SONY

Technical Bulletin SWEM20-001-TB

RANK --

Revised :

Issued : December 8, 2020

Subject: How to replace OLED in ICP panel

Revised Point(s)

Issue No.

SWEM20-001-TB

Target Models / Destination

Model Name	Dest
ICP-3000	CNB
ICP-6520	CNB

Model Name	Dest
ICP-3000	SYL
ICP-6520	SYL

Model Name	Dest
ICP-3016	CNB
ICP-6530	CNB

Model Name	Dest
ICP-3016	SYL
ICP-6530	SYL

[Overview]

A new OLED with longer life is available. The former OLED is no longer available. This technical bulletin describes how to replace the former OLED with the new OLED.

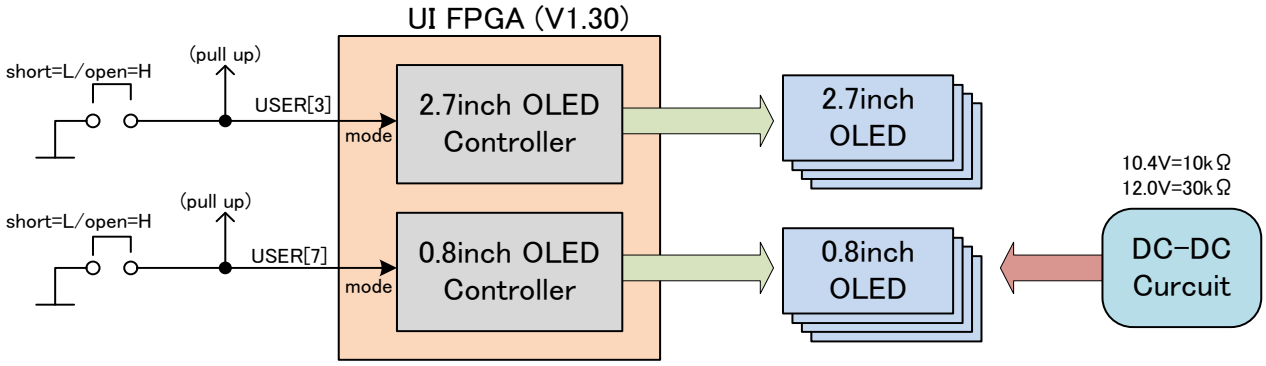
[Symptom]

Replace the former OLED if difficult to view because of failure, reduced brightness, or burn-in.

[Cause/Background]

Technical Background

The FPGA adds a function to control either the new or former OLED. By setting the mode signal line connected to the FPGA to Low/High, new and former OLEDs can be supported. However, because OLEDs of the same size cannot be controlled simultaneously with new and former OLEDs, replace all OLEDs with the same size.



In addition, the new 0.8 inch OLED requires a voltage of 12.0V and the former requires a voltage of 10.4V; therefore, the power circuit constant for the KY board must be changed. (The 2.7 inch OLED does not require a power supply voltage change.)

Part number suffix of mounting board

- The part number suffix of the KY board is -C.
- The mode setting and power supply constant are compatible with the new OLED.
- The UI FPGA is V1.30.
- The KY board on which this technical bulletin is based is equivalent to suffix -C.

[Target serial No.]

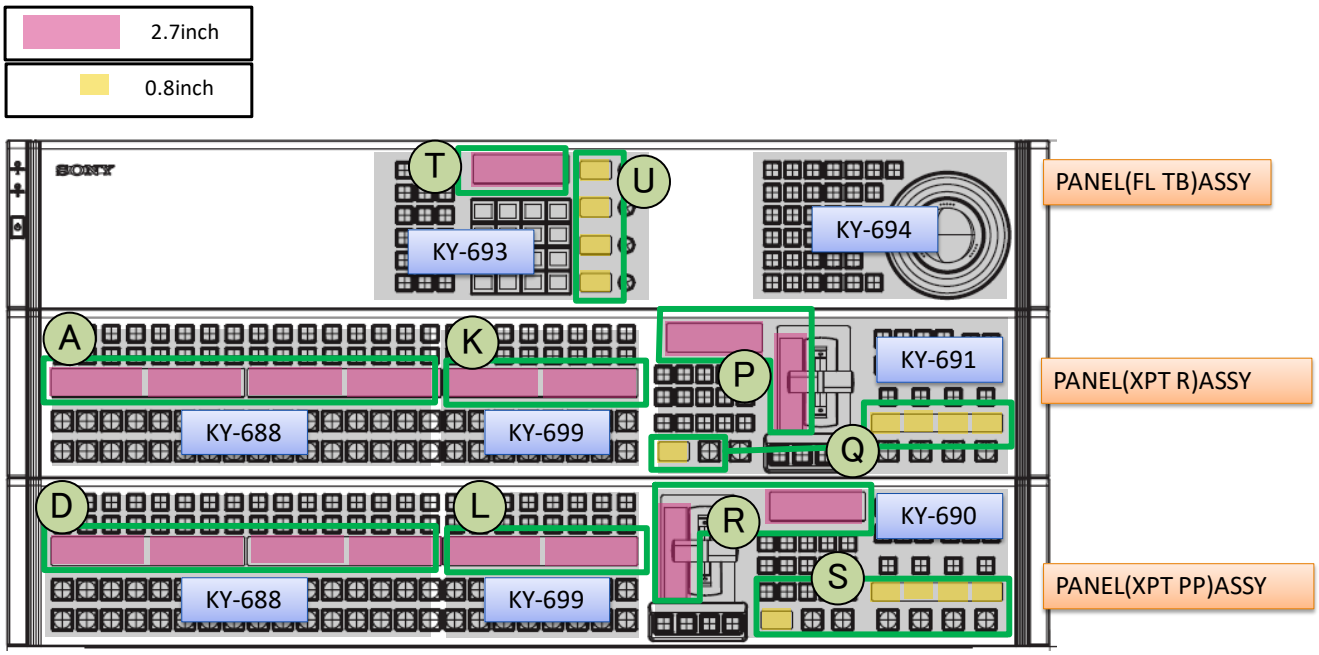
For products with the former OLED and the KY board with suffix -A or -B, replace the former with the new OLED exactly as described in this bulletin; otherwise, the new OLED will not be displayed correctly. Note all parts and procedures as described.

Model	Former OLED	New OLED
ICP-3000 (SYL)	10001 – 10723 20001 – 20258	11001 or later
ICP-3000 (CNB)	50001 – 50095 60001 – 60151	61001 or later
ICP-3016 (SYL)	10001 – 10342	11001 or later
ICP-3016 (CNB)	50001 – 50215	51001 or later
ICP-6520 (SYL)	10001 – 10049 20001 – 20040	11001 or later
ICP-6520 (CNB)	50001 – 50026 60001 – 60025	61001 or later
ICP-6530 (SYL)	10001 – 10224 20001 – 20061	11001 or later
ICP-6530 (CNB)	50001 – 50026 60001 – 60043	61001 or later

[Required parts/tools]

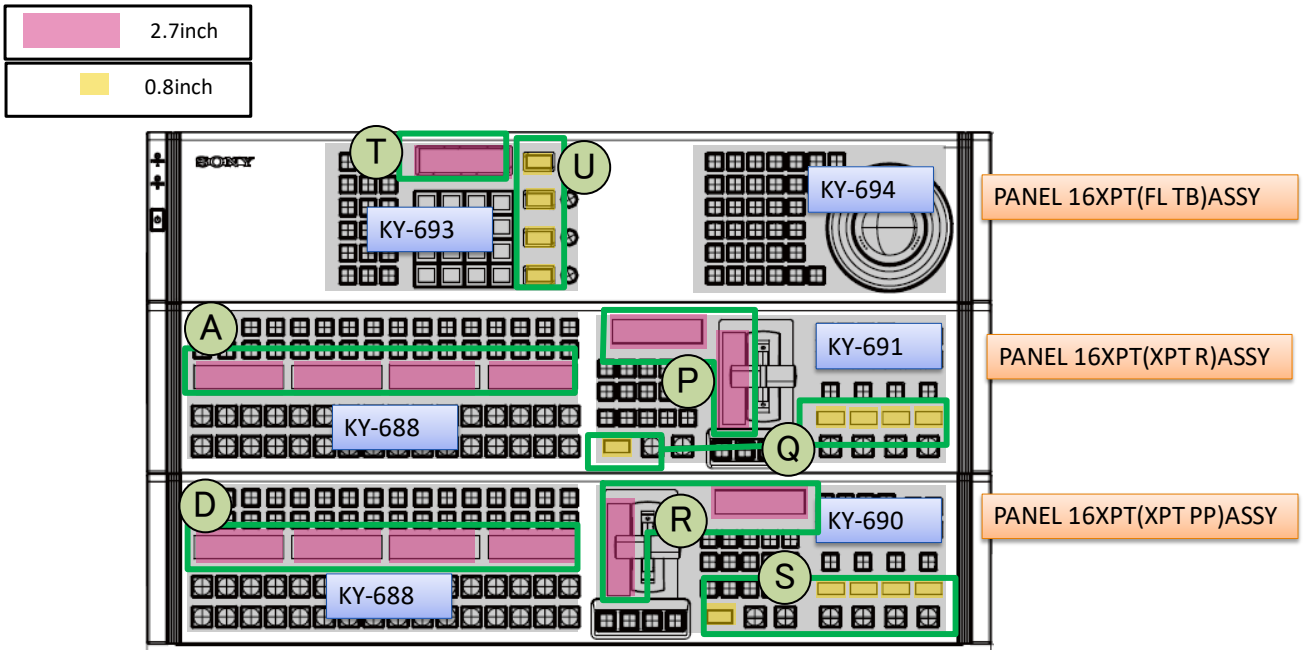
OLED replacement must be performed board by board. Identify the area containing the OLED to be replaced in the figure below, then prepare the parts for replacement as shown in the table to determine the total number of parts required.

