

Service Manual

Manuel de service

D-Lite 2 & 4



Schematic diagrams and part list

Schémas et liste des pièces

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Safety notice

IMPORTANT !

The interior of the generator or compact contain components carrying dangerous levels of electric charge, even though the unit has been disconnected from the mains or without supply battery.

ALWAYS TAKE THE FOLLOWING PRECAUTIONS:

1. Always remove the battery box and/or mains cable, and discharge the unit before (for generator) and after (for compact) removing the outer cover or housing. This is best achieved with a suitable discharge resistor (code 11931 for 230V and code 11930 for 120V) and adapter cable (code 11095) fitted to a lamp head plug which may be inserted into a lamp head outlet for generator only. For compact connect the discharge resistor in the flash tube terminals.
2. Take care when opening a generator. Always start by connecting a voltmeter across the storage capacitors, as capacitor drainage may not have occurred.

ACHTUNG GEFAHR !

Auch wenn die Batterie Box bzw. das Netzkabel nicht im Generator steckt, können im Innern des Gerätes noch gefährliche elektrische Spannungen vorhanden sein.

ACHTUNG GEFAEHRliche HOCHSPANNUNG:

1. Bevor Sie ein Blitzgerät öffnen, entfernen Sie die Batterie Box bzw. das Netzkabel und entladen Sie zuerst die Kondensatoren mittels Entladewiderstand (Best.Nr. 11931 für 230V und Best.Nr. 11930 für 120V) und Adapter Kabel (Best. Nr. 11095).
2. Vorsicht beim Öffnen eines Blitzgerätes. Verbinden Sie sofort ein Voltmeter mit den Kondensatoren, denn diese könnten nicht entladen sein.

ATTENTION DANGER!

Des tensions électriques dangereuses restent présentes dans les condensateurs, même lorsque l'appareil est déconnecté de son mode d'alimentation (secteur 120/230V ou batterie dans le cas des générateurs autonomes « Free Style et Ranger »).

PRUDENCE! LORS DE L'OUVERTURE D'UN GÉNÉRATEUR OU COMPACT.

Pour un flash fonctionnant sur le secteur, la première action sera de retirer la fiche d'alimentation.

Avant d'ouvrir un générateur déchargez-le avec un dispositif approprié, (n° de code 11931, version avec une lampe 230V) ou (n° de code 11930 version avec une lampe 120V).

Pour un compact « Style », il faut retirer une partie du boîtier plastique (1/2 coque droite) et ensuite déchargez-le en raccordant le dispositif 11931 (ou une résistance de puissance appropriée) sur les tiges ou les éléments de fixation du tube flash.

Pour un flash fonctionnant sur batterie « Free Style et Ranger »

Avant de l'ouvrir, éjecter la batterie de l'appareil et décharger l'unité en utilisant l'adaptateur 11095 et le dispositif de décharge 11931 ou (11930 version 120V).

Avant toute intervention, vérifier avec un voltmètre la tension aux bornes des condensateurs. La décharge peut ne pas avoir eu lieu, la rupture d'un élément de sécurité ou d'un conducteur peut en être la cause.

Operating instructions

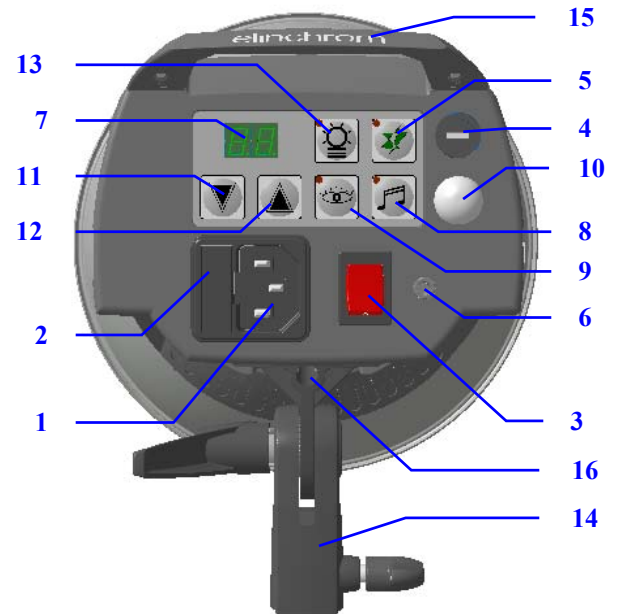
1. Check that the unit voltage is correct
2. Check that the mains switch "3" is on "O" position.
3. Insert mains cable to the MAINS INLET "1" and connect to a FULLY EARTHED OUTLET
4. Connect the sync cord on the socket "6".
5. Using the main ON/OFF SWITCH "3" switch the unit "I" position.
6. Select the power with the push buttons "11" and "12"

Mise en service

1. S'assurer que l'alimentation secteur soit munie d'une mise à la terre et que la tension corresponde à celle indiquée sur l'étiquette signalétique qui est située sous l'appareil.
2. Vérifier que l'interrupteur "3" soit sur "O".
3. Brancher le cordon secteur livré sur la prise "1" et ensuite au réseau.
4. Raccorder un câble de synchronisation sur une des deux prises de synchronisation "6".
5. Enclencher l'appareil en basculant l'interrupteur "3" le mettre sur la position "I"
6. Choisir la puissance du flash en agissant sur les touches "11" et "12"

Inbetriebnahme

1. Überprüfen Sie, dass die Netzanschluss- Steckdose geerdet ist und die Netzspannung mit der des Blitzgerätes "1" übereinstimmt.
2. Der Schalter "3" muss auf AUS stehen.
3. Netzkabel am Gerät einstecken "1" und dann erst
4. SYNCHRO- Kabel anschließen an eine der zwei dafür vorgesehenen Buchsen "5"
5. Das Gerät mit dem Kippschalter "3" einschalten (EIN).
6. Die Blitzleistung kann mit den Tastern "11" und "12" eingestellt werden.



INDEX

1. Mains inlet socket
2. Mains fuse (slow blow)
3. Mains Illuminated on/off switch
4. Modelling fuse (fast blow)
5. Open-flash
6. Synchro-socket 3,5mm
7. Digital power display and charge/discharge indicator
8. Acoustic recharging signal (Beep)
9. Slave cell switch on/off
10. Photocell receptor
11. - Power adjustment in 1/10 f-stops, with ADF
12. + Power adjustment in 1/10 f-stops
13. Modelling lamp switch (Off/Prop/Min/Max)
14. Tilthead complete
15. Handle
16. Umbrella tube (only for EL umbrellas, diameter 7mm)

According to the safety regulation: We draw your attention to the fact that this equipment should be used only in a dry environment; it must be protected from dripping water and from extremely dusty conditions. The unit must ALWAYS be plugged into an EARTHED electrical socket.

Compatibility

Incompatible Housing / Mains board

The very first D-Lite series have a different housing and a different mains board as the actual standard version. The Mains socket hole of the housing has different dimensions. On Mains board exchange please check unit serial number, and board number (50.0030.0x) and exchange also housing if necessary.

The NEW housing 226.002 and 226.004 (only available for service) will fit for both mains board versions!

The mainsboard 14461A will fit into the old and the new housing version

The mainsboard 14461B will fit only into the new housing 226.002 or 226.004

Housing version	Housing complete assembled		Mains board revision	D-Lite serial numbers	
	D-Lite2	D-Lite 4		D-Lite 2	D-Lite 4
1	226.002	226.004	50.0030.02 / 50.0030.03 code 14461A	Up to a/H2 002732	Up to a/H4 002490
2	226.002	226.004	50.0030.04 .. code 14461B	a/H2 002733 ..	a/H4 002491 ..

Printed boards

Overview

D-Lite 2

Board	Code No.	Name	Description	Used on (compatible for)
PB1	14461A or 14461B **	Mains board 50.0030.0x	Mains and Power Supply board	D-Lite 2 and D-Lite 4
PB2	14460	Power board 50.0032.0x	Power board with doublers	D-Lite 2 and D-Lite 4
PB3	14462	Key board 50.0031.0x	Keyboard (BR200 and BR201 open)	D-Lite 4 (see Board differences)
PB4	14352	Flash board 50.0033.0x	Only 2 flash capacitors assembled	D-Lite 4 (see Board differences)

D-Lite 4

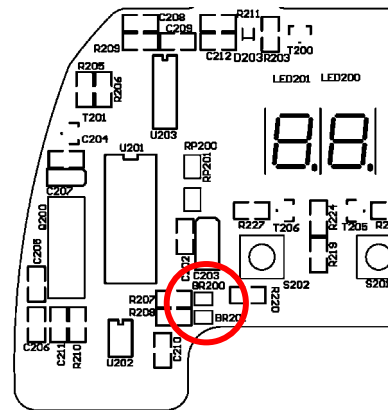
Board	Code No.	Name	Description	Used on (compatible for)
PB1	14461A or 14461B **	Mains board 50.0030.0x	Mains and Power Supply board	D-Lite 2 and D-Lite 4
PB2	14460	Power board 50.0032.0x	Power board with doublers	D-Lite 2 and D-Lite 4
PB3	14462	Key board 50.0031.0x	Keyboard (BR200 closed only)	D-Lite 2 (see Board differences)
PB4	14354	Flash board 50.0033.0x	All 4 flash capacitors assembled	D-Lite 2 (see Board differences)

