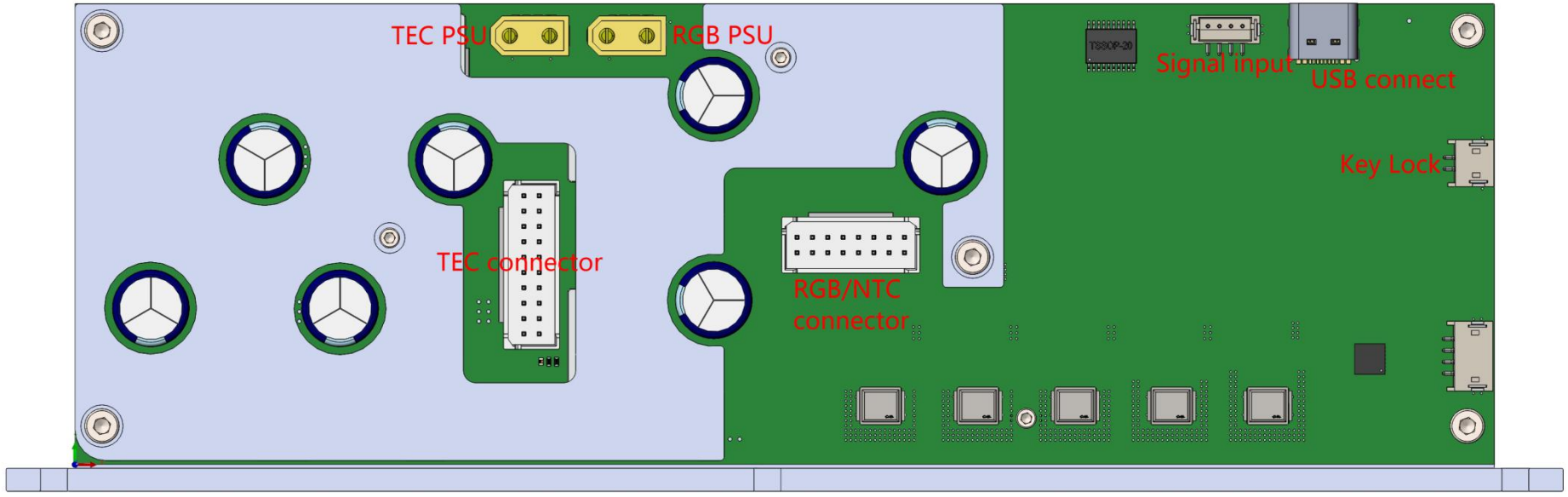
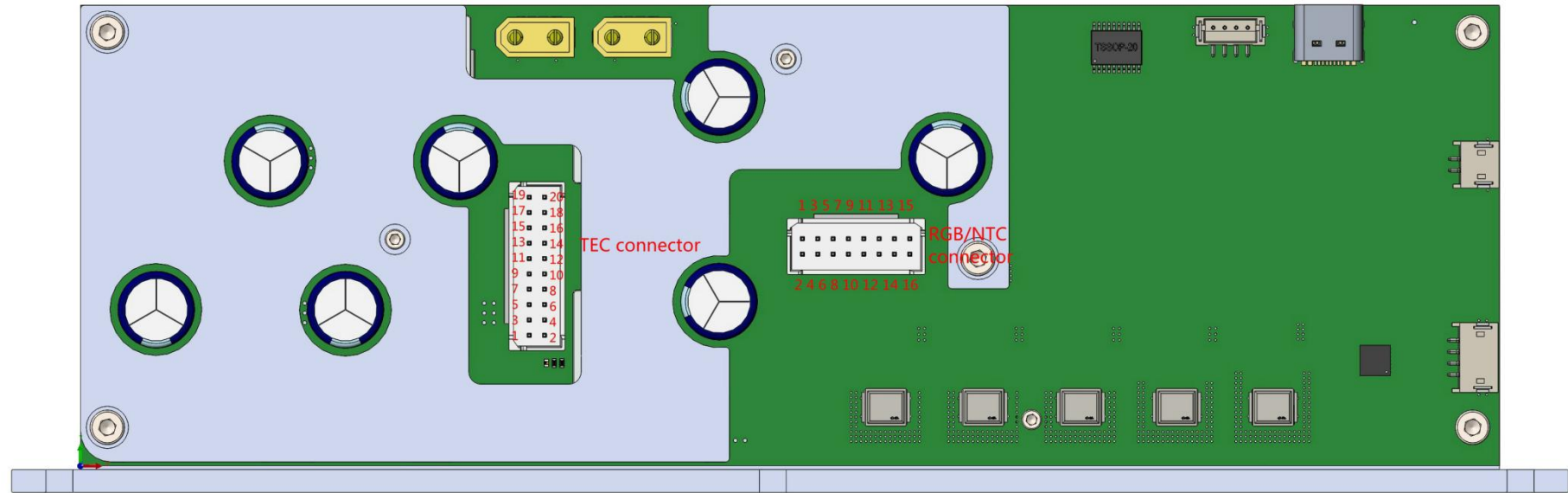


Xeon 50 laser driver



Model	Reference	Size (mm)	Weight (g)	Supply Voltage (V)	Modulation Frequency (KHz)	Color Channels	Color Voltage Range (V)	Color Current Range (A)	Tec Channels	Tec Power (W)	NTC channels
Xeon 10	5W-10W	110*63.5*19	175	24	200	3	0.8-22.5	0.2-3.3	1	40/80	1
Xeon 20	12W-20W	125*63.5*19	222	24	200	3	0.8-22.5	0.2-3.3	2	40/80	1
Xeon 30	22W-30W	155*63.5*19	297	24	200	4	0.8-22.5	0.2-3.3	3	40/80	3
Xeon 50	40W-60W	185*63.5*27.5	415	36	200	5	0.8-33.5	0.2-3.3	4	40/80/120	3



