

# **S P E C I F I C A T I O N**

**Product : LED Backlight Driver**

**Model Name : GH574A(P6)**

**GCCT Name : GCCT574PG**

**Supportable Dimming : External PWM**

**September 2015**

**Revision History**

| No | Date     | Revision                  | Page |
|----|----------|---------------------------|------|
|    | Sep 2015 | Engineering Sample Issued |      |

**1. Application**

This specification is an users' guidance for the adoption of mating LED driver.

The target TFT LCD Module are **Mitsubishi 19"**, **AA190EA01** which is not built-in the LED driver for 8 CH type Backlight.

## 2. Electrical Characteristics

### 2.1 Absolute Maximum Ratings

| Item                  | Symbol | Spec        | Unit | Remarks |
|-----------------------|--------|-------------|------|---------|
| Input Voltage1        | Vin    | 21.6 ~ 26.4 | V    |         |
| Input Voltage2        | On/Off | 5.25        | V    |         |
| Operating Temperature | Top    | - 30 ~ 85   | °C   |         |
| Storage Temperature   | Tstg   | -30~85      | °C   |         |
| Relative Humidity     | RH     | 80          | %    |         |

### 2.2. Control Signal

| Pin No. | Symbol | Status | Action   | Remarks   |
|---------|--------|--------|----------|-----------|
| CN1 #9  | On/Off | HIGH   | LAMP-ON  | 2.4~5.25V |
|         |        | LOW    | LAMP-OFF | 0.8V MAX  |

### 2.3. Output Characteristics

| No. | Item           | SYM  | Condition            | Min. | Typ. | Max. | Unit |
|-----|----------------|------|----------------------|------|------|------|------|
| 1   | Input Voltage  | Vin  | -                    | 21.6 | 24.0 | 26.4 | Vdc  |
| 2   | Input Current  | Lin  | Vin=24.0V, DIM= 100% | -    | -    | 4.0  | A    |
| 3   | Output Voltage | Vout | Vin=24.0V, DIM= 100% | -    | 36.0 | 55.0 | Vdc  |

|   |                          |      |                      |          |       |           |        |
|---|--------------------------|------|----------------------|----------|-------|-----------|--------|
| 4 | Output Current           | Iout | Vin=24.0V, DIM= 100% | 120.0    | 130.0 | 140.0     | mAmean |
| 5 | Backlight ON/OFF Control | ON   | -                    | 2.4      | -     | 5.25      | Vdc    |
|   |                          | OFF  | -                    | -0.3     | -     | 0.8       |        |
| 6 | Frequency                | F    | Vin=24.0V, DIM= 100% | 230.0    | 280.0 | 330.0     | KHz    |
| 7 | PWM Signal               | Fpwm | -                    | -        | 180.0 | -         | Hz     |
|   |                          | Duty | Active High Level    | 20 (Min) | -     | 100 (Max) | %      |