****check board differences and Compatibility page**

Board differences, board configuration

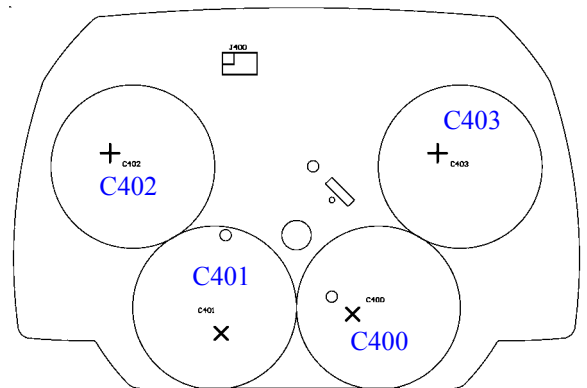
Key board

Unit type	Solder bridge BR200	Solder bridge BR201
D-Lite 2	open	open
D-Lite 4	close	open



Flash board

Flash Caps	Bi-Voltage and 230V-Version	
	D-Lite 2	D-Lite 4
C400	Yes	Yes
C401	Yes	Yes
C402	No	Yes
C403	No	Yes



Mechanics

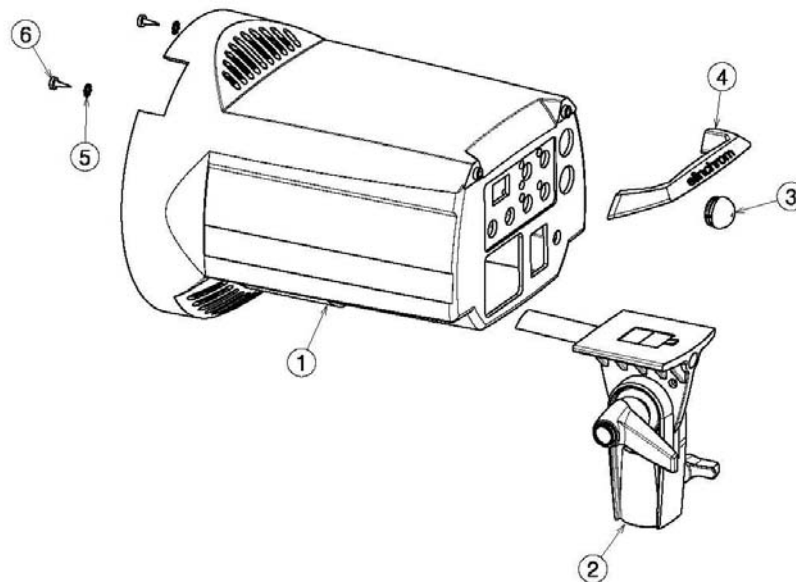
Fuses

Version	Main fuse inside of mains socket Code No.(10 fuses)		Modelling fuse / code No.(10 fuses)	
	Type	Code No.	Type	Code No.
D-Lite 2 & 4	8AT	19022	2.5AF	19033

Flashtube, Modelling lamp

Version	Flashtube Code No.	Modelling lamp @ 230 VAC		Modelling lamp @ 115 VAC	
		Lamp	Code No	Lamp	Code N°
D-Lite 2 & 4	24009	Krypton 100W	23002	Krypton 100W	23006

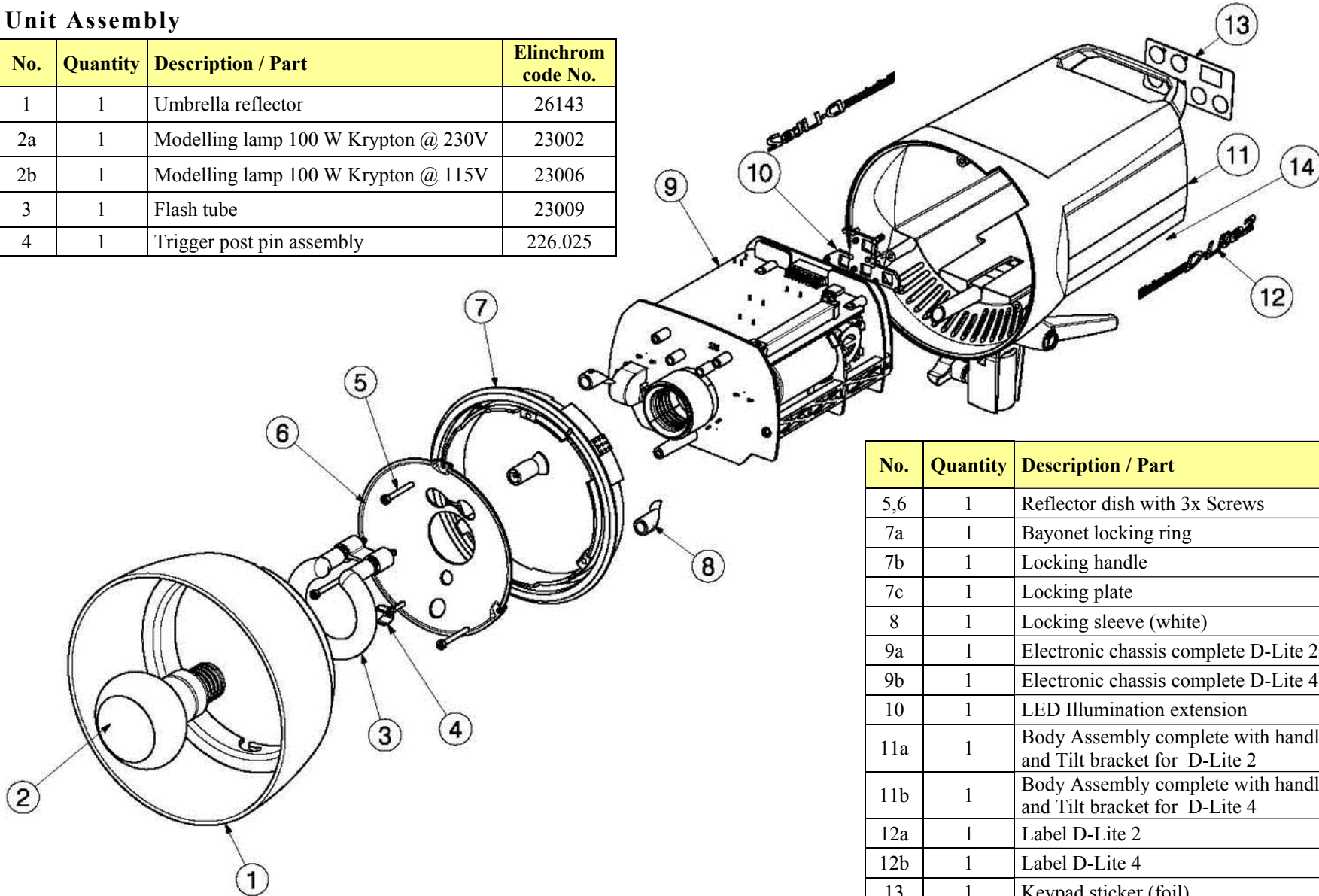
Housing Assembly



No.	Quantity	Description / Part	Elinchrom code No.
1a	1	Housing (Body) blank (1 st version see page Compatibility)	-
1b	1	Housing (Body) blank (2 nd version see page Compatibility)	-
2	1	Tilt bracket assembly complete	226.010
3	1	Dome	204.115
4,5,6	1	Handle complete with screws and star washer	226.020
Complete assembled housings with Tilt bracket, handle, side labels and Dome			
	1	Body Assembly complete D-Lite 2 (2 nd version see page Compatibility)	226.002
	1	Body Assembly complete D-Lite 4 (2 nd version see page Compatibility)	226.004

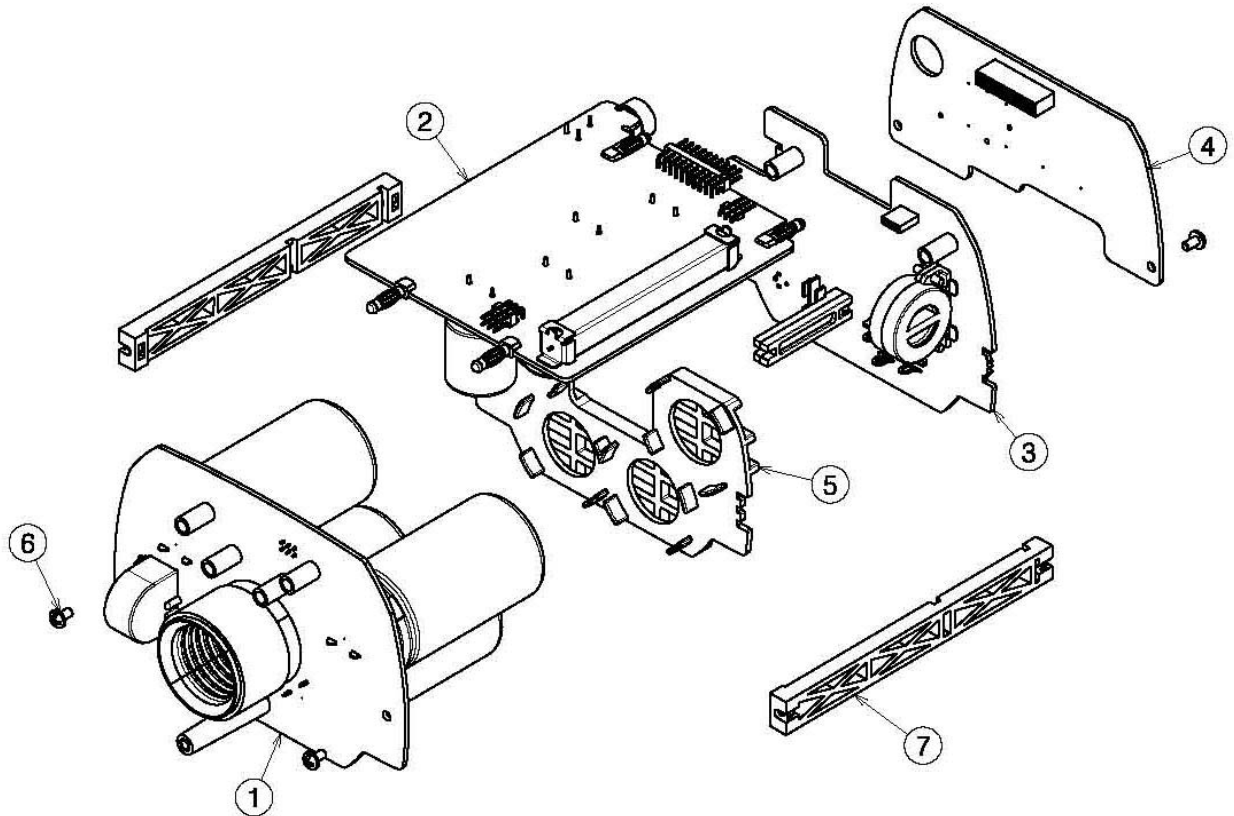
Unit Assembly

No.	Quantity	Description / Part	Elinchrom code No.
1	1	Umbrella reflector	26143
2a	1	Modelling lamp 100 W Krypton @ 230V	23002
2b	1	Modelling lamp 100 W Krypton @ 115V	23006
3	1	Flash tube	23009
4	1	Trigger post pin assembly	226.025