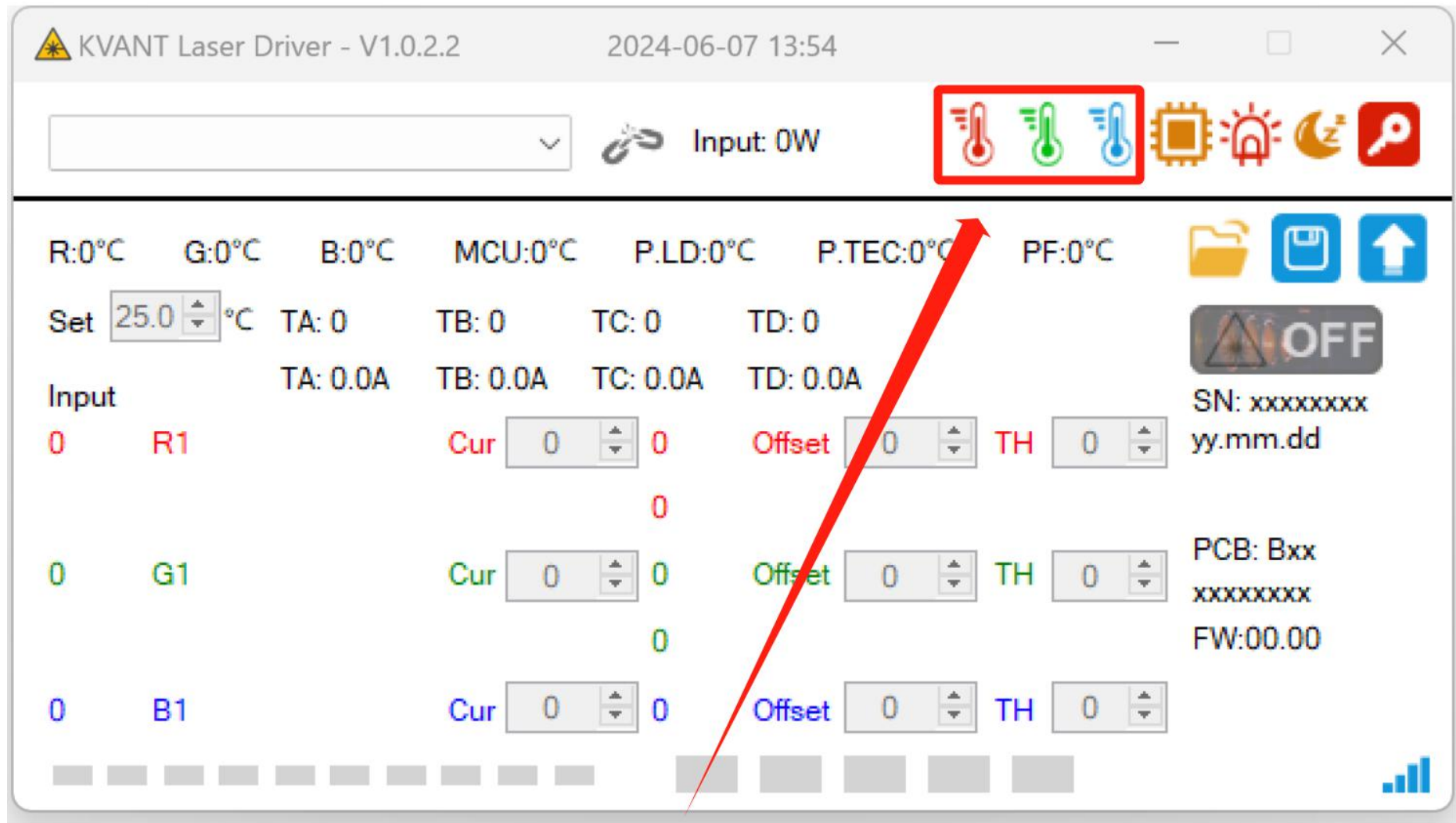


TEC connector

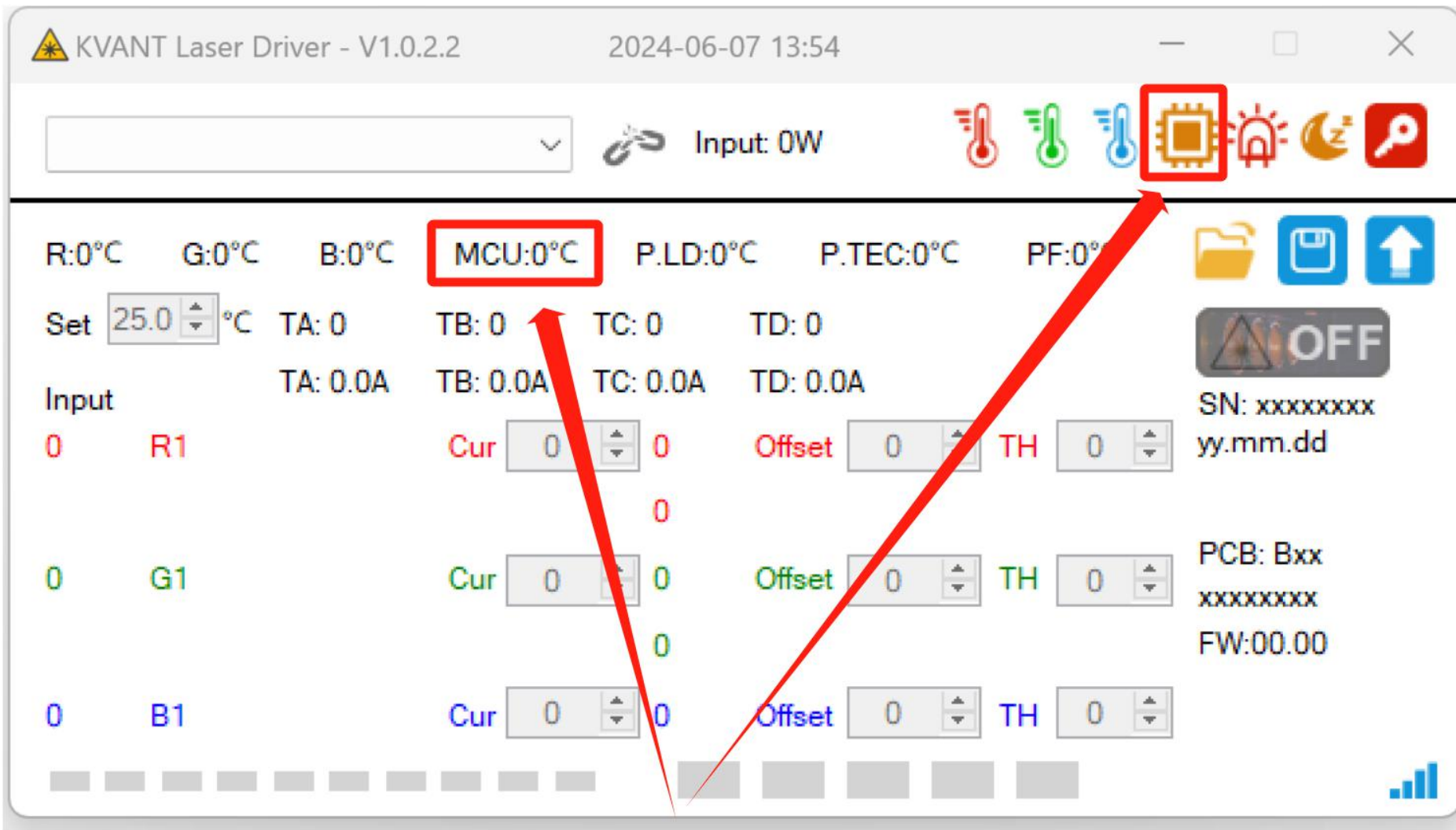
13,15---R_TEC+(TA)	14,16---R_TEC-
17,19---G1_TEC+(TB)	18,20---G1_TEC-
5,7-----G2_TEC+(TC)	6,8-----G2_TEC-
9,11-----B_TEC+(TD)	10,12----B_TEC-