[ICP- 3000]



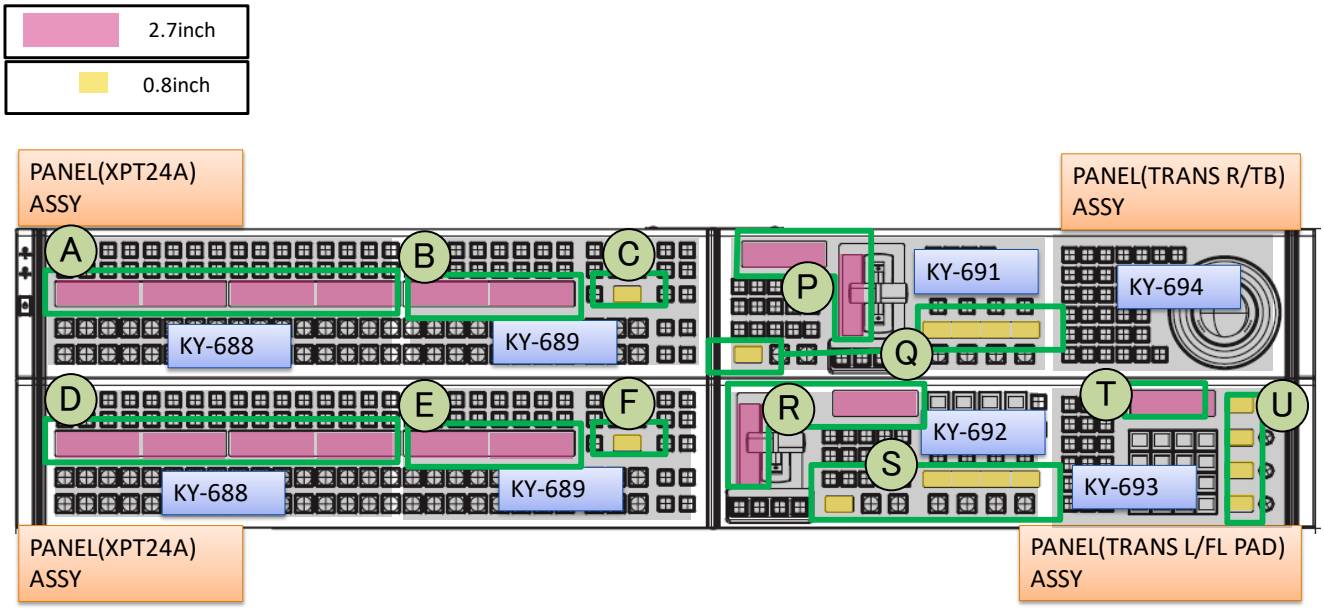
	2.7-in OLED (1-002-269-11)	0.8-in OLED (1-002-267-11)	OL Holder 2.7 (5-006-349-01)	OL Holder 0.8 (5-006-348-01)	30KΩ (1005) (1-250-530-11)	0Ω (1005) (1-218-990-81)
A	4	0	4	0	0	1 (R338)
D	4	0	4	0	0	1 (R338)
K	2	0	2	0	0	1 (R338)
L	2	0	2	0	0	1 (R338)
P	2	0	2	0	0	1 (R338)
Q	0	5	0	5	1 (R1015)	1 (R342)
R	2	0	2	0	0	1 (R338)
S	0	5	0	5	1 (R1015)	1 (R342)
T	1	0	1	0	0	1 (R338)
U	0	4	0	4	1 (R1015)	1 (R342)

[ICP- 3016]



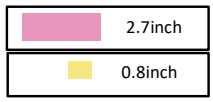
	2.7-in OLED (1-002-269-11)	0.8-in OLED (1-002-267-11)	OL Holder 2.7 (5-006-349-01)	OL Holder 0.8 (5-006-348-01)	30KΩ (1005) (1-250-530-11)	0Ω (1005) (1-218-990-81)
A	4	0	4	0	0	1 (R338)
D	4	0	4	0	0	1 (R338)
P	2	0	2	0	0	1 (R338)
Q	0	5	0	5	1 (R1015)	1 (R342)
R	2	0	2	0	0	1 (R338)
S	0	5	0	5	1 (R1015)	1 (R342)
T	1	0	1	0	0	1 (R338)
U	0	4	0	4	1 (R1015)	1 (R342)

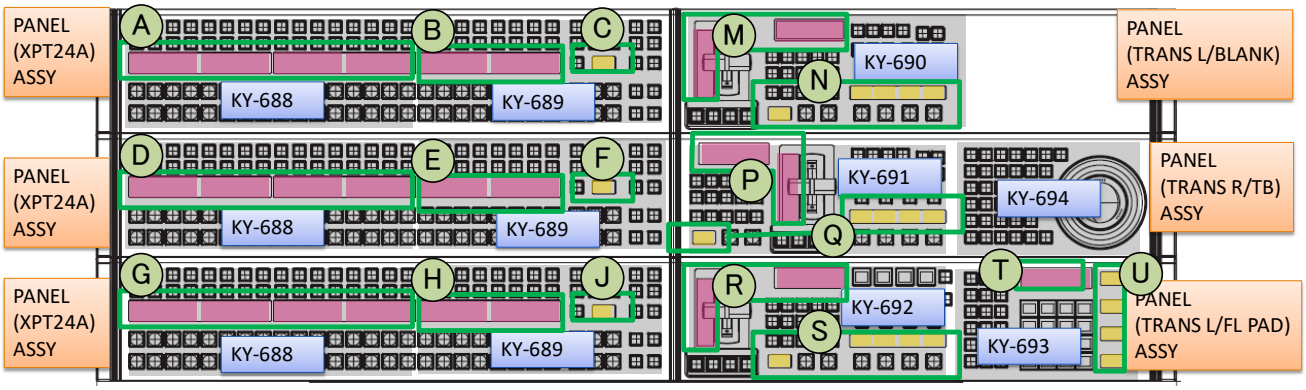
[ICP- 6520]



	2.7-in OLED (1-002-269-11)	0.8-in OLED (1-002-267-11)	OL Holder 2.7 (5-006-349-01)	OL Holder 0.8 (5-006-348-01)	30KΩ(1005) (1-250-530-11)	0Ω(1005) (1-218-990-81)
A	4	0	4	0	0	1 (R338)
B	2	0	2	0	0	1 (R338)
C	0	1	0	1	1 (R1011)	1 (R342)
D	4	0	4	0	0	1 (R338)
E	2	0	2	0	0	1 (R338)
F	0	1	0	1	1 (R1011)	1 (R342)
P	2	0	2	0	0	1 (R338)
Q	0	5	0	5	1 (R1015)	1 (R342)
R	2	0	2	0	0	1 (R338)
S	0	5	0	5	1 (R1015)	1 (R342)
T	1	0	1	0	0	1 (R338)
U	0	4	0	4	1 (R1015)	1 (R342)

[ICP- 6530]





	2.7-in OLED (1-002-269-11)	0.8-in OLED (1-002-267-11)	OL Holder 2.7 (5-006-349-01)	OL Holder 0.8 (5-006-348-01)	30KΩ (1005) (1-250-530-11)	0Ω (1005) (1-218-990-81)
A	4	0	4	0	0	1 (R338)
B	2	0	2	0	0	1 (R338)
C	0	1	0	1	1 (R1011)	1 (R342)
D	4	0	4	0	0	1 (R338)
E	2	0	2	0	0	1 (R338)
F	0	1	0	1	1 (R1011)	1 (R342)
G	4	0	4	0	0	1 (R338)
H	2	0	2	0	0	1 (R338)
J	0	1	0	1	1 (R1011)	1 (R342)
M	2	0	2	0	0	1 (R338)
N	0	5	0	5	1 (R1015)	1 (R342)
P	2	0	2	0	0	1 (R338)
Q	0	5	0	5	1 (R1015)	1 (R342)
R	2	0	2	0	0	1 (R338)
S	0	5	0	5	1 (R1015)	1 (R342)
T	1	0	1	0	0	1 (R338)
U	0	4	0	4	1 (R1015)	1 (R342)

FPGA data corresponding to former and new OLEDs is required. Unzip the zip file downloaded from Sony, and save the data to USB memory.

[FPGA data]
UI_FPGA.zip

[Work procedure]

1) FPGA update

Connect the memory device with FPGA data to the USB port and select the target data in MENU 7316.10.

Device=UI , Install=V1.30 , Title = ICP-6500/3000 FPGA(KY)

When executed, the process takes approximately 11 minutes to complete.
After restarting, check the version in MENU 7316.1.

ICP6500/3000-KYxxx-FPGA Version 1.30

* V1.30 FPGA supports both new and former OLEDs by detecting the presence or absence of a resistor (R318). Therefore, it is safe to update all Panel FPGAs to V1.30, including modules that do not perform OLED replacement.

Note) Updating the UI device with a software package (V1.23 or earlier) that includes Panel FPGA V1.30 or earlier reverts to the former version. In this case, overwrite FPGA data again as described in this bulletin.

2) Panel disassembly

Disconnect the AC cable before starting replacement.