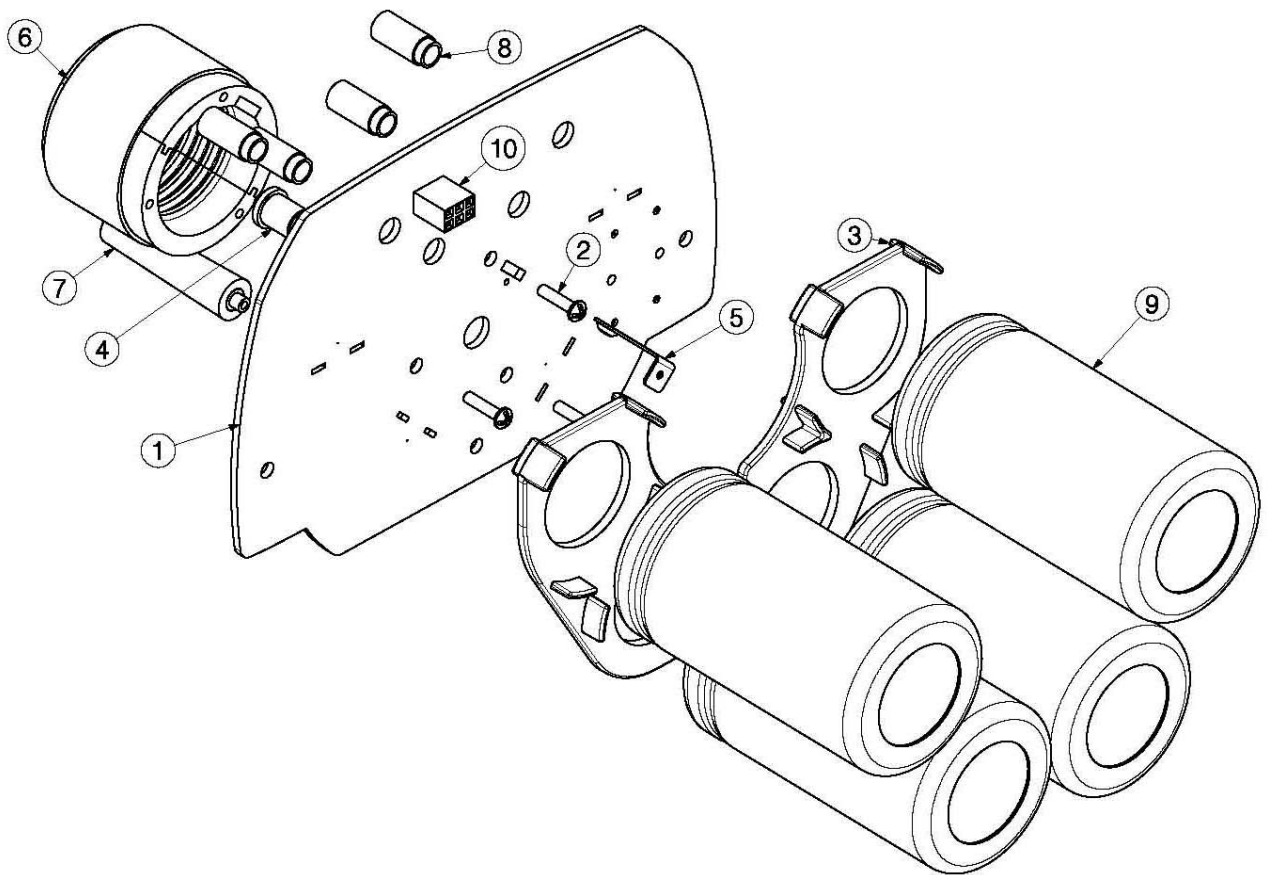
No.	Quantity	Description / Part	code No.
5,6	1	Reflector dish with 3x Screws	226.030
7a	1	Bayonet locking ring	204.090
7b	1	Locking handle	226.035
7c	1	Locking plate	226.040
8	1	Locking sleeve (white)	226.045
9a	1	Electronic chassis complete D-Lite 2 *	226.102
9b	1	Electronic chassis complete D-Lite 4 *	226.104
10	1	LED Illumination extension	226.055
11a	1	Body Assembly complete with handle and Tilt bracket for D-Lite 2	226.002
11b	1	Body Assembly complete with handle and Tilt bracket for D-Lite 4	226.004
12a	1	Label D-Lite 2	226.070
12b	1	Label D-Lite 4	226.075
13	1	Keypad sticker (foil)	226.015

Electronic chassis assembly



No.	Quantity	Description / Part	Elinchrom code No.
1a	1	Flash board assembly D-Lite 2	14352
1b	1	Flash board assembly D-Lite 4	14354
2	1	Power board	14460
3A	1	Mains board assembly 1 st version 50.0030.02 and 50.0030.03	14461A
3B	1	Mains board assembly 2 nd version 50.0030.04 and higher	14461B
4	1	Key board (see Board differences)	14462
5	1	Capacitor support (rear)	226.050
6,7	1	2x PCB support assembly with 2 screws	226.060

Flash board assembly



No.	Quantity	Description / Part	Elinchrom code No.
1	1	Flash board	Only complete assembled flash board for service exchange!
2	2	Modelling lamp socket screws	
3	1	Capacitor support front	
4	1	Modelling lamp middle pin	
5	1	Modelling lamp side pin	
6	1	Modelling lamp socket	
7	1	Trigger post assembly	
8	4	Female Pin for flash tube and PCB	
9	2/4	Flash capacitors D-Lite 2/4	14345

Trouble Seeking Guide for D-Lite 2 and D-Lite 4

Important Note

ALWAYS DISCHARGE UNIT BEFORE COMMENCING WORK !
(d  chargez l  appareil avant de commencer la travail)

ALWAYS CHECK AND DO THE MODIFICATIONS IN SECTION APPENDIX FOR EACH D-LITE

Elinchrom repairing tools

INPUT CURRENT LIMITER with flash capacitor discharge

(code 11931 for 230V and code 11930 for 120V)

This device limits the current that the unit may draw from the mains supply to around 1 ampere. This prevents damage due to shorts-circuits, slow down recharging and improves the voltage stabilisation.

With experience, the activity of the LIMITER lamp can give many clues regarding malfunctions in the unit.

Use flash capacitor discharge function included LIMITER

Known problems

Here is a small list of modifications or solutions with D-Lite series.

1. Modelling lamp is always ON and can not switched OFF

→ Check “Modelling lamp Repair and Modification instruction” in section **Appendix**

2. After replace of the Key board the power display range is not correct to D-Lite 2 (1.0-5.0) and D-Lite 4 (2.0-6.0) unit

Check the key board configuration solder bridge BR200, BR201 for configuration D-Lite 2/4.

3. Unit does not flash (@ minimum or low Power setting)

- Check flash board, trigger capacitors C405 and booster capacitor C406 voltage > 300V. If voltage is lower than 250V replace capacitors C405 and/or C406. Use only MKP4 capacitors from EPCOS or order original ELINCHROM capacitors code No. 104.135.
- If voltage is correct and Trigger and Booster TRIAC is ok then try to exchange capacitor C406 (loss of capacity => damaged capacitor)!
- Sometimes the flash tube is the problem. Try to replace for test!
- It is also possible that one or more booster diodes are damaged, (D400, D402, D402). Check with diode-meter the forward voltage =0.4 to 0.6V, than check the reverse voltage (very high – no display) of the diodes. If the reverse voltage is low or the forward voltage = 0 then one or more diodes are damaged → exchange
- → **check section Appendix also**

4. Unit will not go READY, no charge of the flash capacitors

Check power board, comparator U300 = TL331 or LM397MF if output Pin 4 = lower than 0.5V.

U300-Pin4 < 0.5V => unit will charge or hold flash capacitor voltage

U300-Pin4 > 3V => flash capacitors charged to correct power setting

Replace U300 – please order with “TL331IDBVR or LM397MF” from ELINCHROM

5. Sometimes the unit is not triggered by Photocell

Check R404=100 Ohm! In the first series there is a resistor with R404=220 Ohm assembled. Replace against a 100 Ohm resistor or add a 220 Ohm resistor parallel to R404 → Check Appendix!

6. No or bad Buzzer tone

Replace Buzzer

7. Damaged charge circuit on power board

Check all charge diodes on the power board D301-D308 and D315.