3-----Platform temperature_NTC+	
4-----GND	

RGB/NTC connector

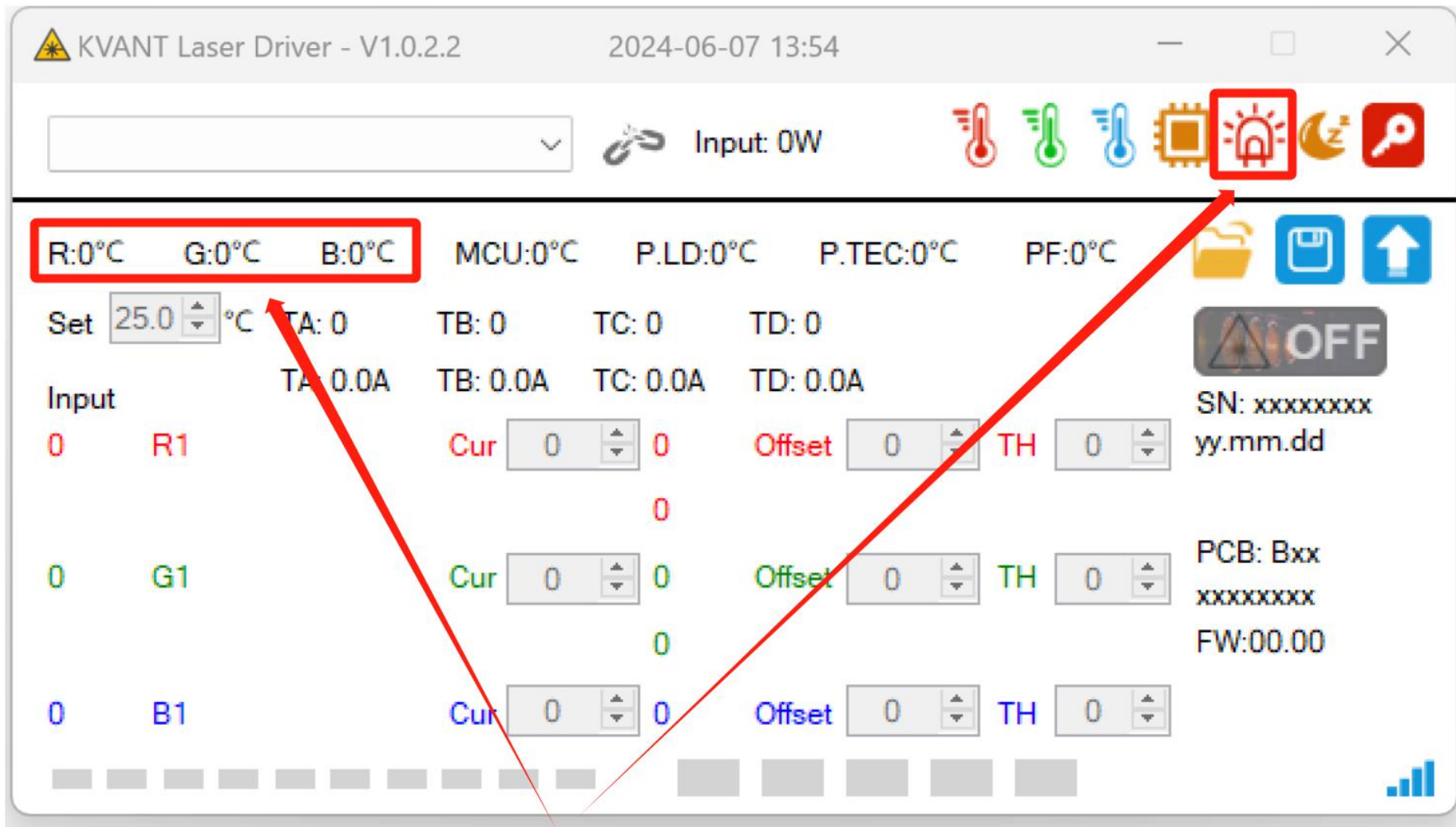
1,3---R+	9,11-----B+
2-----R1-	10,12----B-
4-----R2-	13-----GND
5,7---G+	14----B_NTC+
6-----G1-	15----R_NTC+
8-----G2-	16----G_NTC+



