# G185HAN01.000
# EC to 004

2023/05/19

AUO Display+

# EC item (Tcon IC)

**Purpose :**

The Tcon IC (AUO-12304 Z03) will be EOL. In order to keep supply smoothly, we would like to adopt new PCBA circuit with new Tcon IC (AUO-12303 Z09).

**Replacement model :**

G185HAN01.000=> G185HAN01.004

**Verification schedule:**

1. Verification samples will come out at the 2023/05.
2. RA / EMI / ESD all test passed
3. Cut in => 2023/Q4

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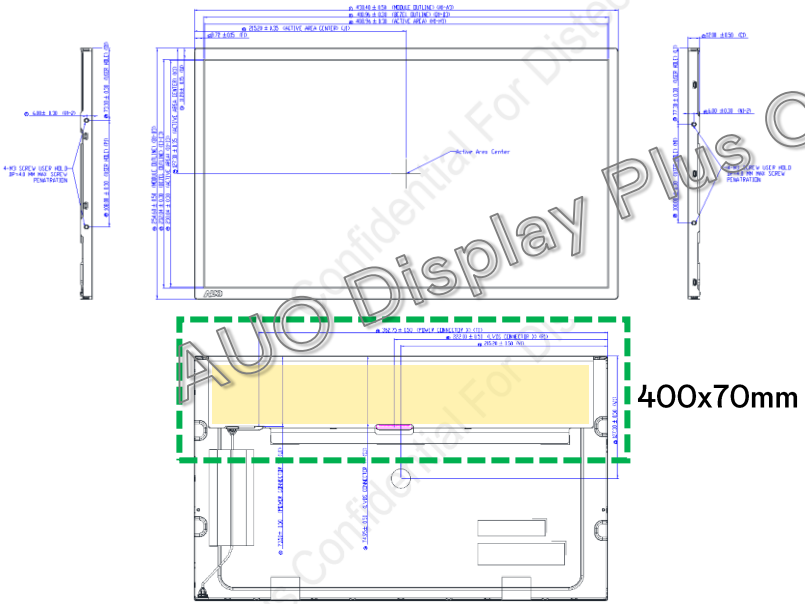
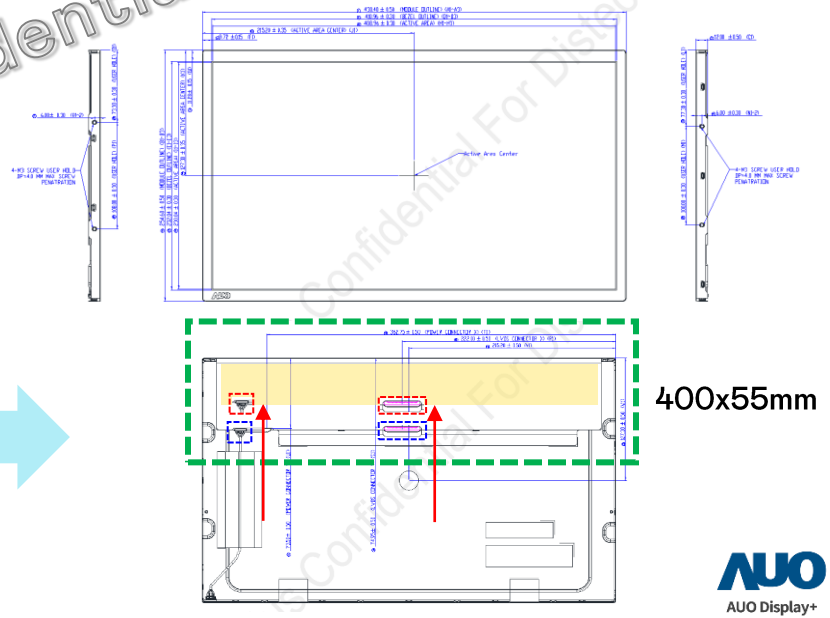
# Difference section

- Keep outline and same mounting hole.
- PCBA size change, and connector position move up 15mm.

**G185HAN01.000**




**G185HAN01.004**

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# Specification Comparison

| Panel supplier | MP (now) | EC model |
|---|---|---|
| Mode | AHVA | AHVA |
| Model name | G185HAN01.000 | G185HAN01.004 |
| Resolution | 1920 x 1080 | 1920 x 1080 |
| Active Area(mm) | 408.96 x 230.04 | 408.96 x 230.04 |
| Outline dimension(mm) (W x H x D) | 430.4 x 254.6 x 12 | 430.4 x 254.6 x 12 |
| Treatment | Antiglare (Haze 25%) / (3H) | Antiglare (Haze 25%) / (3H) |
| Contrast Ratio (Typ.) | 1000:1 | 1000:1 |
| Viewing Angle (CR≥10) (Typ.) | 89/89/89/89 | 89/89/89/89 |
| Response Time (Tr+Td) (Typ.) | 20ms | 20ms |
| Brightness (cd/m²) (Typ.) | 350 | 350 |
| NTSC | 72% | 72% |
| Weight (g) | 1200g | 1750g |
| Interface | LVDS / True 8 bit | LVDS / True 8 bit |
| Operating Temperature | -20~70 °C | -30~80 °C |
| Storage Temperature | -20~70 °C | -30~80 °C |
| LED life time | 50K | 50K |
| LED driver board | Y | Y |
| Color Coordinates | x:0.299 ; Wy:0.315 | x:0.299 ; Wy:0.315 |