8. Damaged flash capacitor

If one flash capacitor is broken, check all and exchange the damaged ones. If only one is damaged you do not need to exchange all!

Error Message

This error messages are shown by the units display if an error is detected by the units Micro-Controller.

Error Message Display Value	Description	Check	Note
E 1	Over voltage protection Fault or unit is switched ON without any delay time	Power board: Check maximum flash cap. voltage Power board: Check D301, T300	1
E 2	Over temperature	Unit is overheated – wait cooling	1, 2
E 3	Discharge time out error	Power board: Check R309, T303, T304	3
E 4	Charge time out error	Power board: Check charge circuit T300, D301,.. Power board: Check doublers	4
E 5	Main supply zero detect error	Power board: Check T306, T307, T308	5
E 6	After charge time out error	Power board: Check charge circuit T300, D301,..	6

Note1: Temperature sensor D411 with 10mV/°C(=> 0°C=2,73V, 25°C=2,98V; 80°C=3,53V)

Note2: Over temperature is detected Temp.>90°C on heat sink, Normal mode if Temp.<70°C

Note3: Discharge time out after approx. 100 seconds without READY

Note4: Charge time out after approx. 25 seconds without READY

Note5: The Micro detects each zero crossing of the mains supply voltage. This signal is needed for triggering modelling lamp.

Note6: After charge time out after approx. 50 seconds without recharge

Repairing Help

1. Fault tracing for blown fuse
 - Wrong value fuse
 - Power board: charge circuit T300 or D301 short circuit (on short circuit you have to replace also D301, T300, T301, T302, D305; check also R315 and R316 resistor values)
 - Check D302 .. D308 and D315 short circuit
 - Photo flash capacitor short circuit
2. Replacing a Photo flash capacitor
 - Always discharge the unit before commencing work!
 - Check that there is no voltage across the new capacitors!

WHEN A PHOTO FLASH CAPACITOR IS BEING REPLACED. IT MUST BE REFORMED

WITH THE LIMITER IN LINE SET THE UNIT TO MINIMUM

3. Modelling lamp circuitry does not function
 - Modelling lamp fuse blown (quick acting)
 - Blown bulb
 - Flash board: check Modelling lamp socket contacts
 - Flash board: check V401, L400 and C409 (→ see also 4 !)
 - Check Signal MODTRG (100Hz or 120Hz. Pulse 5V) on J301-Pin14 on Power board or J200-Pin14 on Key board
 - Power board: check T305 modelling trigger signal for TRIAC
4. Modelling lamp is always ON and cannot switched OFF
 - Check “Modelling lamp Repair and Modification instruction” appendix
5. Fault tracing for discharge resistor failure (Error E3)
 - Power board: check 309 (6.8k Ohm 17W) and T303, D309 and T304
6. Fault tracing for charge failure or charge error message (E4)
 - Power board: check D302 .. D308 and doubler capacitors C301 and C302
 - Power board: check flash capacitor short circuit (C301, C302, C303, C304)

7. Fault tracing for error message (E1)

The error message E1 has two possibilities

1. The unit is switched OFF and ON again without a delay of minimum 30 seconds
→ switch unit OFF and wait minimum 30 t 60 seconds before switch unit ON again!
This is a special protection to protect internal electronic!
2. The unit has detected an Over voltage on the flash capacitors
 - Check max. flash voltage of 335 VDC
 - Check points under repairing Help 1
 - Readjust the flash voltage and over voltage protection → see **Power board flash voltage adjustment**
8. Fault tracing for error message (E2) = Over temperature detection
 - Switch unit OFF and wait until cooling
 - If error is still here, check sensor on flash board D411

9. Fault tracing for firing faults

- Cracked flashtube
- Flash board: check Trigger voltage at capacitor C405 (Booster) and C406 (Trigger) (0.1µF/400V => MKP4 type only) of approx. 300 .. 350V
- PB1: check Trigger Boost circuitry R402, R403, C404, D403, D404
- Check READY LED (if off triggering flash tube is not possible)
- Key board: check push button S200, U200, D203, R203, T200

When there is no voltage present across the trigger capacitor try replacing D404 1N4007 Diode. This sometimes reads OK but is often 'leaky' when a voltage is applied.

Special circuitry and Graphs

MOSFET charge circuitry

ATTENTION:

Measurement GND (-) is **HIGH VOLTAGE**

Measurement GND (-): D301 (Anode)
Gate supply voltage (18V): D300(Cathode) or OK300-Pin4

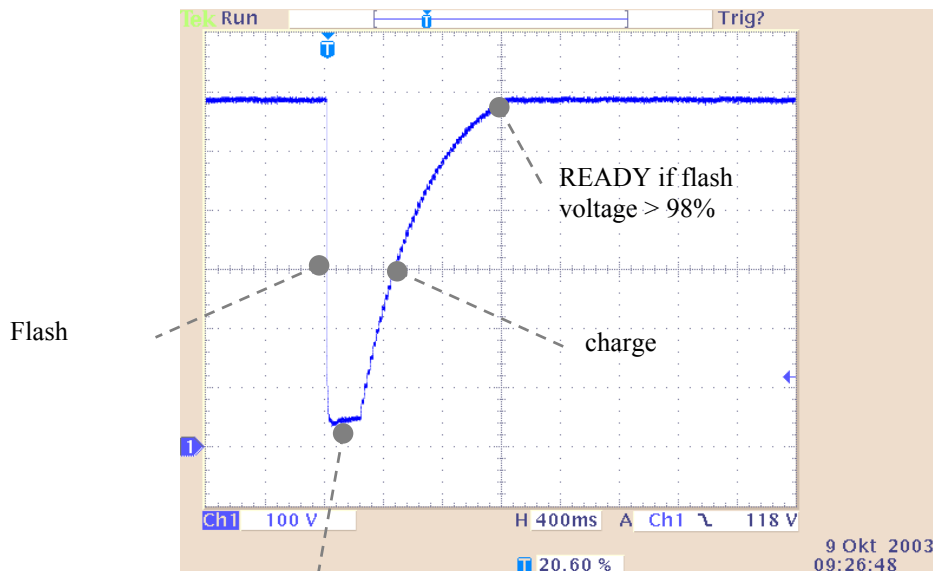
Function:

The MOSFET enables and disables flash capacitor charge. The Gate supply voltage is generated by R301, R302, D300, D301 and C300 and is 18VDC. The Gate driver electronic includes a soft start function with T301 and T302.

On damage or malfunction change always T301, T302, T300 and DD305 together and check all resistor and capacitor values.

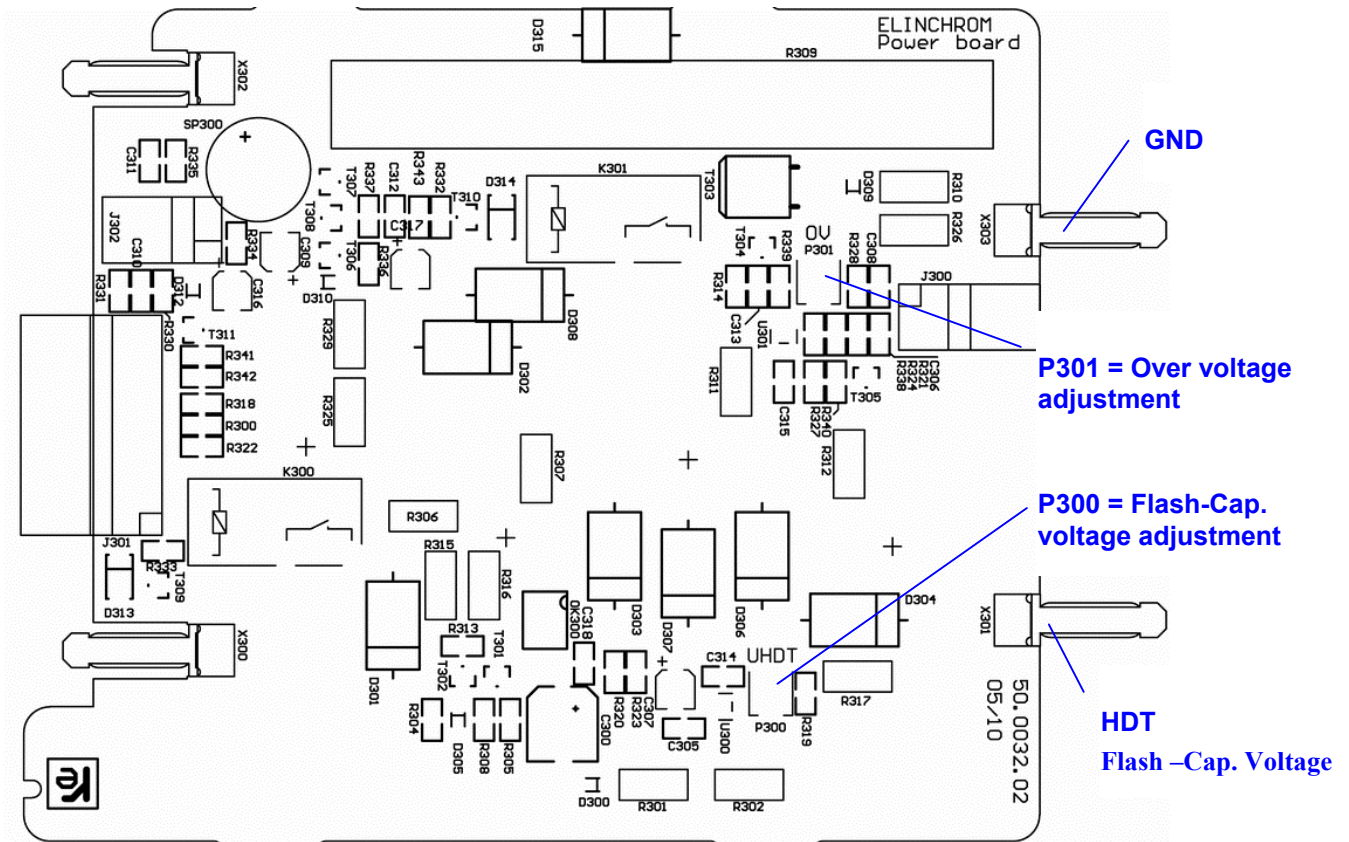
Flash voltage HTD (Flash board)

The D-Lite series has a absolute stabile flash voltage and f-stop stability. The READY signal is generated only if the flash voltage is greater than 98% of the f-stop setting.