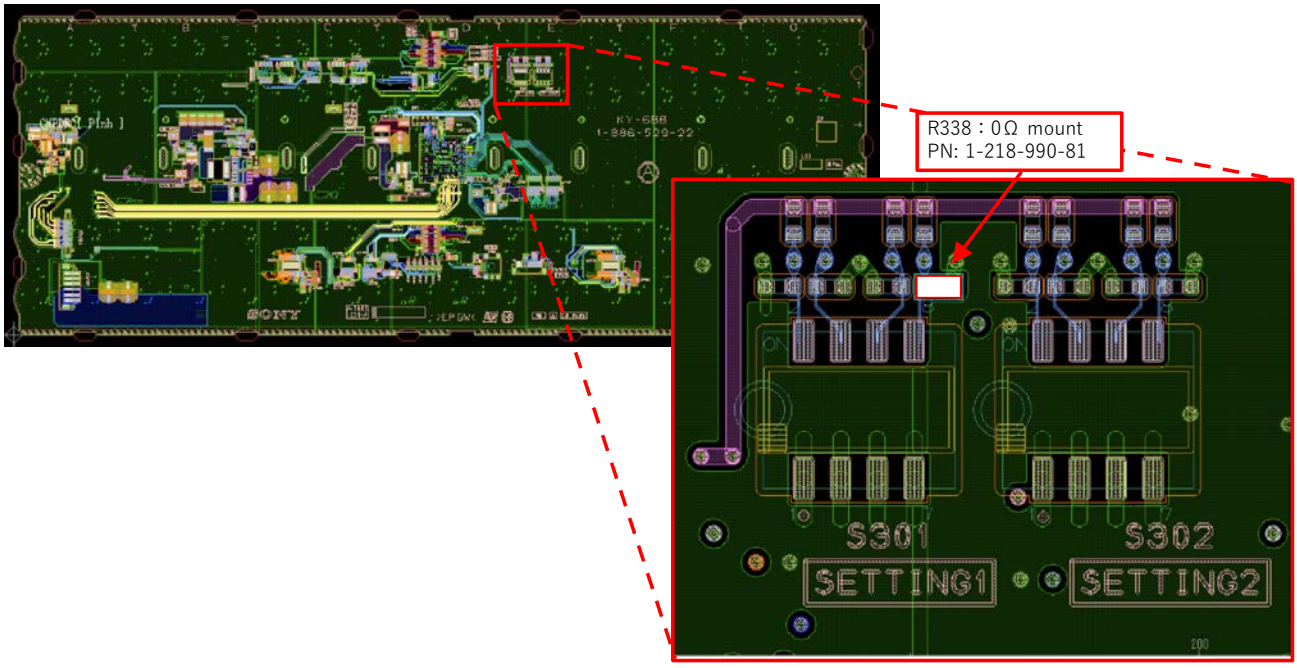
Refer to the service manual and remove all OLEDs and holders in the corresponding area.

3) Addition of change of resistor
Instructions for each exchange area.