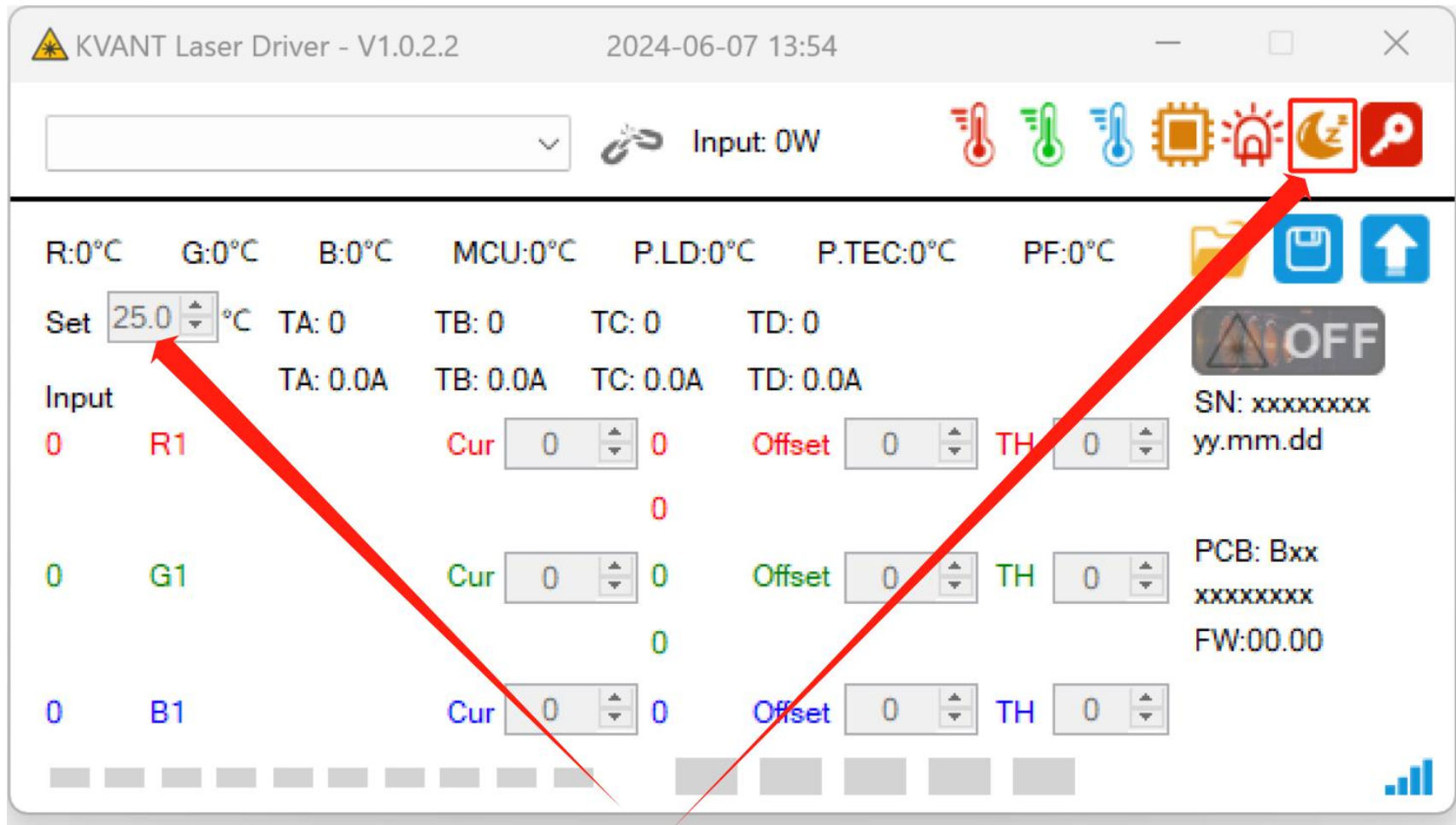
When NTC is missing, an icon will be displayed



When the MCU temperature exceeds 75 degrees, an icon will be displayed, and LD and TEC will turn off the output. Return to 65 degrees to restore output.



When the LD temperature exceeds 40 degrees, an icon will be displayed and the LD will turn off the output. LD recovery output below 40 degrees.



Sleep icon

When the input signal is less than 0.5V, increase by 3 degrees after 5 minutes, increase by 5 degrees after 15 minutes, and increase by 10 degrees after 30 minutes. Release sleep when there is a signal greater than 0.5V input.