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# RA report-1

| Product No | G185HAN01.0 | | Part No | 97.18G03.004 | Judgement | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Test Purpose | G185HAN01.004 EC | | | | PASS | | | | | | |
| RA No | D221216008 | | Product Stage | DVT | | | | | | | |
| Test Item | Test Condition | Test Panel | | | Test Result | | | | | | |
| THB | 50°C 80% 500h | No | Chip_Id | Shipping_No | T0★ | T100★ | T200★ | T300★ | T500 | Judgement | Judgement |
| | | D2212160080001 | | 112B94M1ZMZZZS0104 | OK | OK | OK | OK | OK | PASS | PASS |
| | | D2212160080002 | | 112B94M12LZZZS0104 | OK | OK | OK | OK | OK | PASS | |
| | | D2212160080003 | | 112B94M14BZZZS0104 | OK | OK | OK | OK | OK | PASS | |
| HTO | 80°C 500h | No | Chip_Id | Shipping_No | T0★ | T100★ | T200★ | T300★ | T500 | Judgement | Judgement |
| | | D2212160080004 | | 112B94M14LZZZS0104 | OK | OK | OK | OK | OK | PASS | PASS |
| | | D2212160080005 | | 112B94M1XDZZZS0104 | OK | OK | OK | OK | OK | PASS | |
| | | D2212160080006 | | 112B94M1UHZZZS0104 | OK | OK | OK | OK | OK | PASS | |
| HTS | 80°C 500h | No | Chip_Id | Shipping_No | T0★ | T100★ | T200★ | T300★ | T500 | Judgement | Judgement |
| | | D2212160080007 | | 112B94M12CZZZS0104 | OK | OK | OK | OK | OK | PASS | PASS |
| | | D2212160080008 | | 112B94M1WGZZZS0104 | OK | OK | OK | OK | OK | PASS | |
| | | D2212160080009 | | 112B94M1UAZZZS0104 | OK | OK | OK | OK | OK | PASS | |
| TST | -20°C/30min, 60°C /30min, 100 cycles judge 100cycles | No | Chip_Id | Shipping_No | C0★ | C100★ | | | | Judgement | Judgement |
| | | D2212160080010 | | 112B94M12EZZZS0104 | OK | OK | | | | PASS | PASS |
| | | D2212160080011 | | 112B94M13GZZZS0104 | OK | OK | | | | PASS | |
| | | D2212160080012 | | 112B94M1WFZZZS0104 | OK | OK | | | | PASS | |
| LTO | -30°C 500h | No | Chip_Id | Shipping_No | T0★ | T100★ | T200★ | T300★ | T500 | Judgement | Judgement |
| | | D2212160080013 | | 112B94M11JZZZS0104 | OK | OK | OK | OK | OK | PASS | PASS |
| | | D2212160080014 | | 112B94M11LZZZS0104 | OK | OK | OK | OK | OK | PASS | |
| | | D2212160080015 | | 112B94M1VMZZZS0104 | OK | OK | OK | OK | OK | PASS | |
| LTS | -30°C 500h | No | Chip_Id | Shipping_No | T0★ | T100★ | T200★ | T300★ | T500 | Judgement | Judgement |
| | | D2212160080016 | | 112B94M1VGZZZS0104 | OK | OK | OK | OK | OK | PASS | PASS |
| | | D2212160080017 | | 112B94M1WBZZZS0104 | OK | OK | OK | OK | OK | PASS | |
| | | D2212160080018 | | 112B94M1XLZZZS0104 | OK | OK | OK | OK | OK | PASS | |

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# RA report-2

| Optical Measurement Report | | | | | |
|---|---|---|---|---|---|
| Originator | chongfeng | Model/PCS | G185HAN01.0/5PCS | Date | 2023/4/1 |
| Test Condition | Lum.,CR,Chromaticity,Uniformity,Gary Scale,V-T,View Angle,RT,CrossTalk,Flicker | | | | |
| Test System | Detector | Inverter | DC Voltage | Warm up time | |
| FPM-520-2 | SR-UL1R | NA | 12V | 30 min | |