For areas A, D and G: KY-688

・Mount a 0Ω resistor on R338.（Set FPGA to new 2.7-inch OLED mode.）

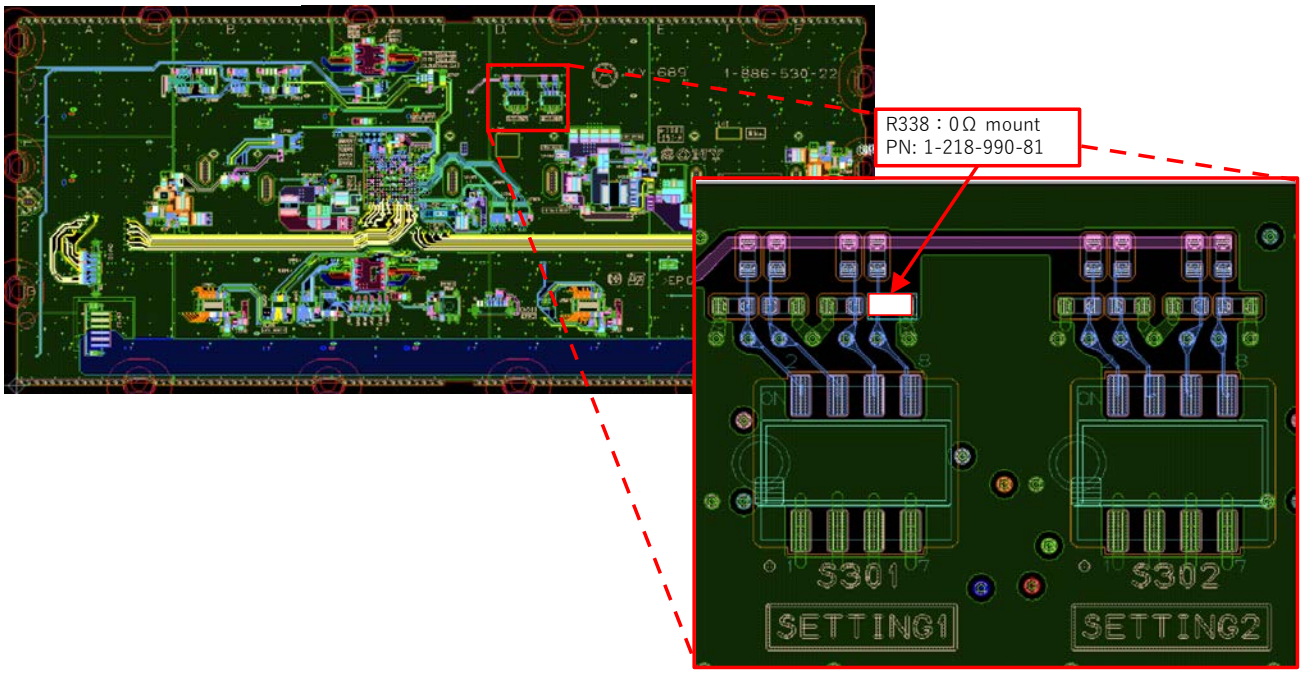
KY-688　A Side



For areas B, E and H: KY-689

・Mount a 0Ω resistor on R338.（Set FPGA to new 2.7-inch OLED mode.）

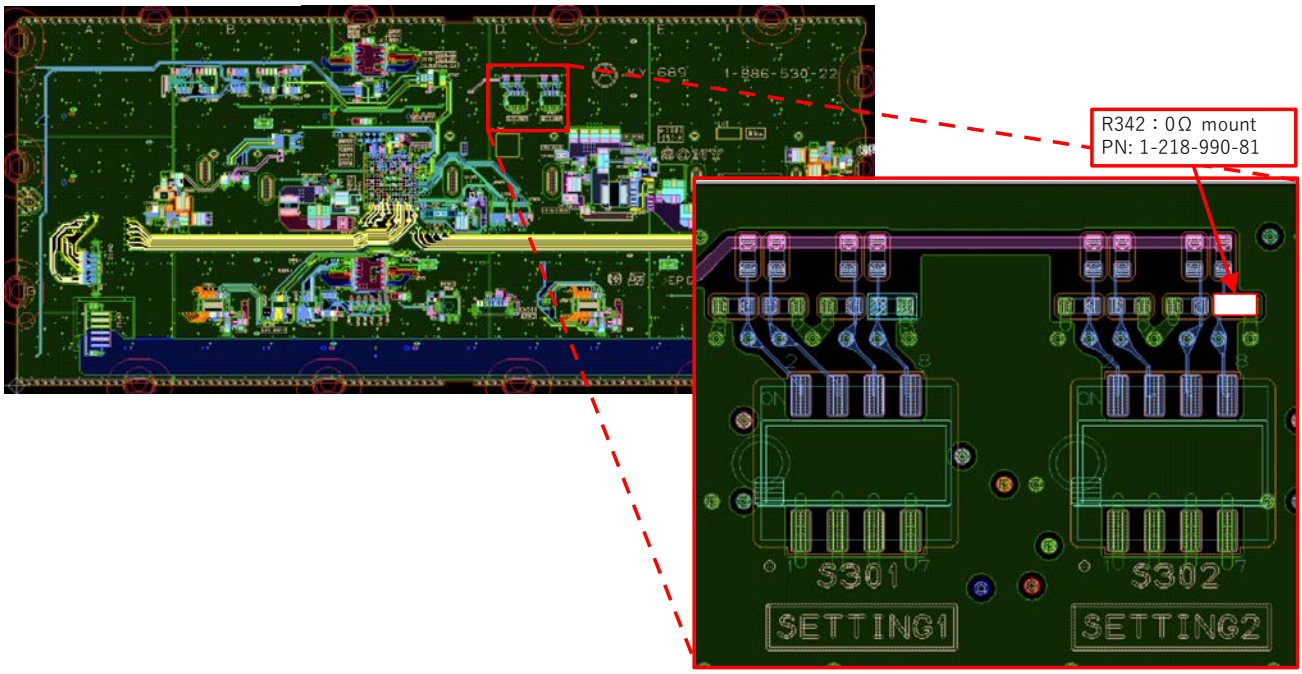
KY-689　A Side



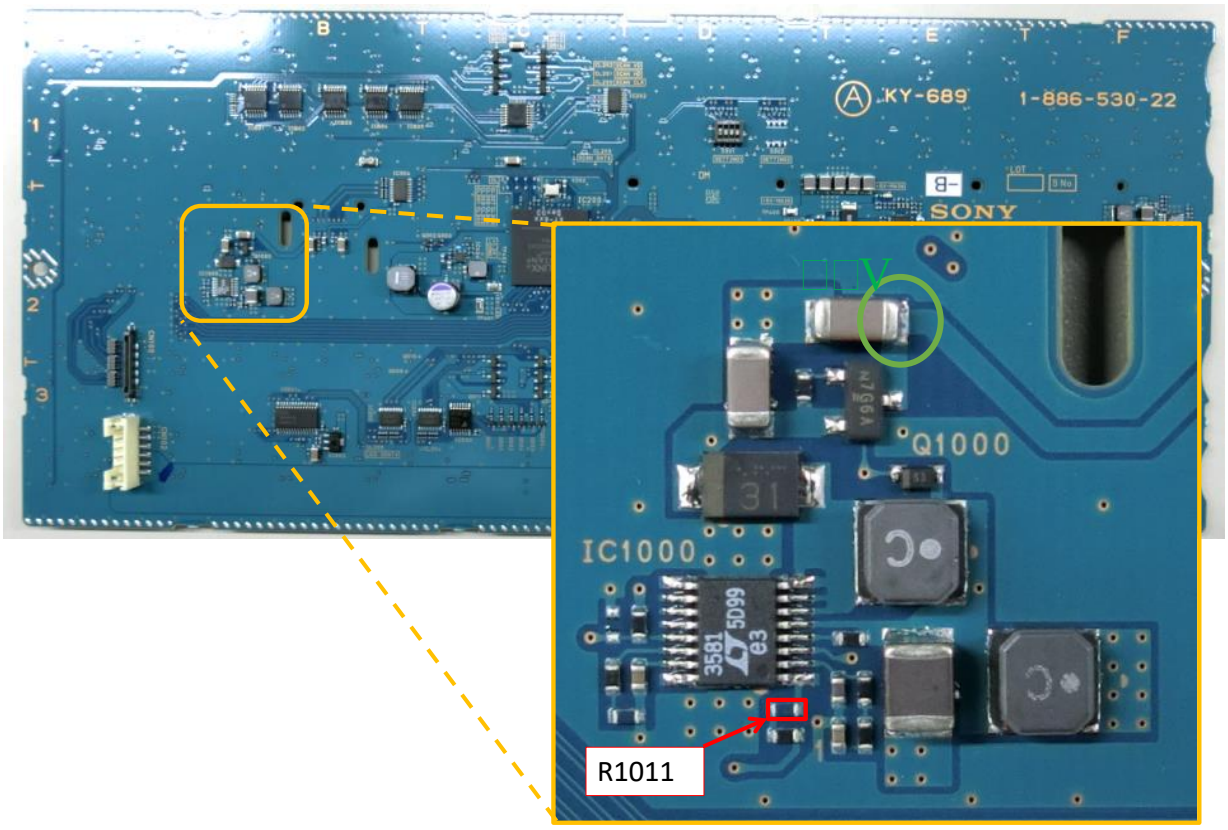
For areas C, F and J: KY-689

・Mount a 0Ω resistor on R342.（Set FPGA to new 0.8-inch OLED mode.）

KY-689　A Side



・Remove R1011 and mount a 30 kΩ resistor instead.（10.4V⇒12.0V）

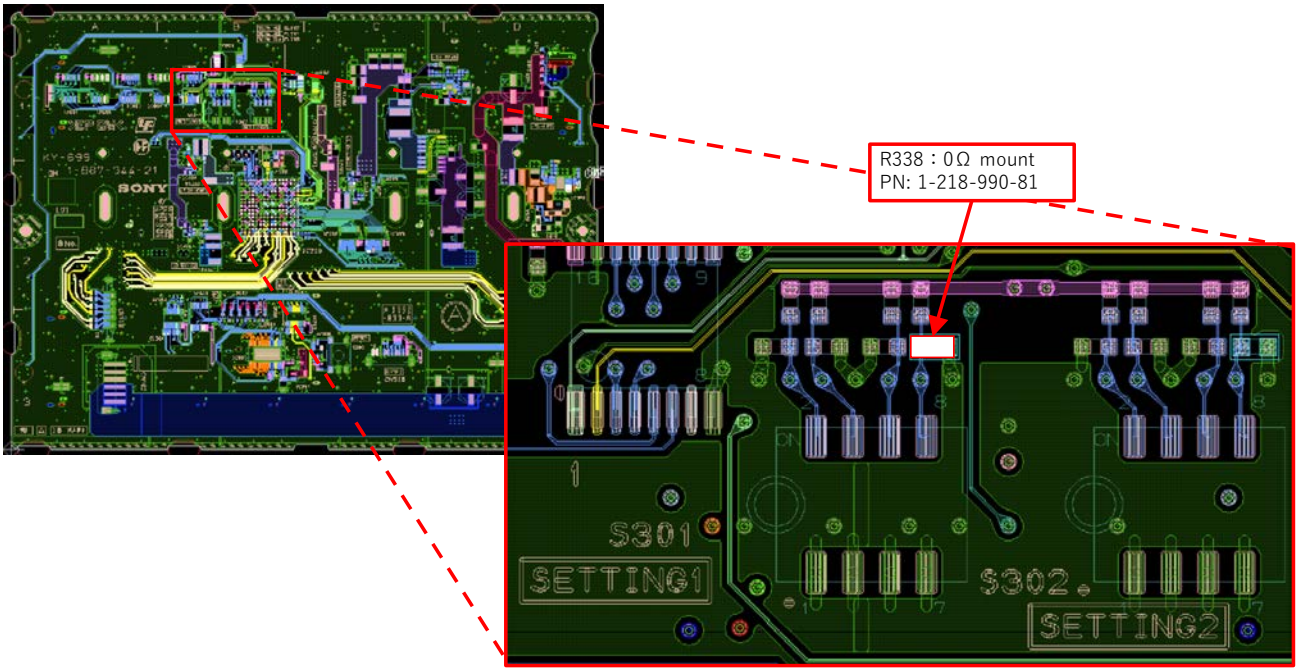


*If the repair is done correctly, the green part shows a voltage of 12V.