KVANT Laser Driver - V1.0.2.2 2024-06-07 13:54

Input: 0W

R:0°C G:0°C B:0°C MCU:0°C P.LD:0°C P.TEC:0°C PF:0°C

Set 25.0 °C TA: 0 TB: 0 TC: 0 TD: 0

Input TA: 0.0A TB: 0.0A TC: 0.0A TD: 0.0A

0 R1 Cur 0 0 Offset 0 TH 0

0 G1 Cur 0 0 Offset 0 TH 0

0 B1 Cur 0 0 Offset 0 TH 0

OFF

SN: xxxxxxxx yy.mm.dd

PCB: Bxx xxxxxxxx

FW:00.00

Key lock icon Green is unlock,Red is lock

KVANT Laser Driver - V1.0.2.2 2024-06-07 13:54

Input: 0W

R:0°C G:0°C B:0°C MCU:0°C P.LD:0°C P.TEC:0°C PF:0°C

Set 25.0 °C TA: 0 TB: 0 TC: 0 TD: 0

Input TA: 0.0A TB: 0.0A TC: 0.0A TD: 0.0A

0 R1 Cur 0 0 Offset 0 TH 0

0 G1 Cur 0 0 Offset 0 TH 0

0 B1 Cur 0 0 Offset 0 TH 0

SN: xxxxxxxx yy.mm.dd

PCB: Bxx xxxxxxxx

FW:00.00

Load and save the setting

KVANT Laser Driver - V1.0.2.2 2024-06-07 13:54

Input: 0W

R:0°C G:0°C B:0°C MCU:0°C P.LD:0°C P.TEC:0°C PF:0°C

Set 25.0 °C TA: 0 TB: 0 TC: 0 TD: 0

Input TA: 0.0A TB: 0.0A TC: 0.0A TD: 0.0A

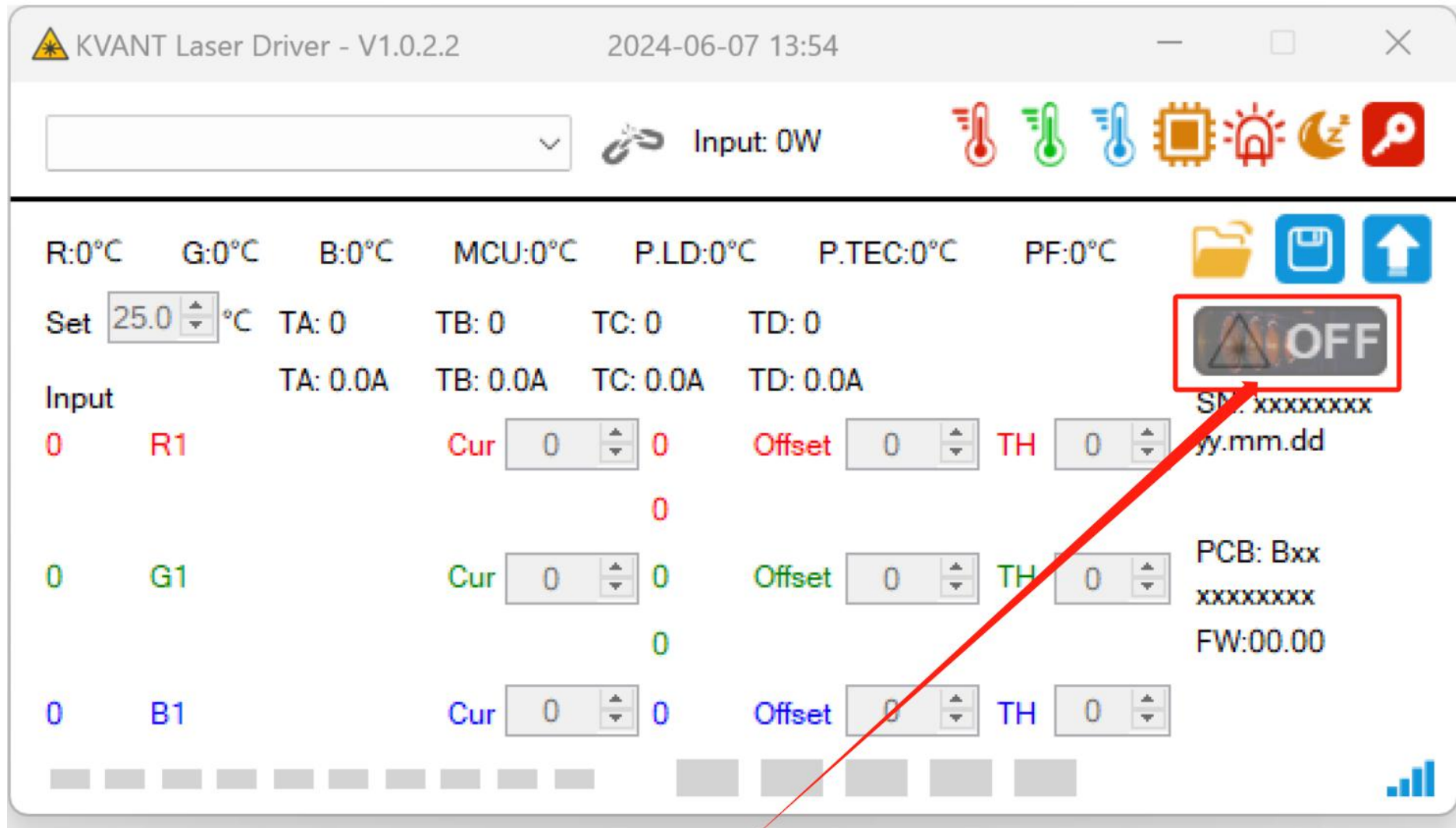
0 R1 Cur 0 0 Offset 0 TH 0

0 G1 Cur 0 0 Offset 0 TH 0

0 B1 Cur 0 0 Offset 0 TH 0

SM: xxxxxxxx
yy.mm.dd

PCB: Bxx
xxxxxxx
FW:00.00



Close,Open the RGB laser

KVANT Laser Driver - V1.0.2.2 2024-06-07 13:54

Input: 0W

R:0°C G:0°C B:0°C MCU:0°C P.LD:0°C P.TEC:0°C PF:0°C

Set 25.0 °C TA: 0 TB: 0 TC: 0 TD: 0

Input TA: 0.0A TB: 0.0A TC: 0.0A TD: 0.0A

0 R1 Cur 0 0 Offset 0 TH 0

0 G1 Cur 0 0 Offset 0 TH 0

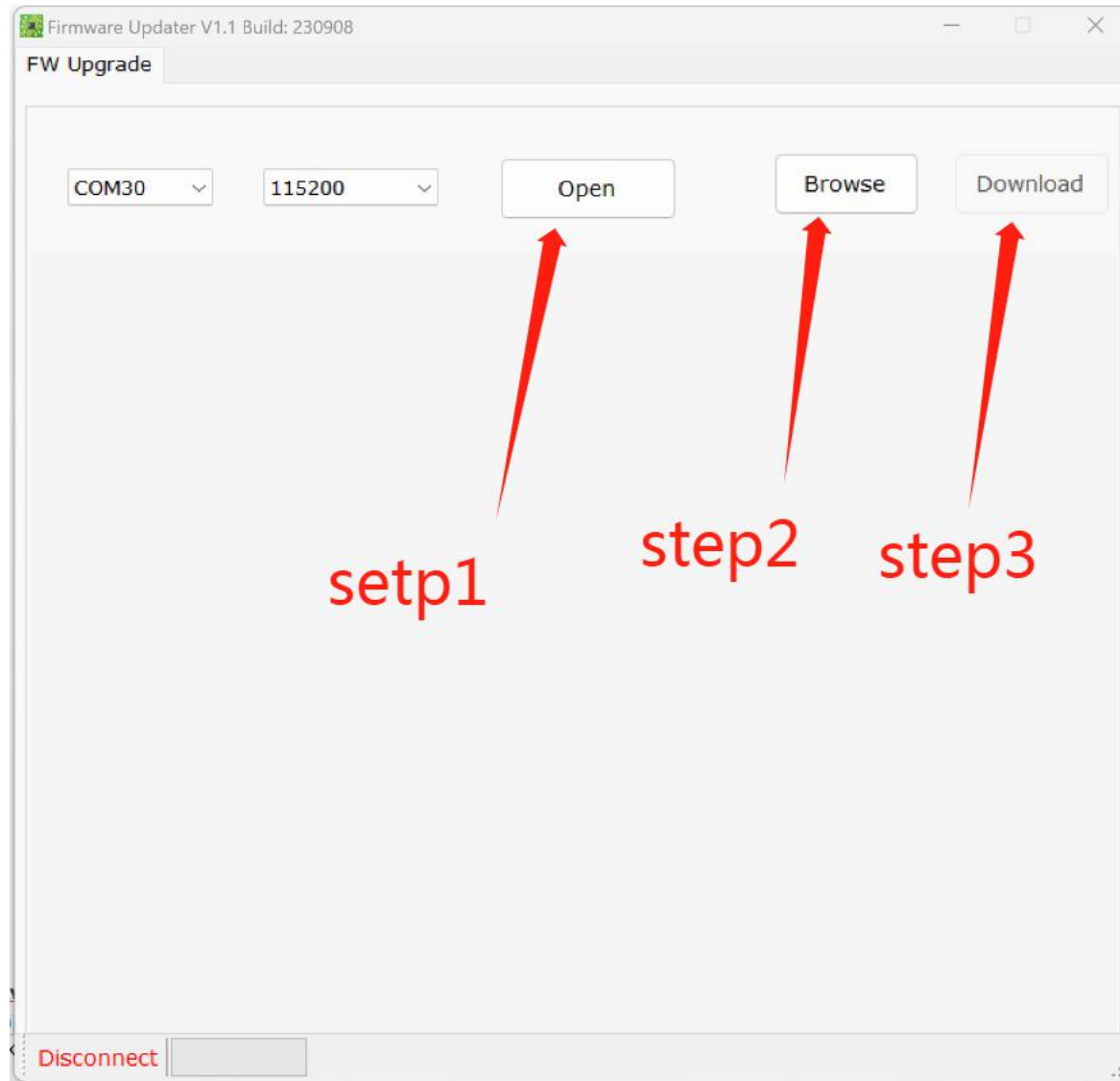
0 B1 Cur 0 0 Offset 0 TH 0

SM: xxxxxxxx yy.mm.dd

PCB: Bxx xxxxxxxx