**\*\* The Duty of the PWM Signal has to be more than 1% per a step of Brightness.**

### 3. Interface

#### 3.1 CN1 Connector (Input) : 12505WR-12(P) (YEONHO) or Equivalent

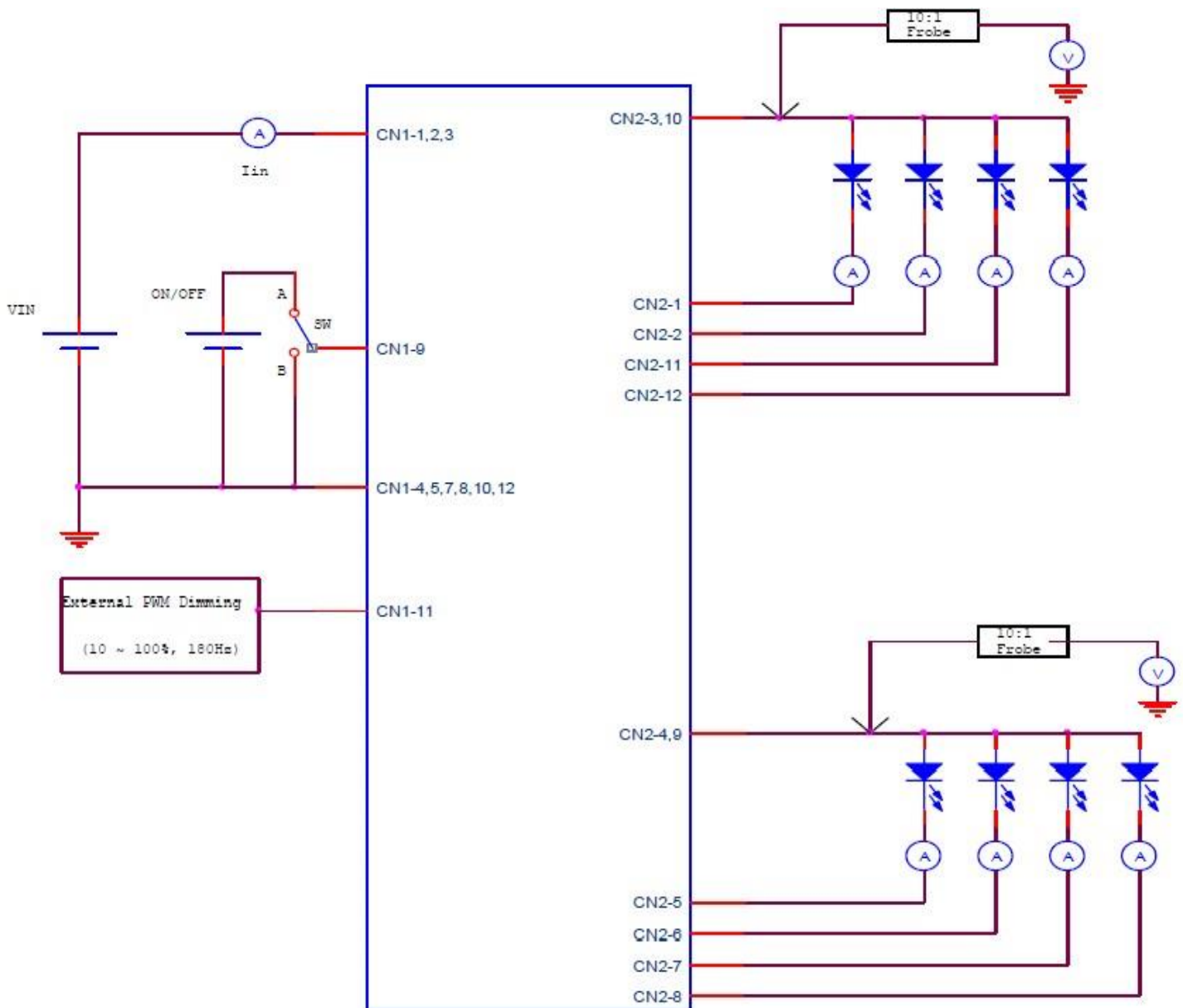
| Pin No.       | Symbol   | Description                         |
|---------------|----------|-------------------------------------|
| 1,2,3         | VIN      | Voltage Input : 24V (typ)           |
| 4,5,7,8,10,12 | GND      | Ground                              |
| 6             | N.C      | No Connection                       |
| 9             | On / Off | LED Driver On / Off Control         |
| 11            | DIM      | External PWM Dimming (0~100% 180Hz) |