For areas K and L: KY-699

・Mount a 0Ω resistor on R338.（Set FPGA to new 2.7-inch OLED mode.）

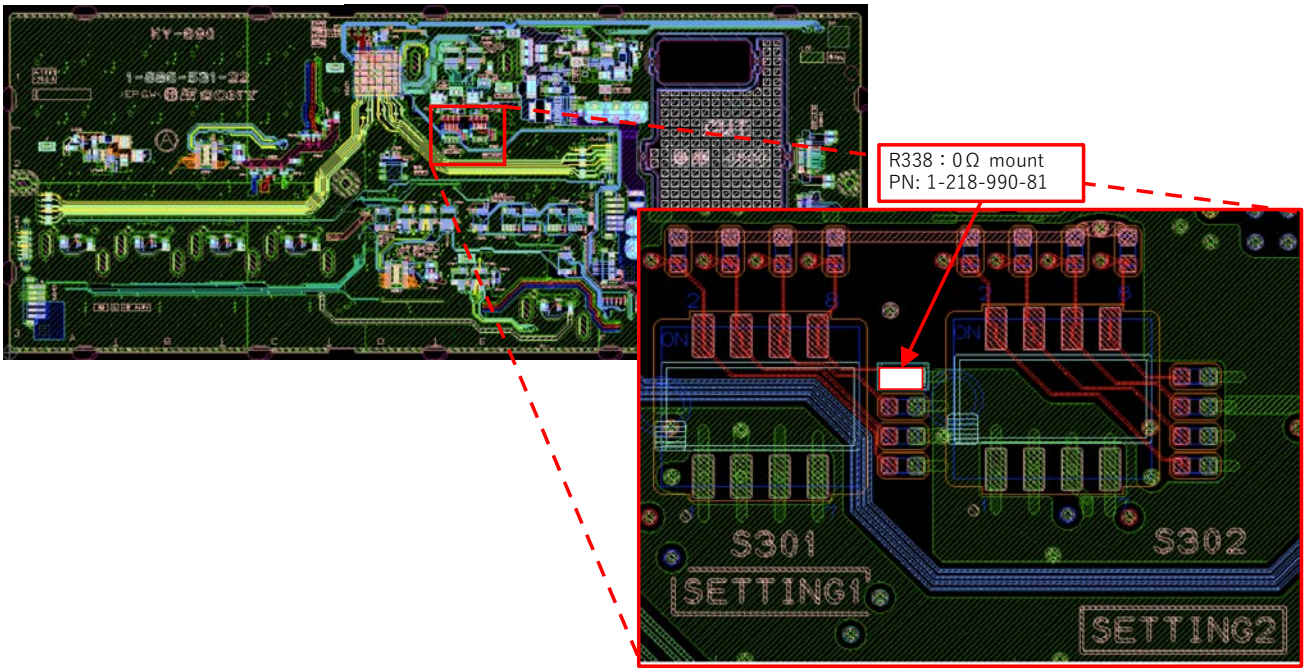
KY-699　A Side



For area M: KY-690

・Mount a 0Ω resistor on R338.（Set FPGA to new 2.7-inch OLED mode.）

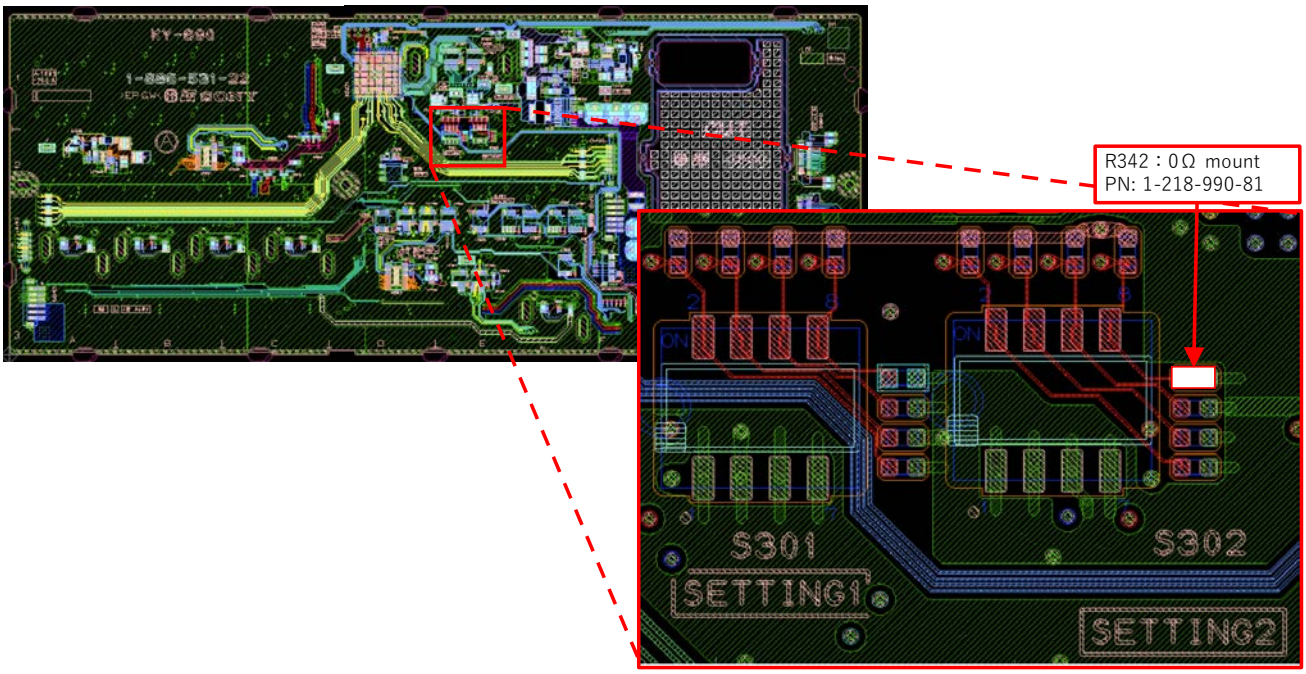
KY-690　A Side



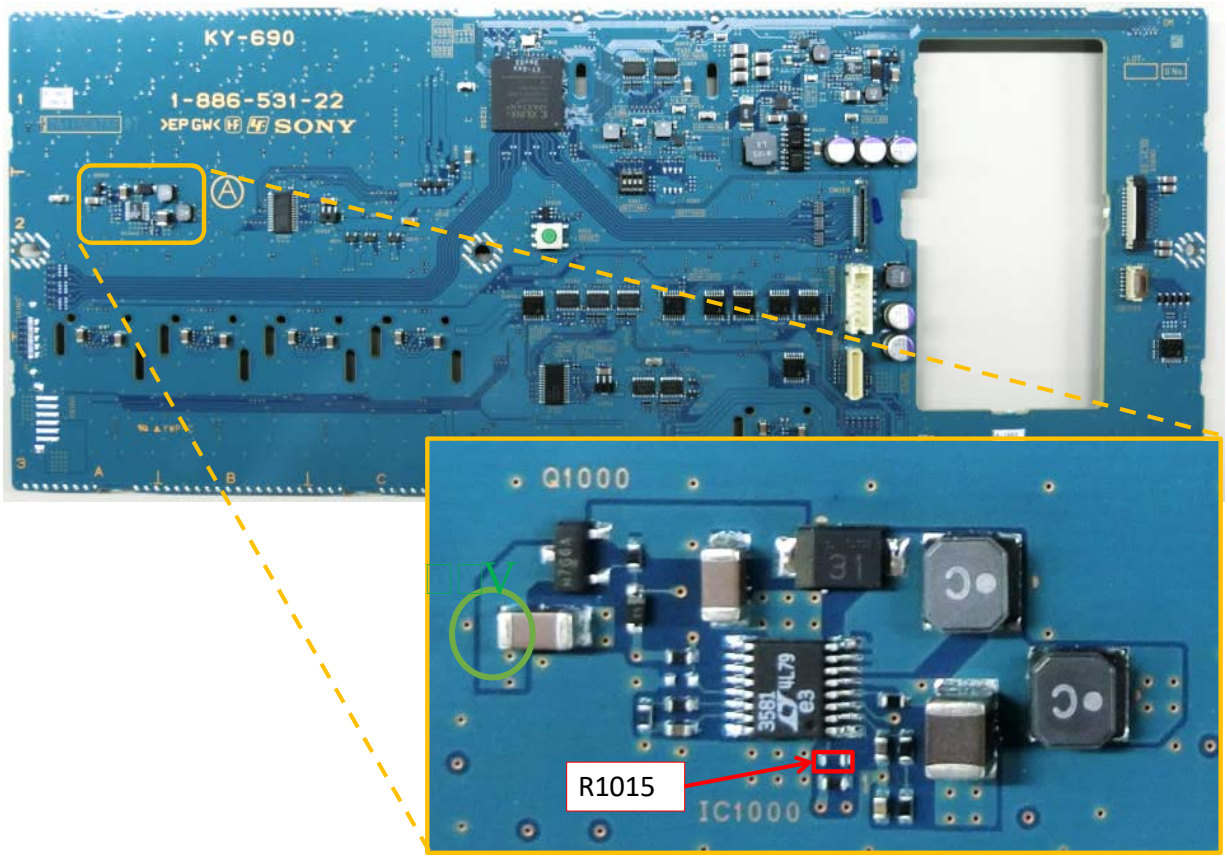
For area N: KY-690

・Mount a 0Ω resistor on R342.（Set FPGA to new 0.8-inch OLED.）

KY-690　A Side



・Remove R1015; mount a 30kΩ resistor instead.（10.4V⇒12.0V）

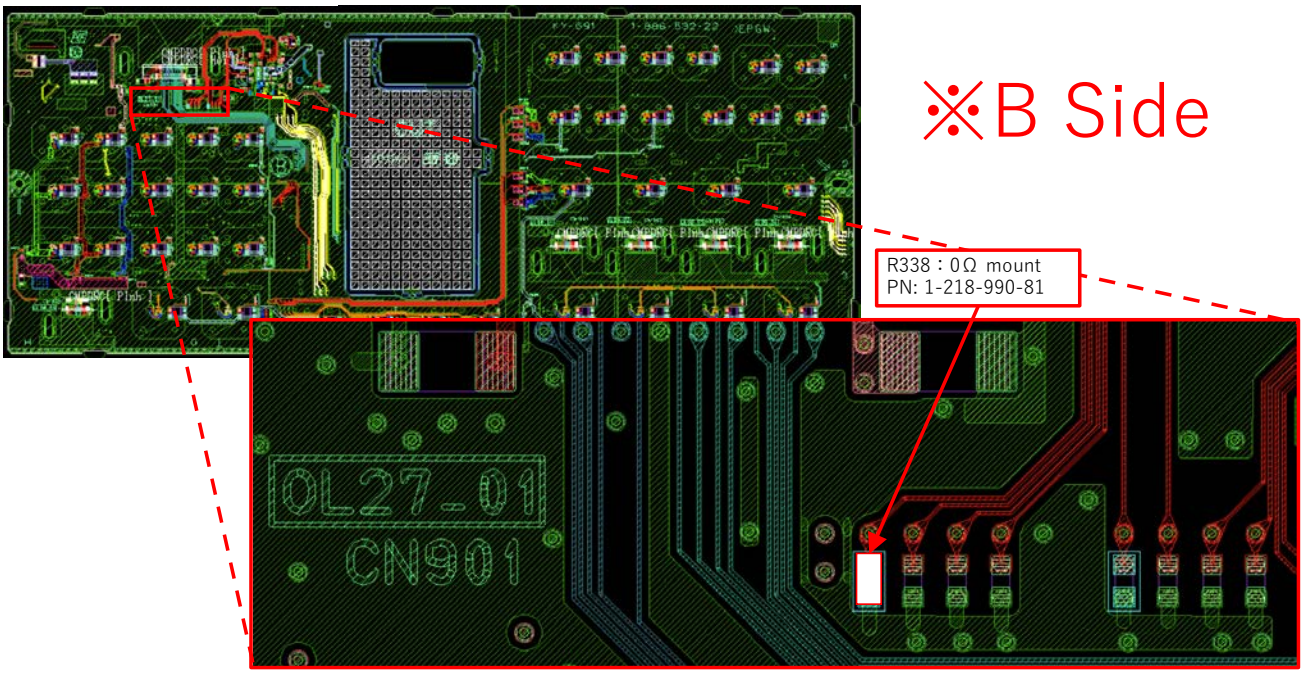


*If the repair is done correctly, the green part shows a voltage of 12V.