FW:00.00

Call up firmware upgrade program



Load the file xxx.gt
Power on upgrade required

KVANT Laser Driver - V1.0.2.2 2024-06-03 15:15

COM30 XR21V1410 USB UART 364W 6.9A / 3.3A

R:25°C G:26°C B:25°C MCU:37°C P.LD:45°C P.TEC:46°C PF:33°C

Set 25.0°C TA: 1 TB: 1 TC: 1 TD: 1 **USB connect**

Input TA: 4.0A TB: 2.1A TC: 2.1A TD: 2.1A

4.99 V R1 105 29.45V Cur 138 1.90A Offset 53 TH 6

4.99 V G1 84 23.68V Cur 192 2.31A Offset 45 TH 8

4.99 V B1 61 17.61V Cur 166 3.20A Offset 36 TH 10

SN: 1074005E 2030.12.31

PCB: B92 KVANT Laser FW:04.09 Test.Version

B92x

USB driver installation required
XR21V1410 is the correct one

KVANT Laser Driver - V1.0.2.2

2024-06-03 15:15

COM30 XR21V1410 USB UART

364W 6.9A / 3.3A

Total

LD

TEC

R:25°C G:26°C B:25°C MCU:37°C P.LD:45°C P.TEC:46°C PF:33°C

Set 25.0°C TA: 1 TB: 1 TC: 1 TD: 1

Input TA: 4.0A TB: 2.1A TC: 2.1A TD: 2.1A

4.99 V R1 105 29.45V Cur 138 1.90A Offset 53 TH 6
0.00A

4.99 V G1 84 23.68V Cur 192 2.31A Offset 45 TH 8
2.29A

4.99 V B1 61 17.61V Cur 166 3.20A Offset 36 TH 10



SN: 1074005E
2030.12.31

PCB: B92
KVANT Laser
FW:04.09

Test.Version

B92x



TEC psu temperature

Platform temperature

LD psu temperature

The screenshot shows the KVANT Laser Driver software interface. At the top, the window title is "KVANT Laser Driver - V1.0.2.2" and the date/time is "2024-06-03 15:15". Below the title bar, there is a dropdown menu showing "COM30 XR21V1410 USB UART" and a power status indicator "364W 