#### 3.2 CN2 Connector (Output) : 20037WR-12(P) (YEONHO) or Equivalent

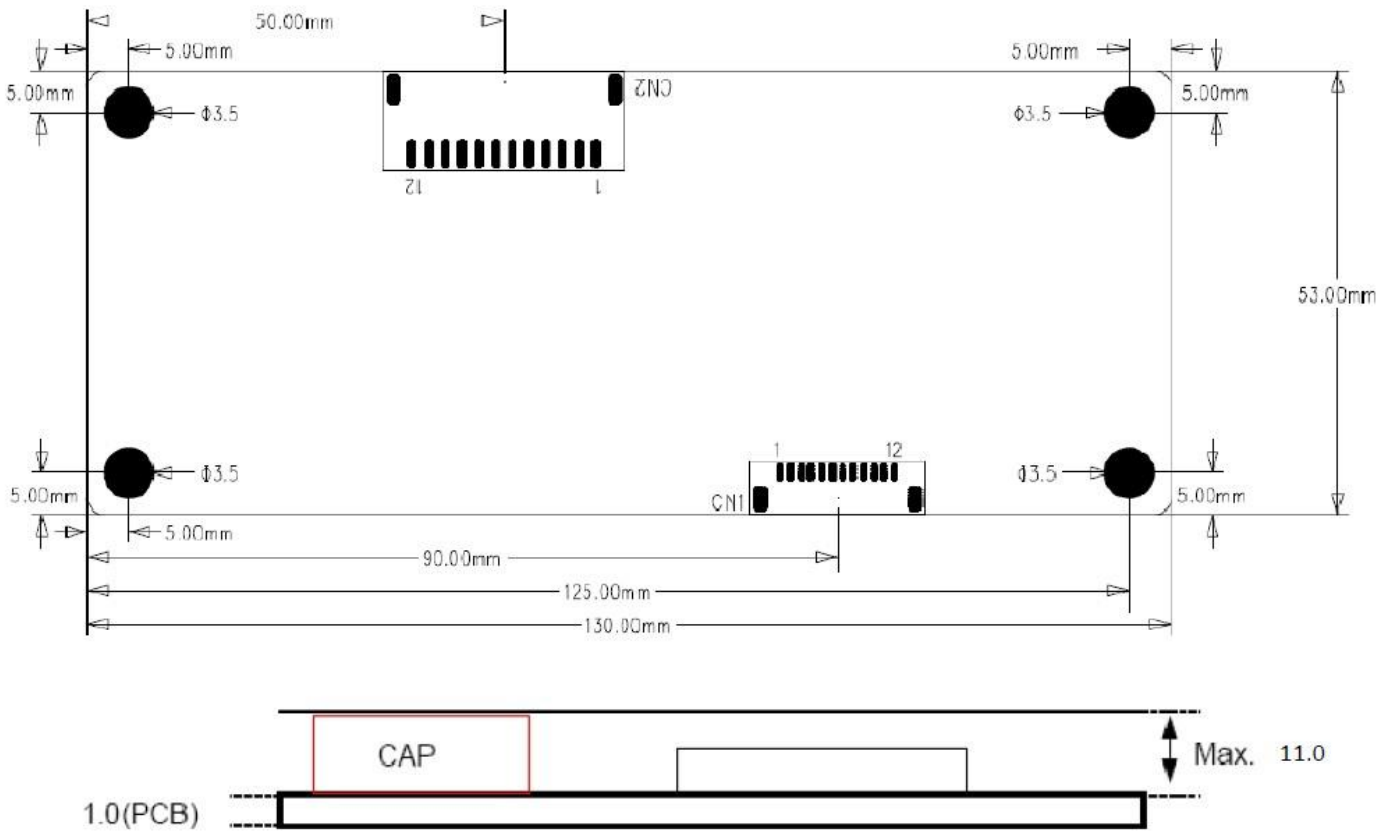
| Pin No. | Symbol | Description         |
|---------|--------|---------------------|
| 1       | R_RTN1 | Right Feedback 1    |
| 2       | R_RTN2 | Right Feedback 2    |
| 3,10    | R_VLED | Right System Output |
| 4,9     | L_VLED | Left System Output  |
| 5       | L_RTN1 | Left Feedback 1     |
| 6       | L_RTN2 | Left Feedback 2     |
| 7       | L_RTN3 | Left Feedback 3     |
| 8       | L_RTN4 | Left Feedback 4     |
| 11      | R_RTN3 | Right Feedback 3    |
| 12      | R_RTN4 | Right Feedback 4    |