For area P: KY-691

・Mount a 0Ω resistor on R338.（Set FPGA to new 2.7-inch OLED mode.）

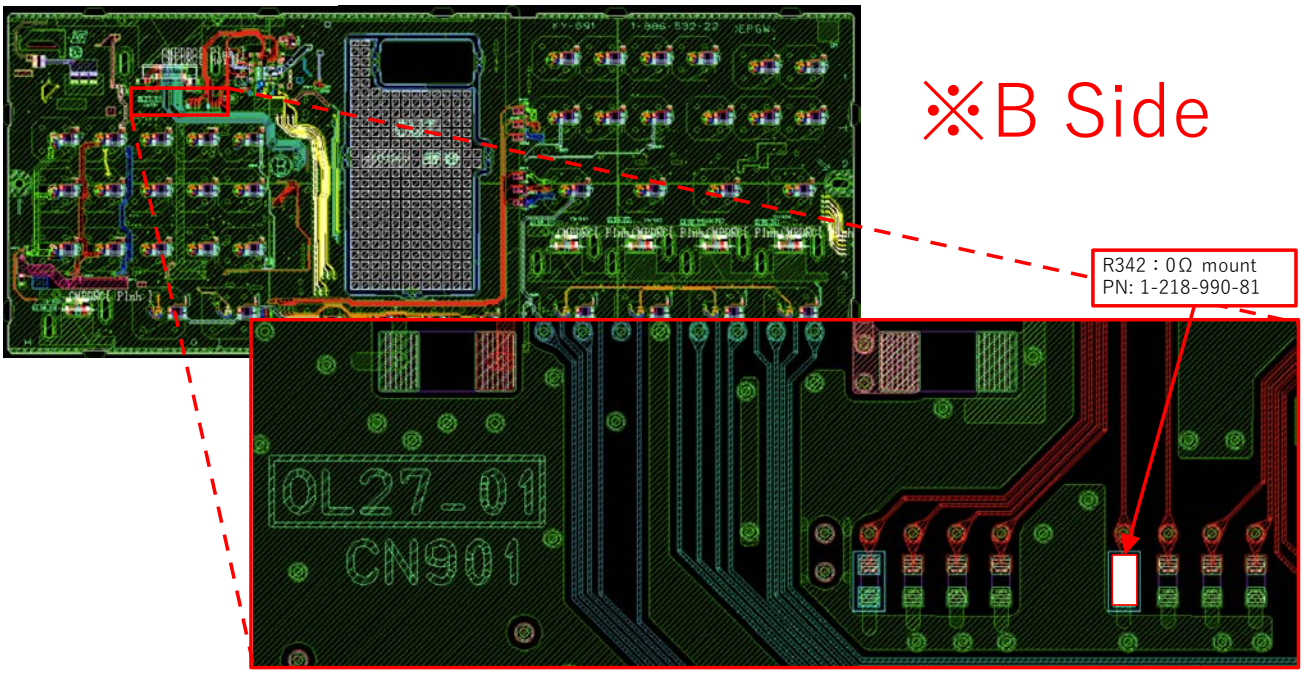
KY-691　B Side



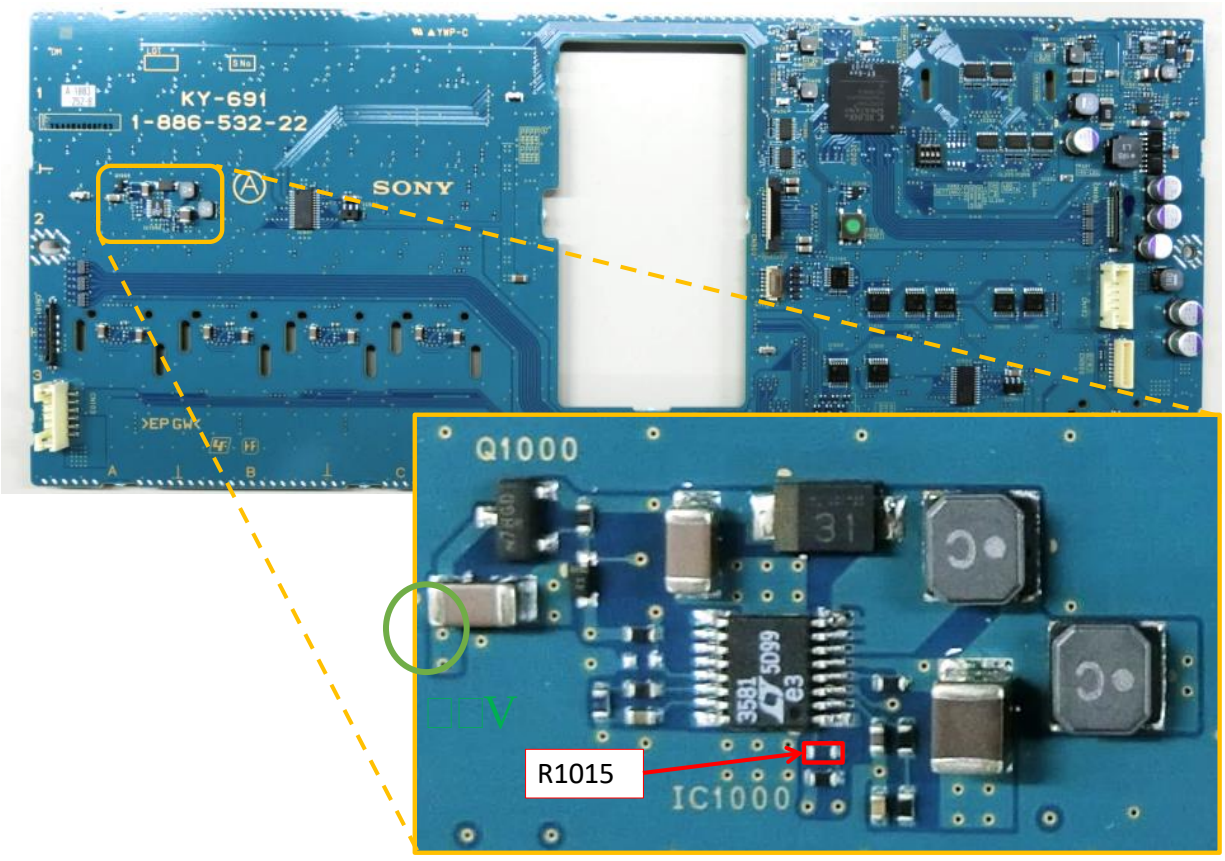
For area Q: KY-691

・Mount a 0Ω resistor on R342.（Set FPGA to new 0.8-inch OLED mode.）

KY-691　B Side



・Remove R1015 and mount a 30kΩ resistor instead.（10.4V⇒12.0V）

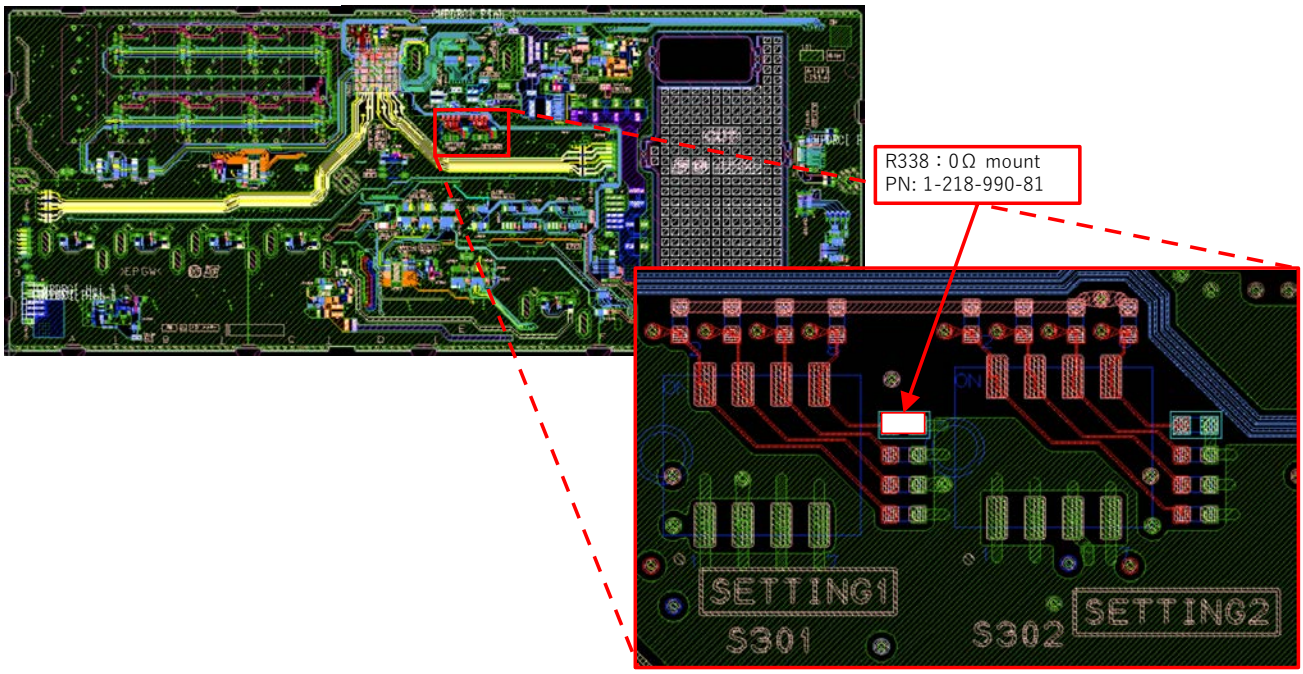


*If the repair is done correctly, the green part shows the voltage of 12V.

For area R: KY-692

・Mount a 0Ω resistor at R338. (Set FPGA to new 2.7-inch OLED mode.)