6.9A / 3.3A". The main display area shows various temperature and power parameters. A red box highlights the "TA: 1" field, which is labeled "Number of TECs per channel". Other temperature fields include "TB: 1", "TC: 1", and "TD: 1". The "P.LD:45°C" field is labeled "LD psu temperature", and the "P.TEC:46°C" field is labeled "TEC psu temperature". The "PF:33°C" field is labeled "Platform temperature". The interface also shows input voltage and current settings for three channels (R1, G1, B1) and a status indicator "ON" with a laser warning symbol. The PCB model is "B92" and the firmware version is "04.09".

Channel	Temp (°C)	Input Voltage (V)	Current (A)
R	25	4.99	1.90
G	26	4.99	2.31
B	25	4.99	3.20
MCU	37	-	-
P.LD	45	-	-
P.TEC	46	-	-
PF	33	-	-

Number of TECs per channel

KVANT Laser Driver - V1.0.2.2 2024-06-03 15:15

COM30 XR21V1410 USB UART 364W 6.9A / 3.3A

R:25°C G:26°C B:25°C MCU:37°C P.LD:45°C P.TEC:46°C PF:33°C

Set 25.0°C TA: 1 TB: 1 TC: 1 TD: 1

Input TA: 4.0A TB: 2.1A TC: 2.1A TD: 2.1A

4.99 V R1 105 29.45V Cur 138 1.90A Offset 53 TH 6

0.00A

4.99 V G1 84 23.68V Cur 192 2.31A Offset 45 TH 8

2.29A

4.99 V B1 61 17.61V Cur 166 3.20A Offset 36 TH 10

E A F H E

ON

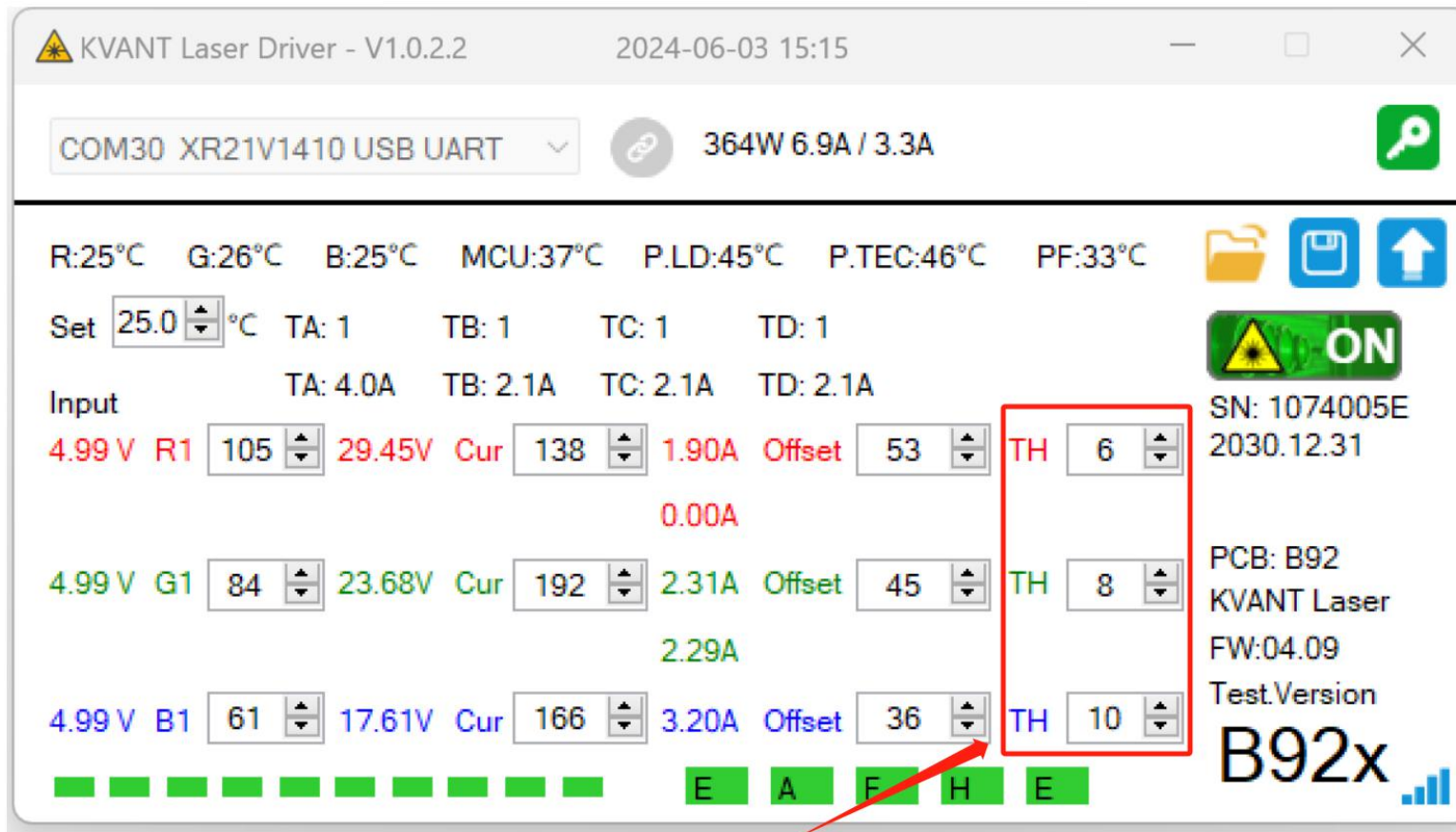
SN: 1074005E
2030.12.31

PCB: B92
KVANT Laser
FW:04.09
Test.Version
B92x

Hardware and software information

Double click on the serial number to copy it

Save the current interface and save the serial number as the file name as the archive



