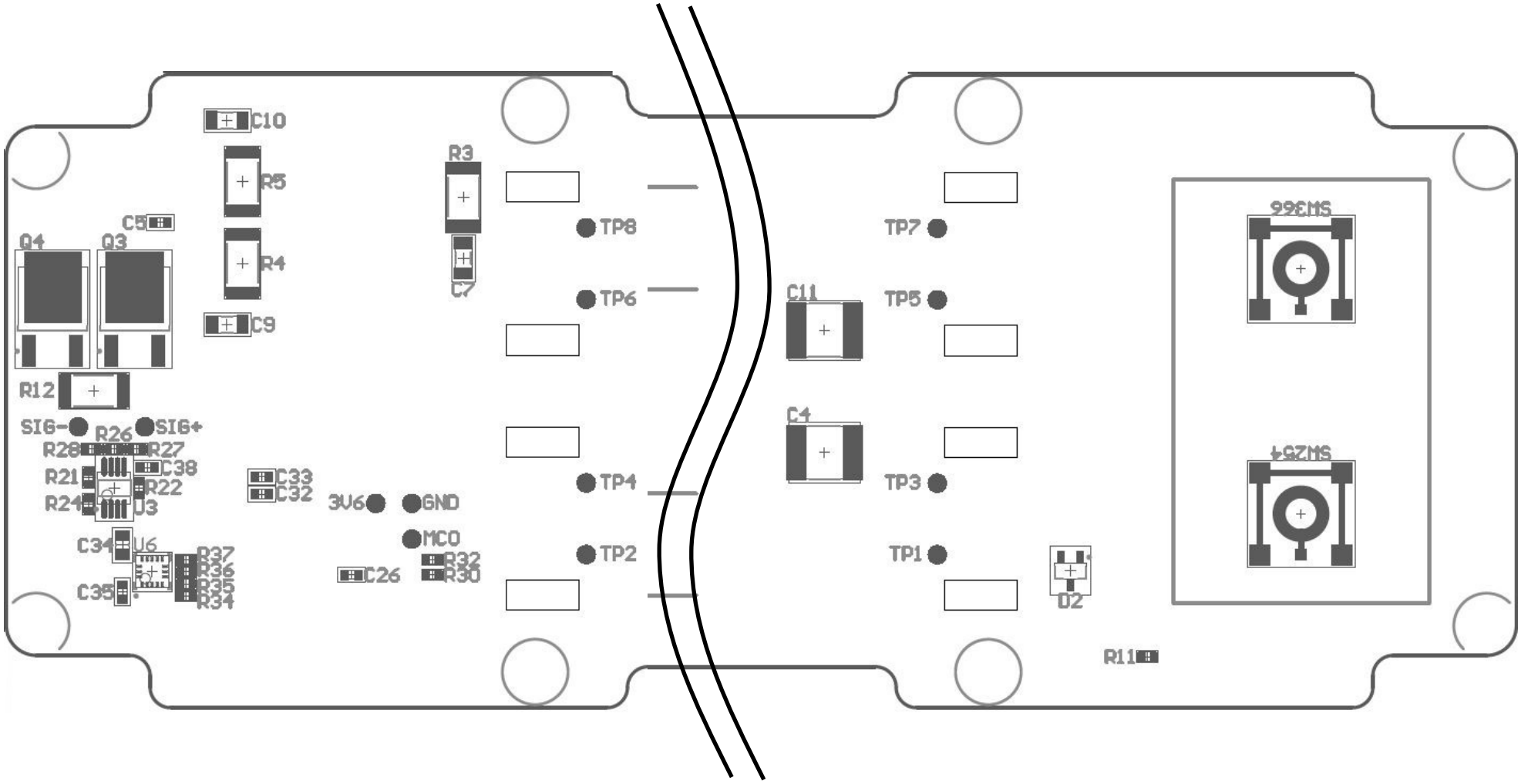


Spare parts:

362.0024 F1 Fuse 125VDC 1.5A T

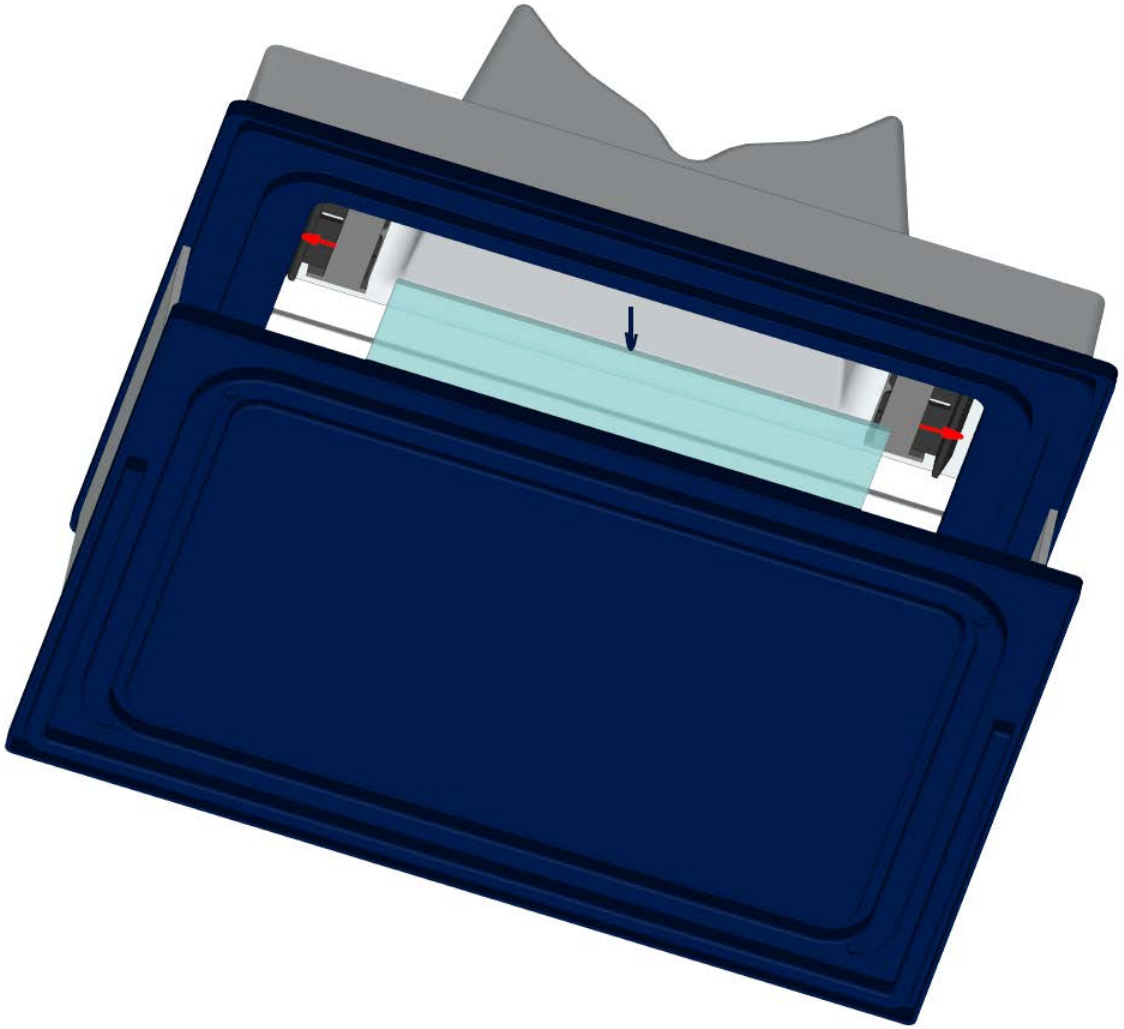
022.9162 Mainboard UV Lamp 4

UV Lamp 4 board layout: bottom side



7 Mechanical drawings

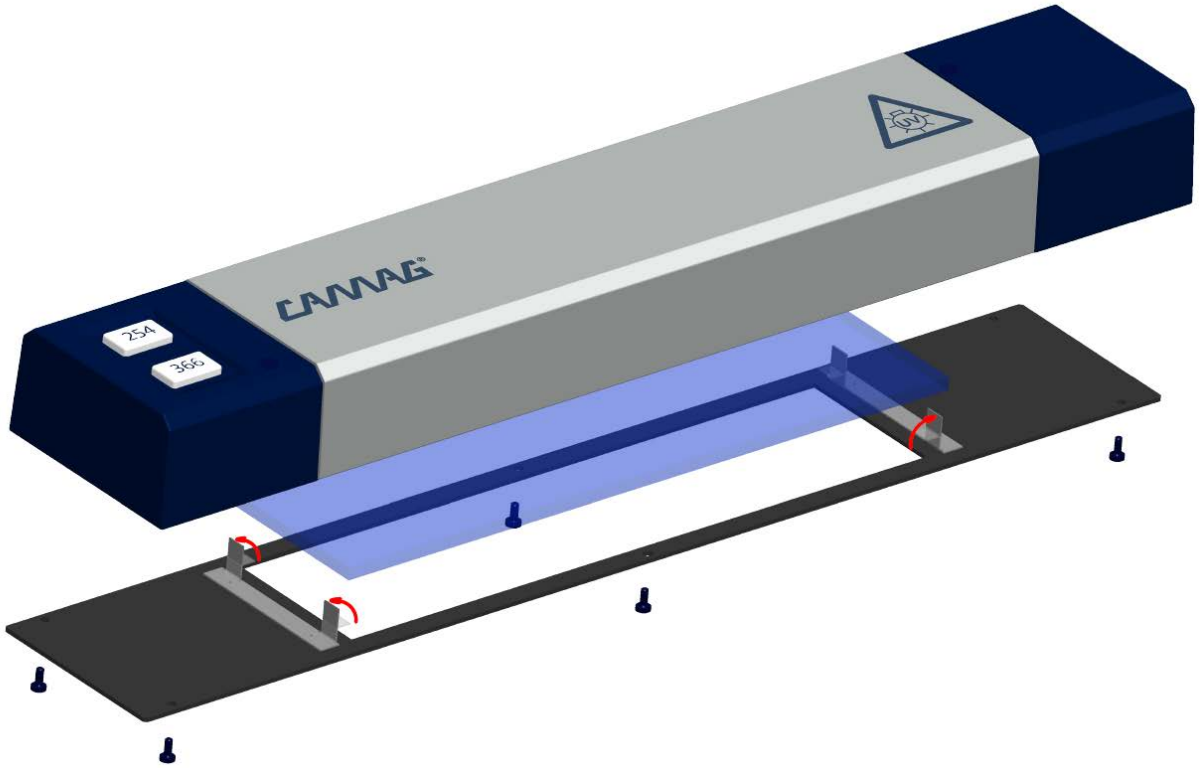
7.1 UV Cabinet 4



Spare parts:

700.0066	Protection glass

7.2 UV Lamp 4



Spare parts:

352.0010	UV tube short-wave 254nm	352.0011	UV tube long –wave 366nm
372.0030	Power supply	022.9162	PCB (with button cover)
692.0050	UV filter	668.0046	Rubber foot
746.1057	Button cover 366/254	125.9160	DC inlet with internal cable and connector
725.2025	Housing middle part	746.1056	Housing left
746.1055	Housing right		

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