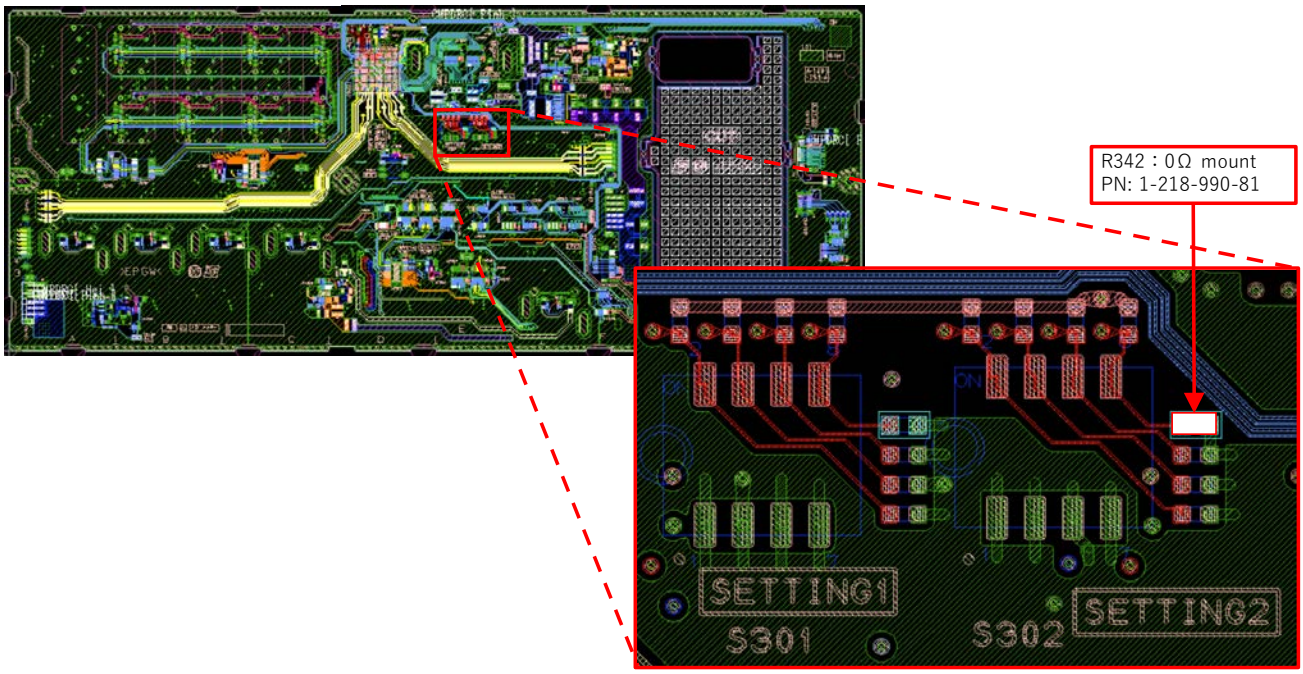
KY-692　A Side



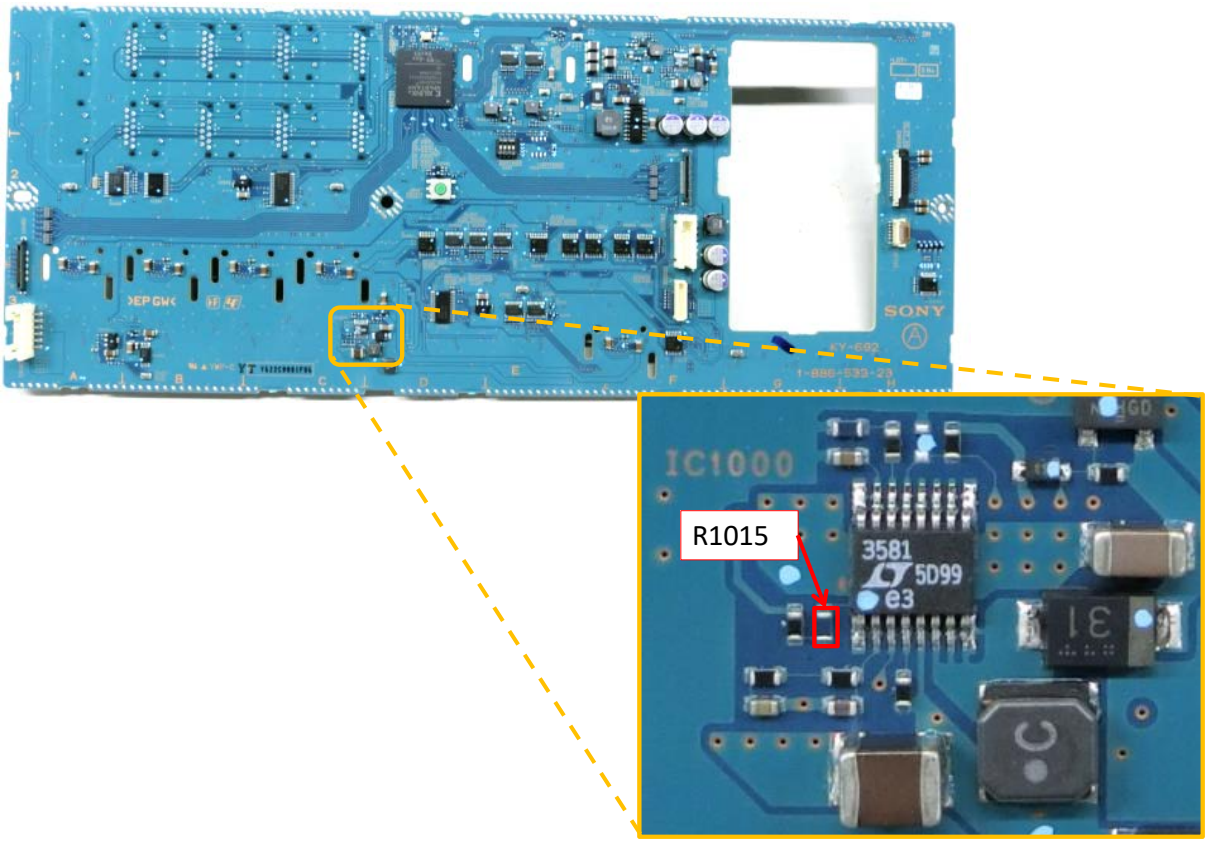
For area S: KY-692

・Mount a 0Ω resistor on R342.（Set FPGA to new 0.8-inch OLED mode.）

KY-692　A Side



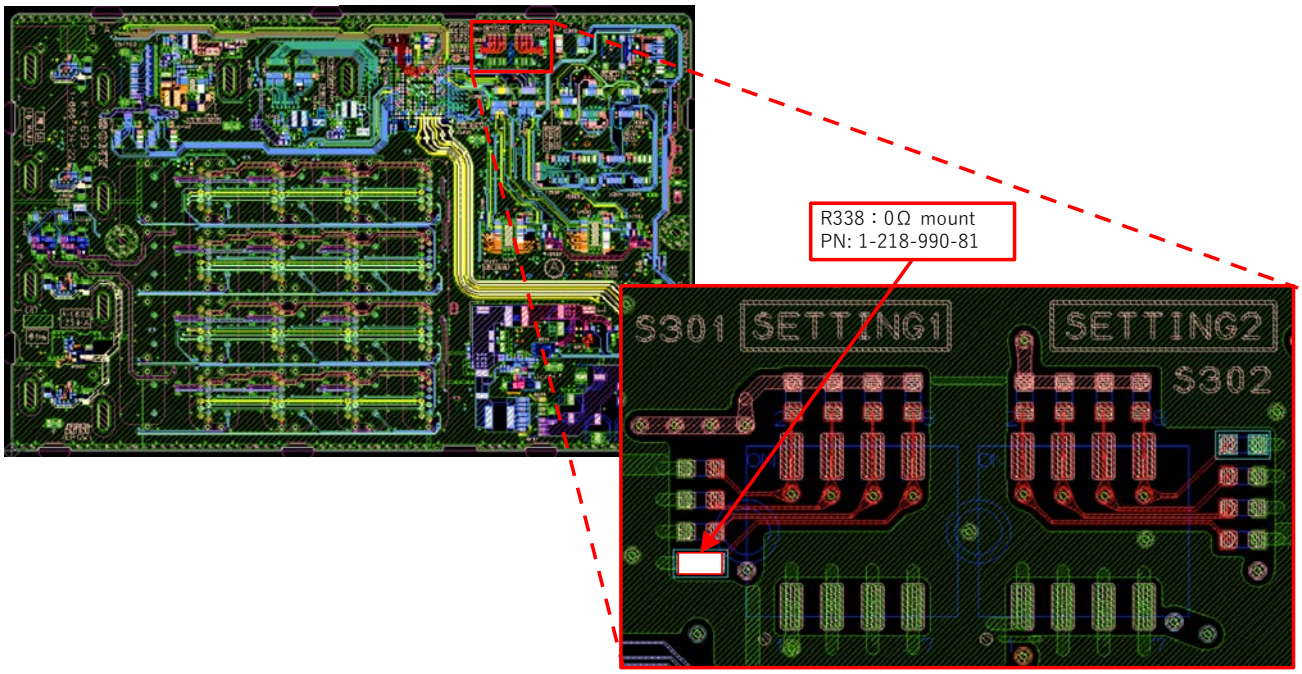
・Remove R1015 and mount a 30kΩ resistor instead.（10.4V⇒12.0V）