### 3.3 Test Circuit

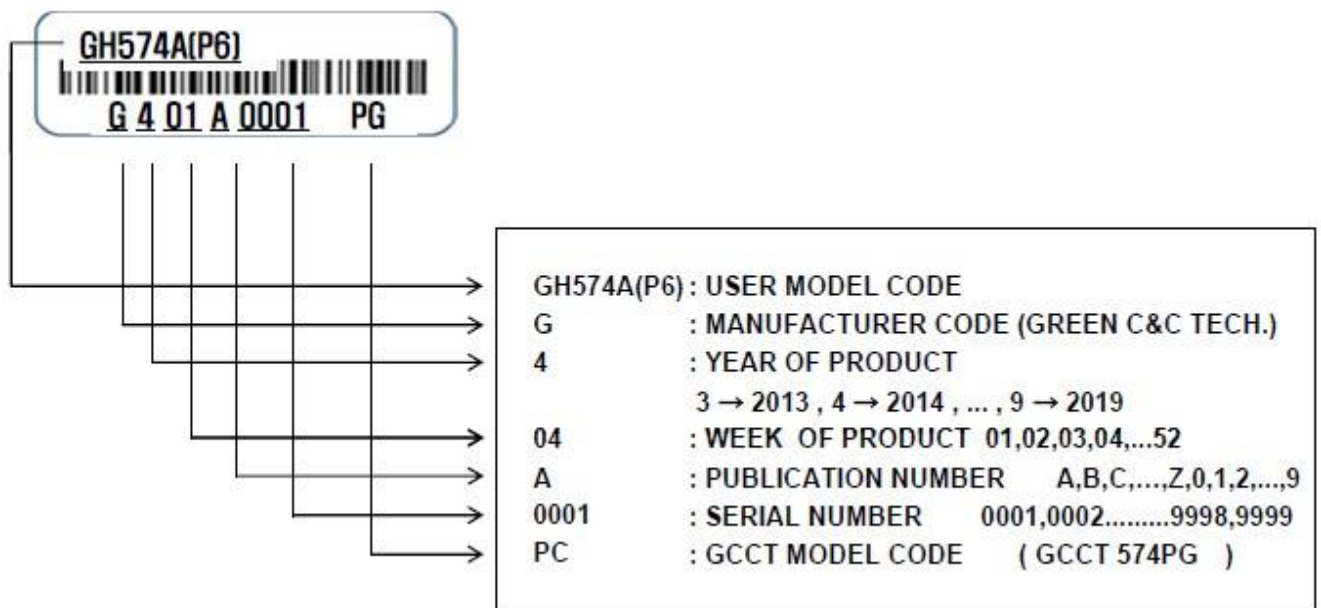
- S/W : A --> BLU ON  
B --> BLU OFF



**4. Drawing (130 mm x 53 mm, Tolerance : +0.8mm, -0.2mm)**