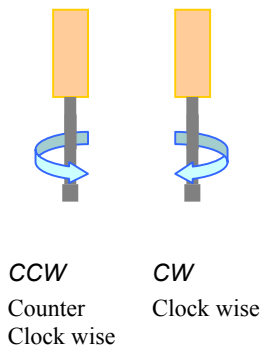
Delay time 150ms - 1.0sec.
Standard value approx. 200ms

Flash voltage and Over voltage Adjustment

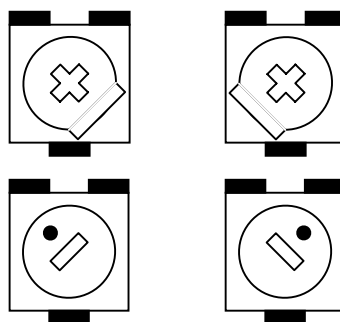


Adjustment legend:

Trimmer turnings



Trimmer end positions:



Pos. 1

Pos. 2

Check exact end position, do not turn over end position!

Adjustment procedure:

1. Adjust Trimmer **P300** and **P301** to default positions:
 - **P300** (HDT) to **Position 1**
 - **P301** (OV) to **Position 2**
2. Connect Voltmeter (select High-Voltage 500V/1000 VDC) to Power board connectors or to Flash tube connectors.
3. Connect mains power 115V or 230VAC 50/60 Hz
4. Switch Mains supply for Unit electronic module **ON**
5. **check Voltmeter $U_{\text{HDT}} < 300$ VDC**
 - if $U_{\text{HDT}} > 300$ VDC then switch unit **OFF immediately** → check Trimmer positions → or electronic fault!
6. Flash 5 times to format flash capacitors
7. Set Power setting to P_{Max} (D-Lite 2 = 5.0, D-Lite 4 = 6.0)
8. **check Voltmeter $U_{\text{HDT}} < 300$ VDC**
 - if $U_{\text{HDT}} > 300$ VDC then switch unit **OFF immediately** → check Trimmer positions → or electronic fault!
9. Adjust **P300 CCW** to $U_{\text{HDT}} = 350\text{VDC}$ (347..353 VDC)
10. Adjust **P301 CW**, slowly in small steps, until Power relay switched **OFF** (→ Display Fault “E1”)
11. Switch Mains supply **OFF**
12. Adjust **P300** to **Position 1** and wait minimum 5 seconds!
13. Switch Mains supply **ON** again.
14. Adjust **P300 CCW** to $U_{\text{HDT}} = 335$ VDC (332..337 VDC)
15. Flash 5-times to format flash capacitors
16. Switch Mains supply **OFF**
17. **Wait until flash voltage is discharged, or discharge with external discharge resistor!**

ATTENTION:

Discharge and Check always the flash capacitor and the doubler voltage (4 doublers for Bi-Voltage version, 2 doublers for 230V version) for HIGH VOLTAGE before touching or handling the electronic module!

Mains board 14461A/B

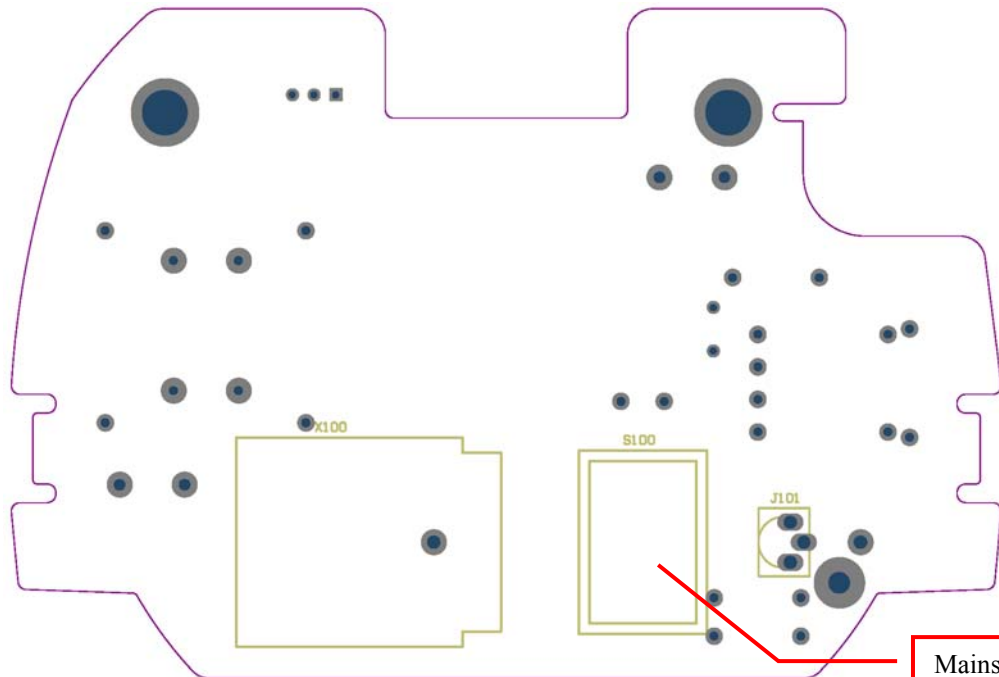
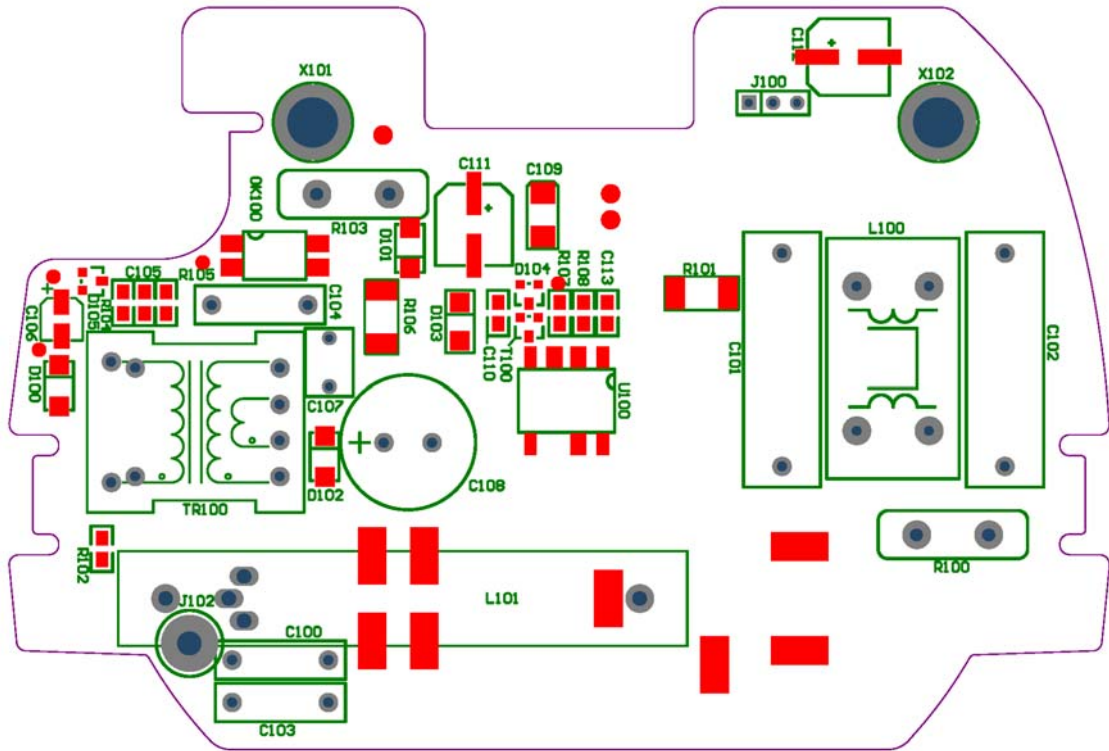
Important Notes

If L400 is a blue ring core inductor check Appendix for detailed information!