For area T: KY-693

・Mount a 0Ω resistor on R338.（Set FPGA to new 2.7-inch OLED mode.）

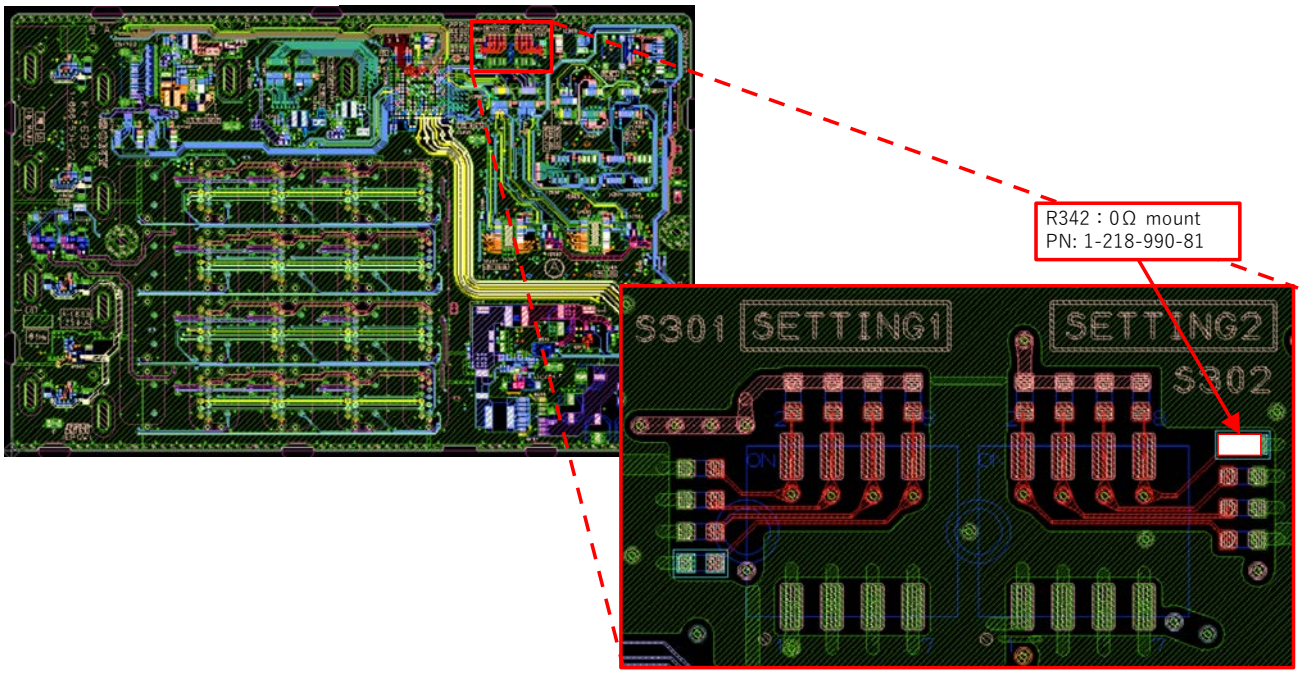
KY-693　A Side



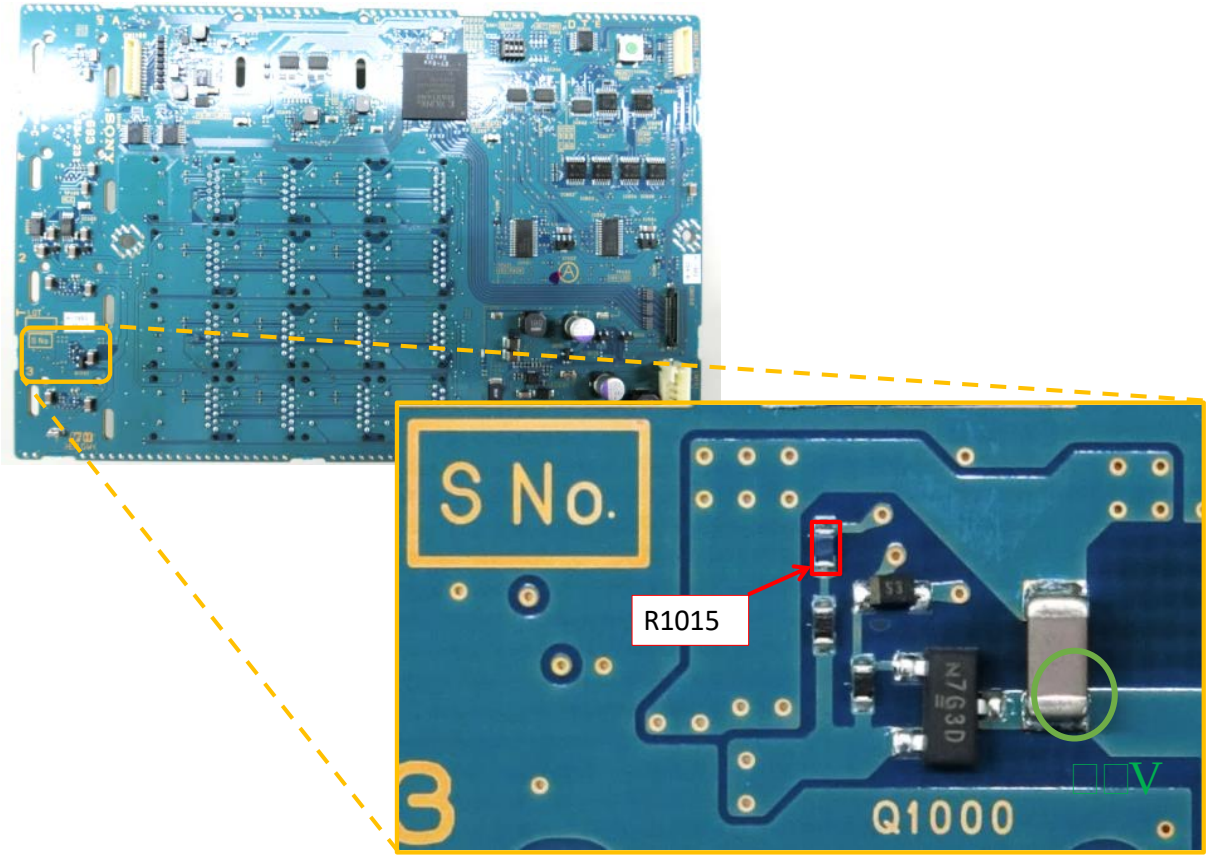
For area U: KY-693

・Mount a 0Ω resistor on R342.（Set FPGA to new 0.8-inch OLED mode.）

KY-693　A Side



・Remove R1015 and mount a 30kΩ resistor instead. (10.4V⇒12.0V)



*If the repair is done correctly, the green part shows a voltage of 12V.

4) Install new OLED and new holder.

Remove the protective sheet on the OLED surface.

5) Assembly

Assemble to the original condition.

[Check/Adjustment]

Start the system and check that the replaced OLED displays normally.

If the FPGA is the former version or the 0Ω resistor is not mounted correctly, the following symptoms will occur:

・0.8-inch OLED

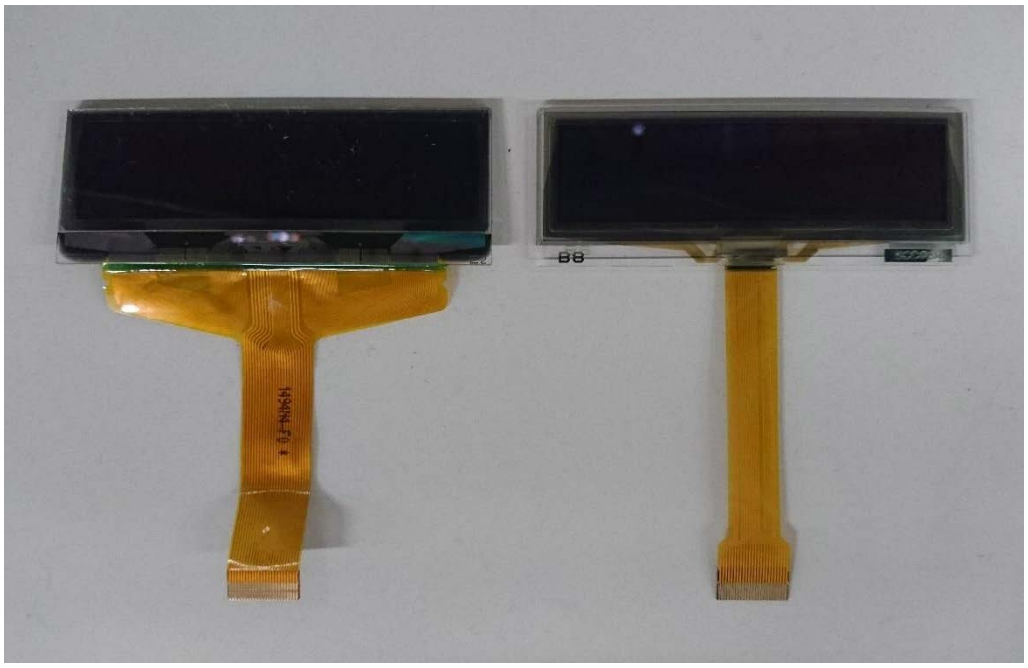
The display is shifted one dot to the left or right and line-like noise appears at the end.

・2.7-inch OLED

Looks slightly brighter than conventional ones. (Left: former, Right: new)

[Parts Outline]

New and former 2.7-inch OLED

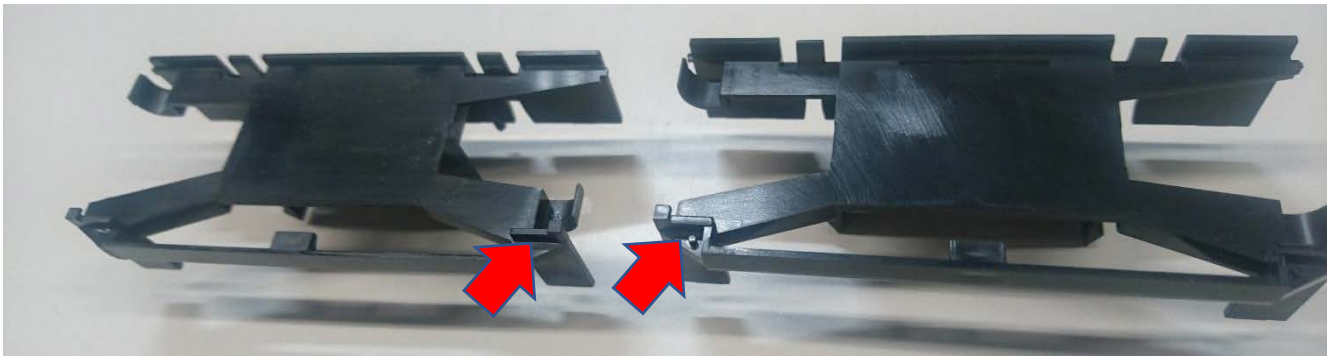


Left: former OLED / Right: new OLED

New and former 0.8-inch OLED

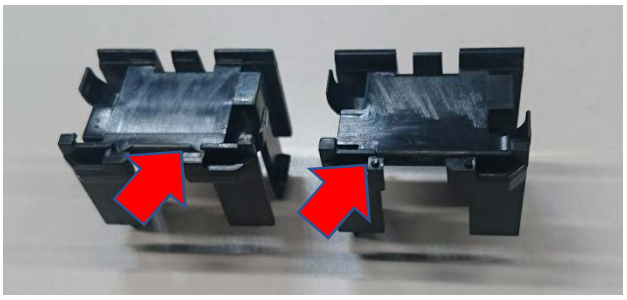
Left: former OLED / Right: new OLED

New and former 2.7-inch holder



Left: Former 2.7-inch holder / Right: New 2.7-inch holder

New and former 0.8-inch holder



Left: Former 0.8-inch holder / Right: new 0.8-inch holder