TH: threshold

1% white balance adjustment video

<https://drive.google.com/file/d/1FXsrQmL6obg8txOGw8IA1sbFG9BznL5p/view?usp=sharing>

KVANT Laser Driver - V1.0.2.2 2024-06-03 15:15

COM30 XR21V1410 USB UART 364W 6.9A / 3.3A

R:25°C G:26°C B:25°C MCU:37°C P.LD:45°C P.TEC:46°C PF:33°C

Set 25.0°C TA: 1 TB: 1 TC: 1 TD: 1

Input TA: 4.0A TB: 2.1A TC: 2.1A TD: 2.1A

4.99 V	R1	105	29.45V	Cur	138	1.90A	Offset	53	TH	6
4.99 V	G1	84	23.68V	Cur	192	2.31A	Offset	45	TH	8
4.99 V	B1	61	17.61V	Cur	166	3.20A	Offset	36	TH	10

ON

SN: 1074005E
2030.12.31

PCB: B92
KVANT Laser
FW:04.09
Test.Version
B92x

E A F H E

Final voltage setting check
When the RGB temperature stabilizes
LD current reaches preset value
Input signal above 4.9V (pure DC)

KVANT Laser Driver - V1.0.2.2 2024-06-03 15:15

COM30 XR21V1410 USB UART 364W 6.9A / 3.3A

R:25°C G:26°C B:25°C MCU:37°C P.LD:45°C P.TEC:46°C PF:33°C

Set 25.0°C TA: 1 TB: 1 TC: 1 TD: 1

Input TA: 4.0A TB: 2.1A TC: 2.1A TD: 2.1A

4.99 V R1 105 29.45V Cur 138 1.90A Offset 53 TH 6

4.99 V G1 84 23.68V Cur 192 2.31A Offset 45 TH 8

4.99 V B1 61 17.61V Cur 166 3.20A Offset 36 TH 10

0.00A
2.29A

ON

SN: 1074005E
2030.12.31

PCB: B92
KVANT Laser
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B92x

E A F H E




A/B/C/D-----The LD voltage is too low,increase the valtage


E/F/G/H-----The LD voltage is perfect

I/J/K/L....Z----The LD voltage is too high,reduce voltage

KVANT Laser Driver - V1.0.2.2 2024-06-03 15:15

COM30 XR21V1410 USB UART 364W 6.9A / 3.3A

R:25°C G:26°C B:25°C MCU:37°C P.LD:45°C P.TEC:46°C PF:33°C
 



Set °C TA: 1 TB: 1 TC: 1 TD: 1
  **ON**

Input TA: 4.0A TB: 2.1A TC: 2.1A TD: 2.1A
 SN: 1074005E
 2030.12.31

4.99 V R1 29.45V Cur 1.90A Offset TH












0.00A


4.99 V G1 23.68V Cur 2.31A Offset TH

2.29A

4.99 V B1 17.61V Cur 3.20A Offset TH

2.29A












E
A
F
H
E

PCB: B92
 KVANT Laser
 FW:04.09
 Test.Version
B92x 

Communication module detection

Green light indicates normal operation

Red light represents communication control failure

KVANT Laser Driver - V1.0.2.2 2024-06-03 15:15

COM30 XR21V1410 USB UART 364W 6.9A / 3.3A

R:25°C G:26°C B:25°C MCU:37°C P.LD:45°C P.TEC:46°C PF:33°C

Set 25.0°C TA: 1 TB: 1 TC: 1 TD: 1

Input TA: 4.0A TB: 2.1A TC: 2.1A TD: 2.1A

4.99 V R1 105 29.45V Cur 138 1.90A Offset 53 TH 6

0.00A

4.99 V G1 84 23.68V Cur 192 2.31A Offset 45 TH 8

2.29A

4.99 V B1 61 17.61V Cur 166 3.20A Offset 36 TH 10

PCB: B92
KVANT Laser
FW:04.09
Test.Version
B92x

ON

SN: 1074005E
2030.12.31

E A F H E

MOSFET detection

Green light indicates normal operation

Red light indicates that the MOSFET is damaged

KVANT Laser Driver - V1.0.2.2 2024-06-03 15:15

COM30 XR21V1410 USB UART 364W 6.9A / 3.3A

R:25°C G:26°C B:25°C MCU:37°C P.LD:45°C P.TEC:46°C PF:33°C

Set °C TA: 1 TB: 1 TC: 1 TD: 1

Input TA: 4.0A TB: 2.1A TC: 2.1A TD: 2.1A

4.99 V	R1	<input type="text" value="105"/>	29.45V	Cur	<input type="text" value="138"/>	1.90A	Offset	<input type="text" value="53"/>	TH	<input type="text" value="6"/>
						0.00A				
4.99 V	G1	<input type="text" value="84"/>	23.68V	Cur	<input type="text" value="192"/>	2.31A	Offset	<input type="text" value="45"/>	TH	<input type="text" value="8"/>
						2.29A				
4.99 V	B1	<input type="text" value="61"/>	17.61V	Cur	<input type="text" value="166"/>	3.20A	Offset	<input type="text" value="36"/>	TH	<input type="text" value="10"/>

SN: 1074005E
2030.12.31

PCB: B92
KVANT Laser
FW:04.09
Test.Version

B92x

E A F H E

All adjustments will be automatically saved after 10 seconds of stationary operation