Assembly drawing 50.0030.02 - 50.0030.03 (14461A)

check previous page "Compatibility"

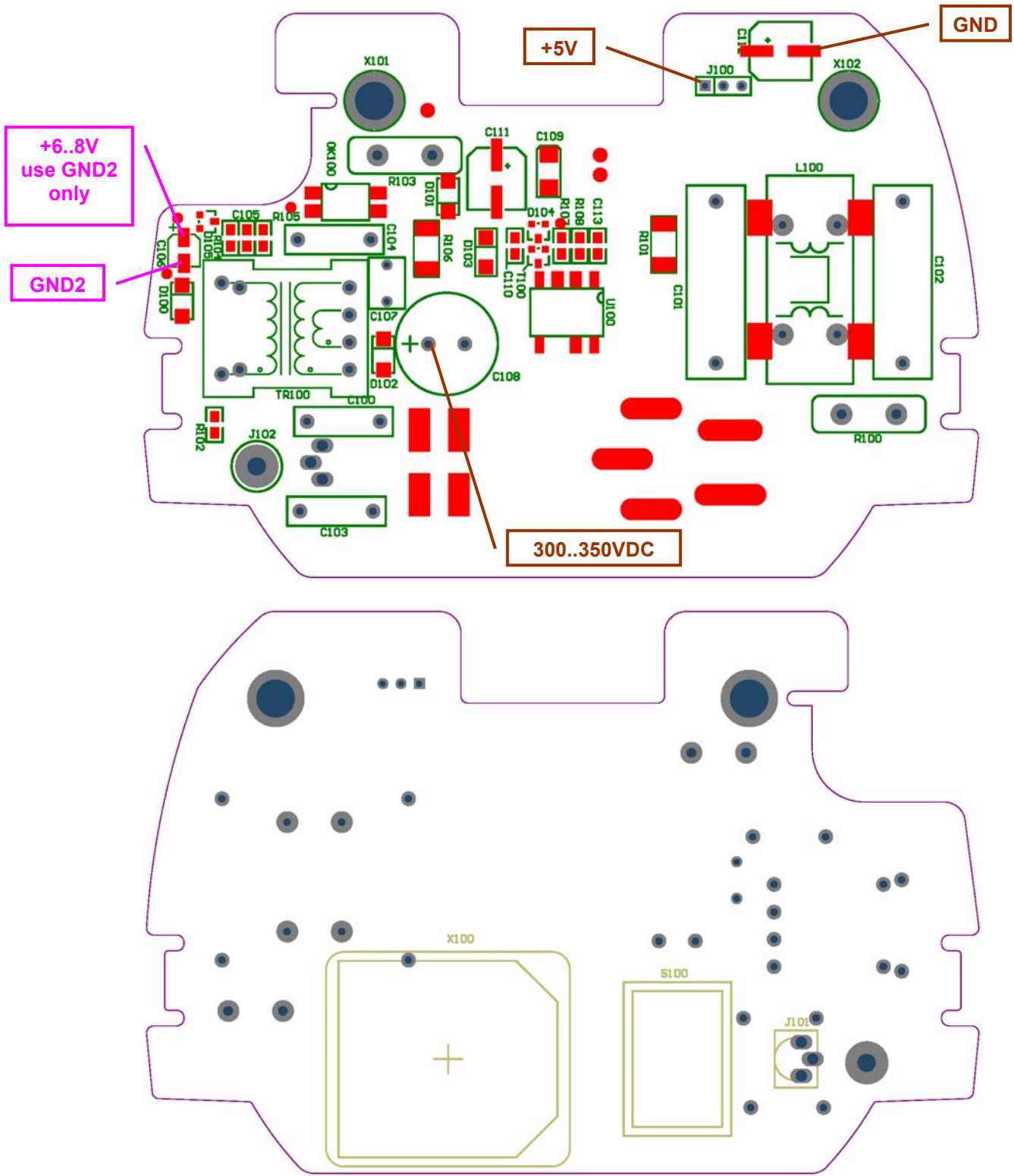
Note !
The electronic board is part of
Exchange Service



Mains switch
Order number
#226.085

Assembly drawing 50.0030.04 (14461B)
check previous page "Compatibility"

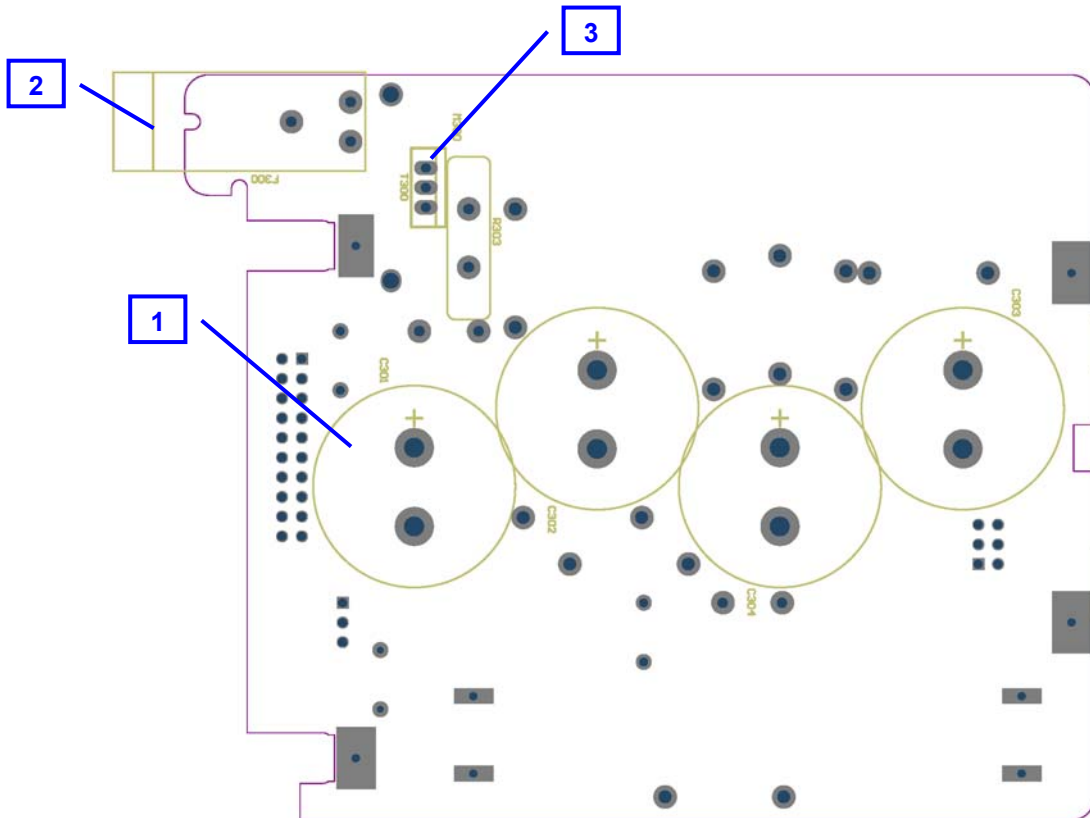
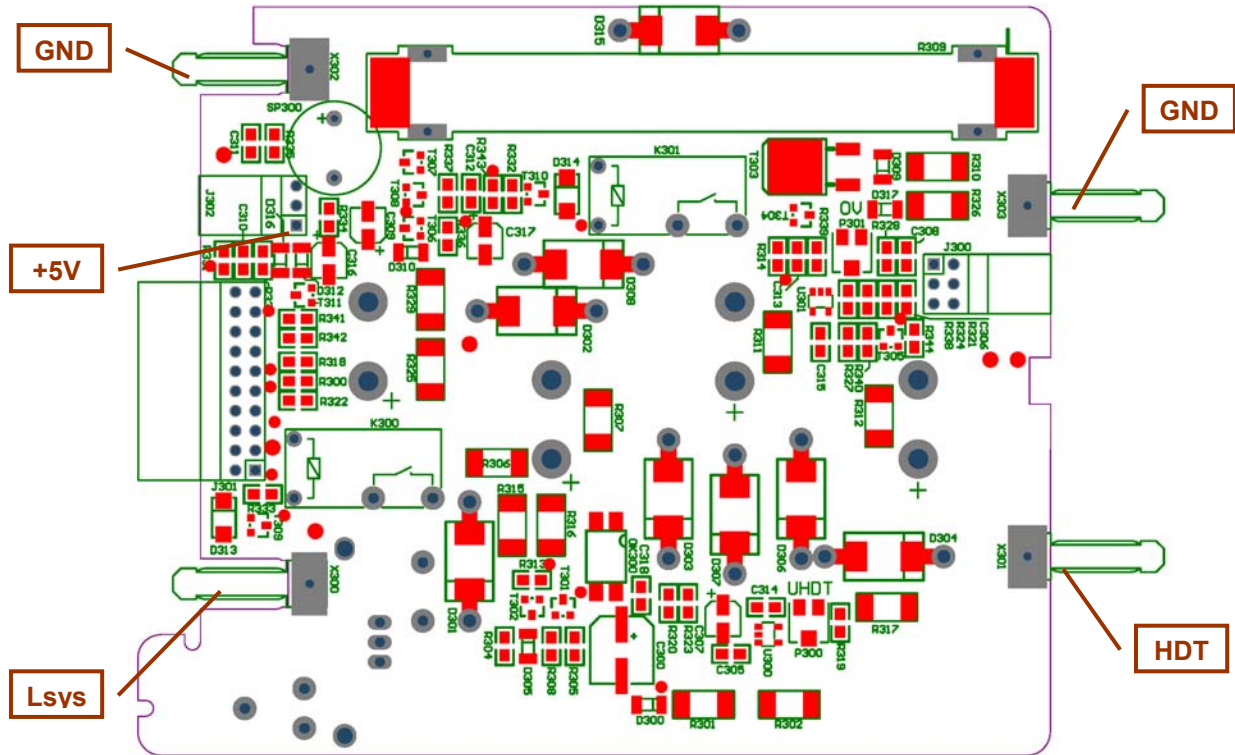
Note !
The electronic board is part of
Exchange Service



