AMOLED Cell Aging System
(EEI – CA840) v1.3

http://www.elp.co.kr

Everlasting Progress
EEI-CA840 is a Aging system for AM OLED Panel (Cell). Various kinds of reliability or aging test are available according to user setting.

**Features**

- Manual Alignment Type Aging System
- Manual Cell loading & unloading
- Aging Mode: TR Aging, OLED Aging, Reverse (3 modes)
- Cell Driving Type: Cell - EEC-P310 (6 Cells Driving) 1ea.
- Hot Plate Jig - High Temperature Aging (*Uniformity* < 5%, 60°C ± 3°C, 80°C ± 4°C)
- \( I_{ELVSS} \) current sensing function
- User friendly control program
- Easy to upgrade for new model
- Customization available on request
2. System configuration

(1) Cell aging system block diagram for panels

- 1 PC & Operation Program
- 1 Cell PG
- 1 Cell Jig (Hot Plate Type) + Temperature Controller
- System Frame
2. System configuration

(2) Aging Process

I measure → V supply → Command

Temperature Controller

Panel Driving

ELP_Aging S/W
3. System composition

- (1) System Frame
3. System composition

➤ (2) System Inside
3. System composition

(3) System Size: 1,700(W)X750(H)X1,600(D)mm - without Monitor
3. System composition

(4) Cell Pattern Generator

EEC-P310 is AMOLED Cell Pattern Generator. Panel test and aging for 6 Cells (default). Model registration and editing by PC program and downloading to EEC-P310 via USB or ROM change.

Features

- Number of signal output: 24 signals
- Number of power output: 12 powers
  - Editing of signal width is 0.1us step.
  - Rising time of signal is under 100ns.
  - Maximum level of signal is -15V~+15V.
- Maximum power output level is -25V~+25V.
  - Maximum current output: 700mA/cell.
  - AC output is available on power output.
  - USB downloading when model change.
  - User friendly control program.
3. System composition

(5) Cell Jig

<Cell Test Jig for under 5”>
## 4. Technical specification

### (1) Panel PG : EEC-P310 for 6 Cells

<table>
<thead>
<tr>
<th>Classification</th>
<th>Specification</th>
<th>Application</th>
</tr>
</thead>
</table>
| **Control Signal**<24ea> | **Gate Signal<23ea>** | Operation Voltage: -15V ~ +15V  
Level Resolution: 0.01V step  
Pulse width setting Resolution: 0.1us step  
Rising & Falling time spec: under 500ns delay (with load)  
Output current: max 100mA / signal | Signal 1 ~ Signal 23 |
| | **DEMUX SIGNAL<1ea>** | Operation Voltage: -15V ~ +15V  
Level Resolution: 0.01V step  
Pulse width setting Resolution: 0.1us step  
Rising & Falling time spec: under 500ns delay (with load)  
Output current: max 100mA / signal | TEST_DATA1~6  
(3:1 DEMUX) |
| **Power<12ea>** | **EL POWER<2ea>** | Operation Voltage: -25V ~ +25V  
Level Resolution: 0.01V step  
Output current: MAX 700mA / POWER  
AC GENERATION: 30 ~ 240Hz  
CURRENT SENSING: ELVDD, Forward 1mA | ELVDD 1~ 6 (On_Off S/W)  
ELVSS 1~6 (On_Off S/W) |
| | **Operation POWER<7ea>** | Operation Voltage: -15V ~ +15V  
Level Resolution: 0.01V step  
Output current: max 100mA / POWER  
AC GENERATION: 30 ~ 240Hz | Power I1—PowerI6  
Power 1 ~ Power 6 |
| **Data POWER<3ea, DEMUX>** | **Operation Voltage: -15V ~ +15V  
Level Resolution: 0.01V step  
Output current: max 100mA / POWER | DC_R, DC_G, DC_B |
5. Technical Features

- Easy to operate and powerful software

Main program Example

1. Test Parameters
2. Time data
3. Test items
4. Operating buttons
5. Current sensing result
5. Technical Features

- Cell PG Program: Easy to register and edit model