【Test Reason】

G185HAN01.004 EC RA test

【Judgement】

PASS

| Test Items | unit | PSS min | PSS typ | PSS max | 23.5℃ 2022/12/21 14:24 2B94M1HXAZZZS01 | 23.5℃ 2022/12/21 14:53 2B94M1UKZZZS01 | 23.5℃ 2022/12/21 15:21 2B94M1ZAZZZS01 | 23.5℃ 2022/12/21 15:47 2B94M12KZZZS01 | 23.5℃ 2022/12/21 16:14 2B94M14HZZZS01 | -4σ | mean | +4σ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Center Brightness | cd/m² | 280 | 350 | | 429.4 | 433.0 | 429.4 | 437.3 | 423.7 | 410.447 | 430.6 | 450.673 |
| Darkness (L0) | | | | | 0.25 | 0.24 | 0.24 | 0.24 | 0.24 | 0.230 | 0.24 | 0.255 |
| Contrast Ratio(CR) | | 800 | 1000 | | 1742.7 | 1815.5 | 1757.7 | 1798.8 | 1758.8 | 1651.176 | 1774.7 | 1898.245 |
| Brightness(5P Ave.) | cd/m² | | | | 414.6 | 416.3 | 413.0 | 418.7 | 407.7 | 397.582 | 414.1 | 430.546 |
| **Chromaticity** | | | | | | | | | | | | |
| Wx | --- | 0.249 | 0.299 | 0.349 | 0.301 | 0.300 | 0.301 | 0.301 | 0.298 | 0.296 | 0.300 | 0.304 |
| Wy | --- | 0.265 | 0.315 | 0.365 | 0.322 | 0.322 | 0.322 | 0.321 | 0.320 | 0.318 | 0.321 | 0.324 |
| Rx | --- | 0.596 | 0.646 | 0.696 | 0.647 | 0.646 | 0.647 | 0.646 | 0.646 | 0.644 | 0.646 | 0.648 |
| Ry | --- | 0.283 | 0.333 | 0.383 | 0.333 | 0.333 | 0.333 | 0.333 | 0.333 | 0.332 | 0.333 | 0.334 |
| Gx | --- | 0.255 | 0.305 | 0.355 | 0.296 | 0.297 | 0.297 | 0.297 | 0.296 | 0.295 | 0.296 | 0.298 |
| Gy | --- | 0.565 | 0.615 | 0.665 | 0.610 | 0.609 | 0.609 | 0.609 | 0.608 | 0.606 | 0.609 | 0.612 |
| Bx | --- | 0.105 | 0.155 | 0.205 | 0.147 | 0.147 | 0.147 | 0.148 | 0.147 | 0.147 | 0.147 | 0.148 |
| By | --- | 0.010 | 0.060 | 0.110 | 0.074 | 0.074 | 0.074 | 0.073 | 0.076 | 0.070 | 0.074 | 0.078 |
| NTSC | --- | --- | 72% | --- | 72.3 | 72.2 | 72.2 | 72.3 | 71.7 | 71.153 | 72.131 | 73.109 |
| CCT | --- | --- | --- | --- | 7316 | 7321 | 7292 | 7316 | 7482 | 7036.444 | 7345.352 | 7654.260 |

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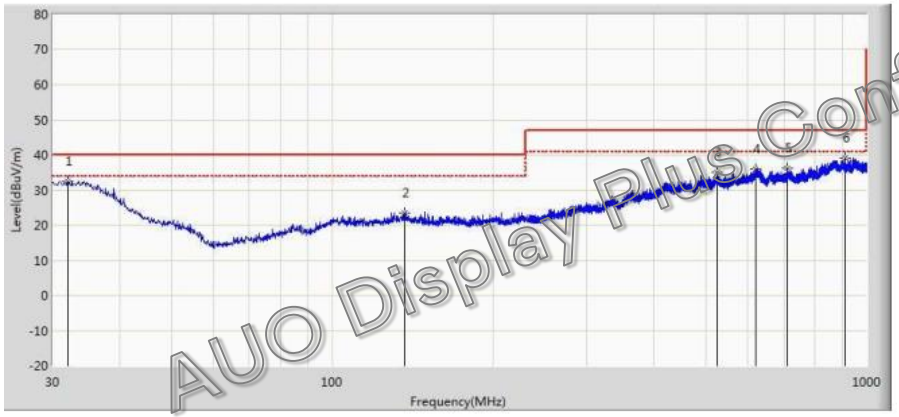
# EMI / ESD report

EMI

PASS




ESD

PASS

| Contact Discharge | | | Air Discharge | | |
|---|---|---|---|---|---|
| IEC Level | Test Voltage | Result | IEC Level | Test Voltage | Result |
| 1 | ±2kV | A | 1 | ±2kV | A |
| 2 | ±4kV | A | 2 | ±4kV | A |
| 3 | ±6kV | B | 3 | ±8kV | B |
| 4 | ±8kV | B | 4 | ±15kV | B |

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