Power board 14460

Assembling drawings 14460

Note !
The electronic board is part of
Exchange Service



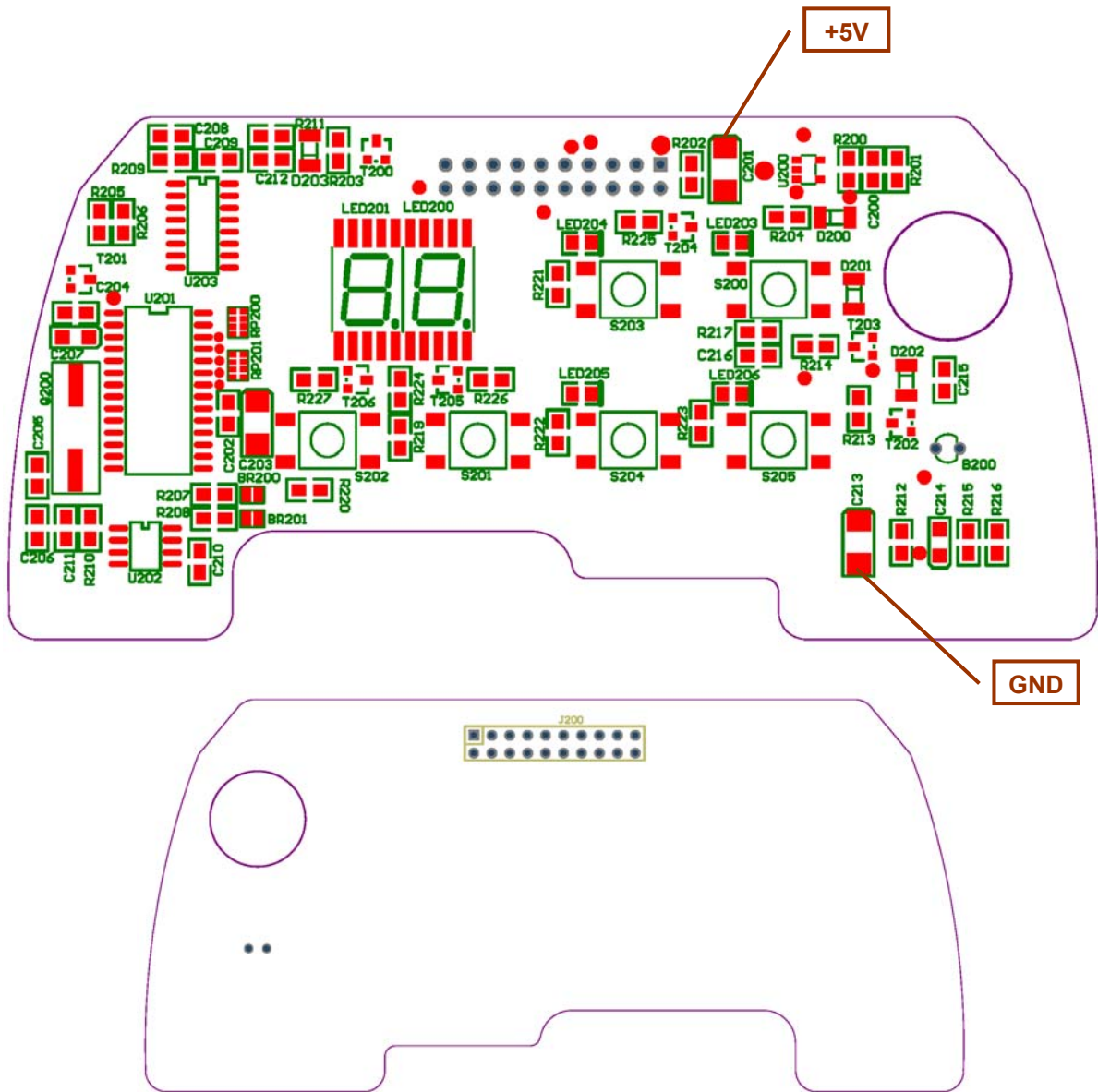
Bill of service material

No.	Quantity	Designator	Description	Elinchrom code No.	Notes
1	4	C301..C304	Doubler capacitors D-Lite series	14056	Original Elinchrom only
2	1	F300	Modelling lamp fuse holder complete	-	-
3	1	T300	Charge IGBT	105.168	Original Elinchrom only

Key board 14462

Assembling drawings 14462

Note !
The electronic board is part of
Exchange Service



Flash board 14352 14354

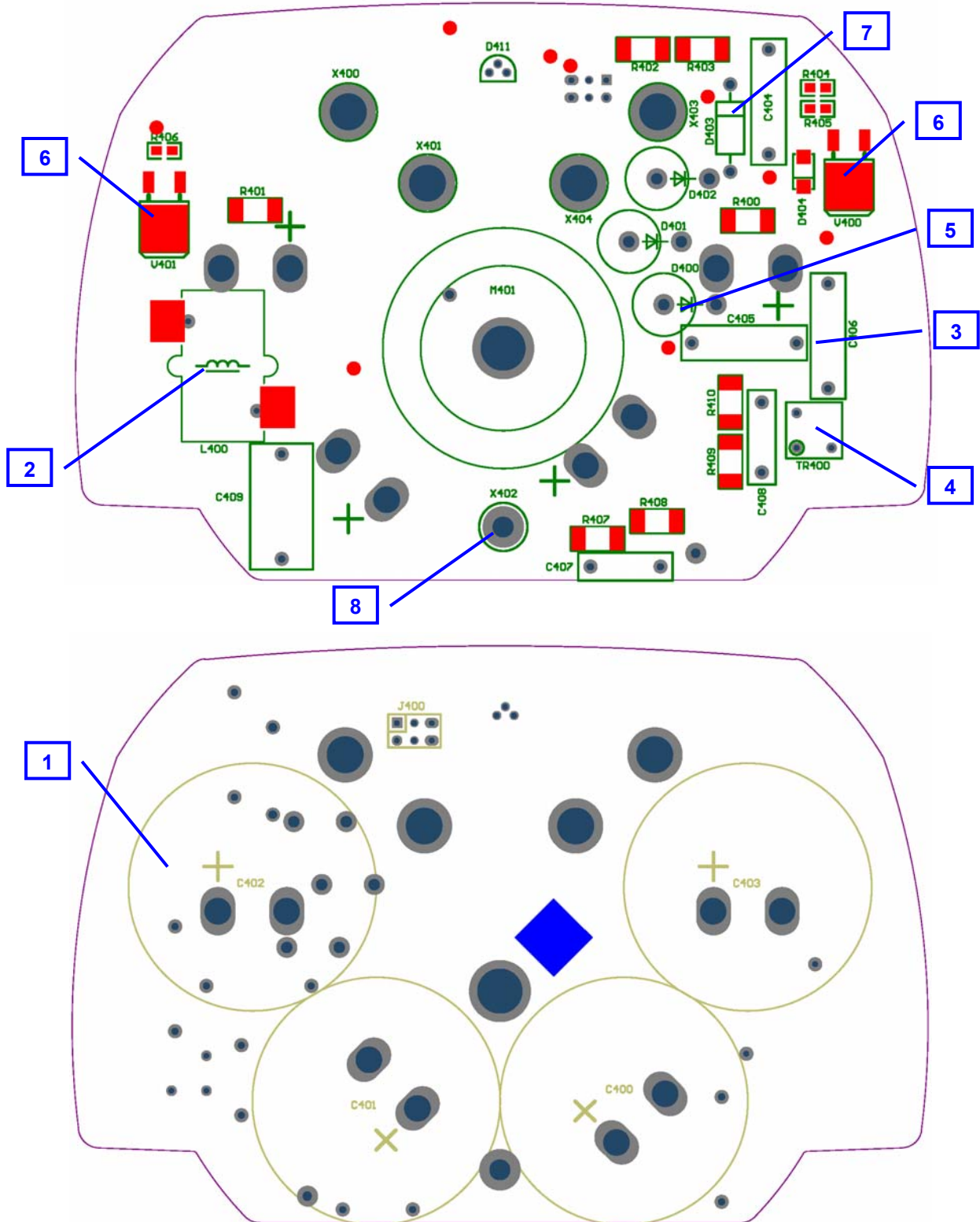
14352 for D-Lite 2 and 14354 for D-Lite 4

Important Notes

Note !
The electronic board is part of
Exchange Service

If L400 is a blue ring core inductor check Appendix for detailed information!

Assembling drawings

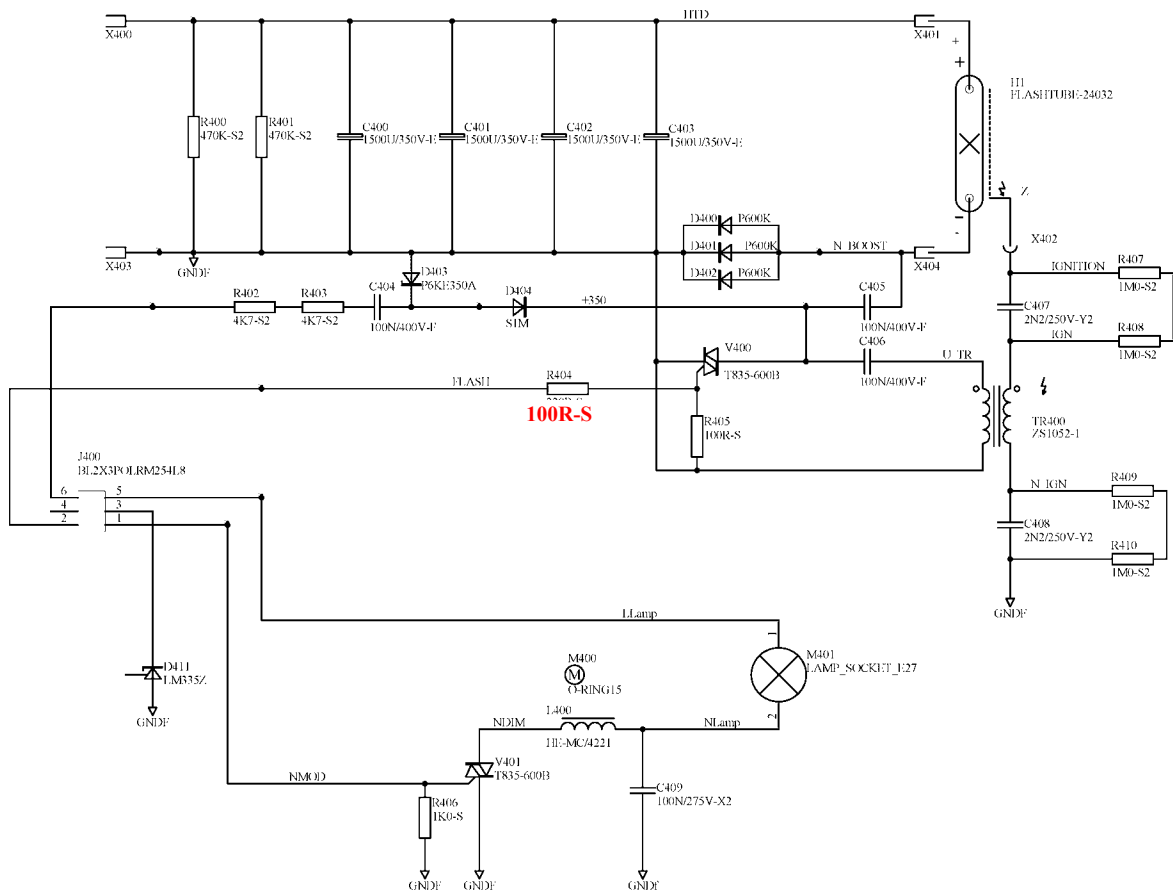


Bill of service material

No.	Quantity	Designator	Description	Elinchrom code No.	Notes
1a	2	C402, C403	Flash capacitor D-Lite series	14345	Original Elinchrom only
1b	4	C400..C403	Flash capacitor D-Lite series	14345	Original Elinchrom only
2	1	L400	Modelling lamp inductor**	100.047	Original Elinchrom only
3	3	C404..C406	Capacitor MKP4 400V	104.135	Original Elinchrom only
4	4	TR400	Ignition transformer	100.060	Original Elinchrom only
5	2	V400, V401	Modelling and Trigger TRIAC T835-600B**	-	-
6	3	D400..D402	Booster diodes P600K / EDI	105.050EDI	Original Elinchrom only
7	1	D403	P6KE350A	105.165	
8	1	X402	Trigger post assembly	-	-

**** check Appendix for further information**

Schematics



Appendix

Modelling lamp modification for blue ring core inductor

Problem: Modelling lamp is always ON and can not switched off !

Fault: Modelling lamp semiconductor (TRIAC) V401 (T835-800B – SMD) is defect !

Cause: Current spikes coming from L/C noise filter can damage the semiconductor V401 (only with L400 = inductor with blue ring core)

Solution: Replace V401, and remove C409 (not needed anymore) on the flash board (50.0033.0x)

Repair Instruction

1. Unplug unit from mains and wait minimum 30 minutes before opening the unit (until autom. Power reduction circuit dumps the flash capacitor voltage)
2. Remove Modelling lamp, flash tube, and trigger spring
3. Open three screws from the reflector side
4. Remove Reflector, the reflector bayonet and three plastic Parts (white)
5. Pull out the complete electronic module (**ATTENTION:** high voltage, if unit is not discharged completely)
6. Check if semiconductor V401 has a short circuit between A1 and A2 pins. On short circuit the component V401 is damaged, replace V401 with a new or similar TRIAC. You can use also a wired TRIAC (see substitute list and pictures below)

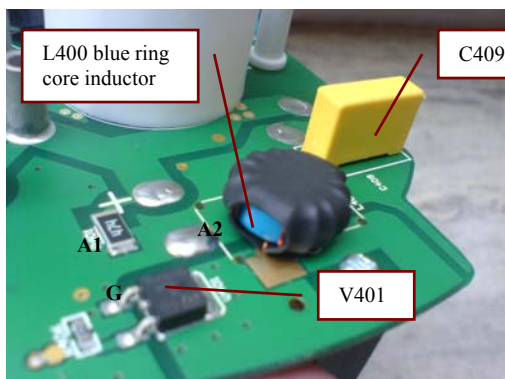
NOTE: This step can be done with out opening the complete electronic module!

Substitutes for V401:

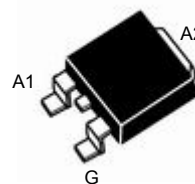
SMD TRIACs	Wired TRIACs
- T410-600B	- BTA06-600B (or ..700.., or ...C)
- T435-600B	- BTA08-600B (or ..700.., or ...C)
- T810-600B	- BTA08-600B (or ..700.., or ...C)
- T835-600B	- BTB24....

7. Check if the inductor L400 has a blue ring core. If so, please remove also capacitor C409, this component is not used if L400 is a blue ring core inductor! Check picture series how to remove the capacitor without removing the flash capacitors!
8. Shift in the electronic module
9. Place the three plastic parts (white), assembly reflector, the bayonet and screw in the three reflector screws
10. Plug in trigger spring, flash tube and modelling lamp and test Modelling lamp function!

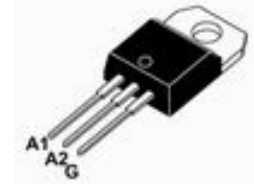
Check also the reflector locking if correctly assembled!



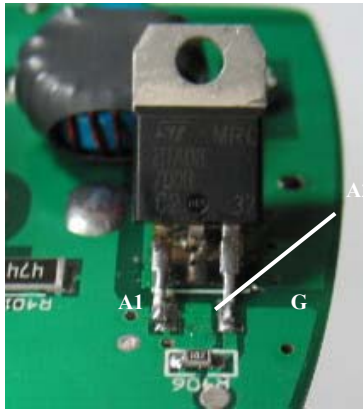
SMD TRIAC



Wired TRIAC



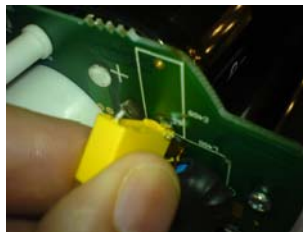
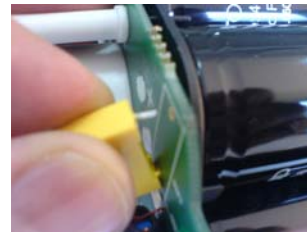
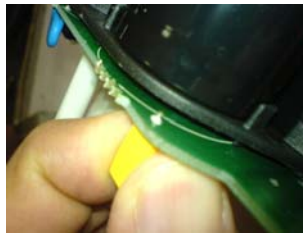
Use wired TRIAC instead of a SMD version:



- Bend middle pin “A2” backwards and solder to bigger SMD pad
- Bend wired TRIAC backwards to reduce height over board

How to remove C409 without removing flash capacitors

1. Solder upper pin of C409 and lift capacitor on one side
2. Bend capacitor C409 until space for soldering out the lower pin of the capacitor
3. Throw away capacitor (its broken)



V400 ordering code number:
#226.095 (SMD version)

Unit does not flash sometimes if triggered by Photocell

- Problem:** The Photocell pulse is so short that sometimes the unit is not triggered correctly !
- Fault:** The trigger pulse for V400 is not powerful enough !
- Cause:** The different specification / sensitivity of V400
- Solution:** Replace R404 to 100 Ohm or add a resistor with 220 Ohm parallel to R404

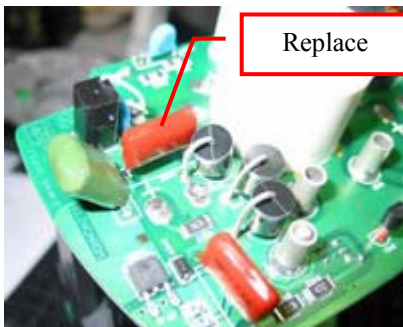
Unit does not flash at minimum or low flash power settings

- Problem:** Unit does not flash at low power setting !
Fault: Booster and/or Trigger capacitor is damaged (red type only)!
Cause: loss of capacity
Solution: Replace C405 and /or C406 (red type capacitor)

Repair Instruction

1. Unplug unit from mains and wait minimum 30 minutes before opening the unit (until autom. Power reduction circuit dumps the flash capacitor voltage)
2. Remove Modelling lamp, flash tube, and trigger spring
3. Open three screws from the reflector side
4. Remove Reflector, the reflector bayonet and three plastic Parts (white)
5. Pull out the complete electronic module (**ATTENTION:** high voltage, if unit is not discharged completely)
6. Check which capacitor type is assembled, **red or green type** for C405 and C406
7. Replace the capacitors C405 and/or C406 if red type capacitor is assembled. You can replace the capacitors without disassembling the complete electronic chassis to replace the capacitors. If you use a soldering iron with a long small iron point, removing the component is not a problem → check pictures!
8. Shift in the electronic module
9. Place the three plastic parts (white), assembly reflector, the bayonet and screw in the three reflector screws
10. Plug in trigger spring, flash tube and modelling lamp and test Modelling lamp function!

Check also the reflector locking if correctly assembled!



1. check C405 and C406, normally the red type capacitor is damaged.



2. replace C405/C406 without disassembling the complete electronic module. Unsolder the first

C405/C406 ordering code numbers:

- #104.150 (green type)
- or
- #104.017 (Style RX type)
- or
- #104.135 (Style FX/BX type)



3. now unsolder the second pin and remove the capacitor



4. assemble / solder the new capacitor from the top side!