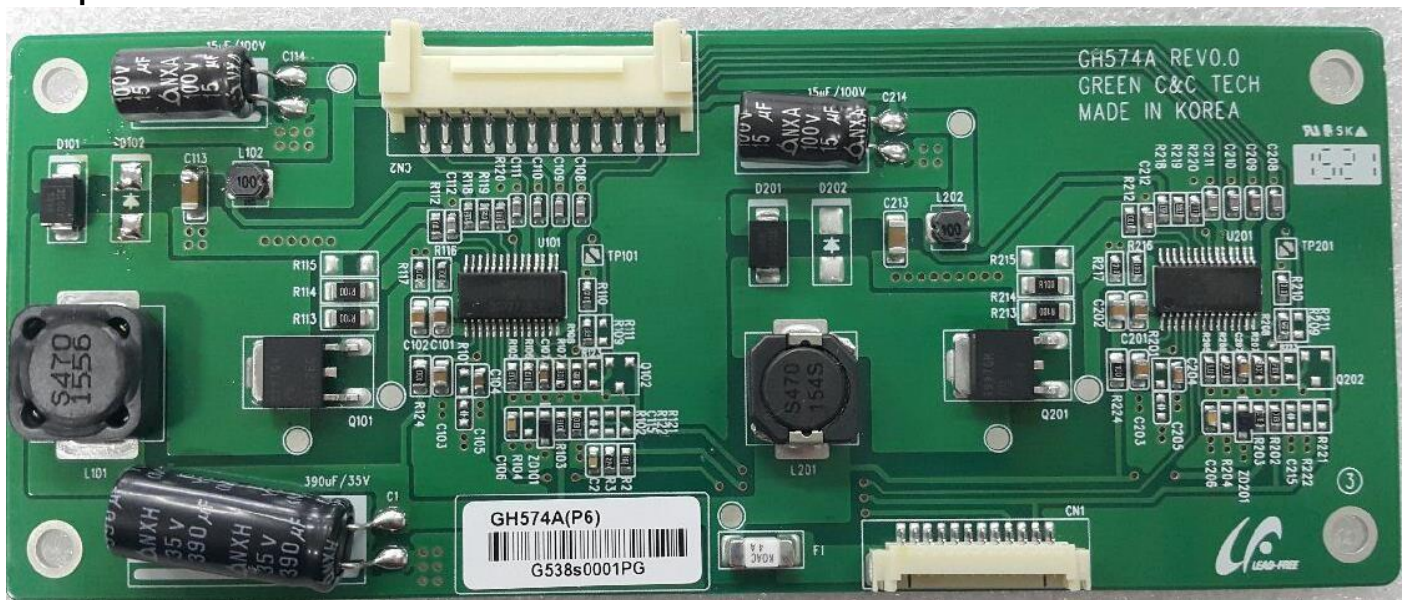


**5. Product Label on the rear surface of PCB**

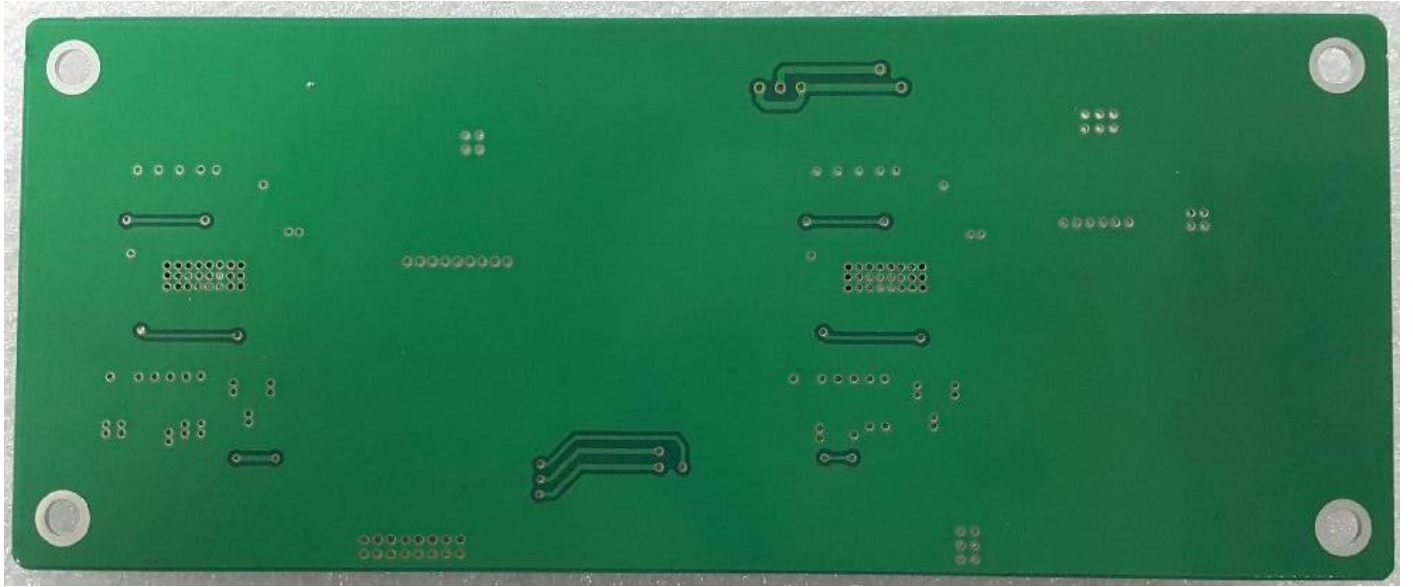


**6. Product Pictures**

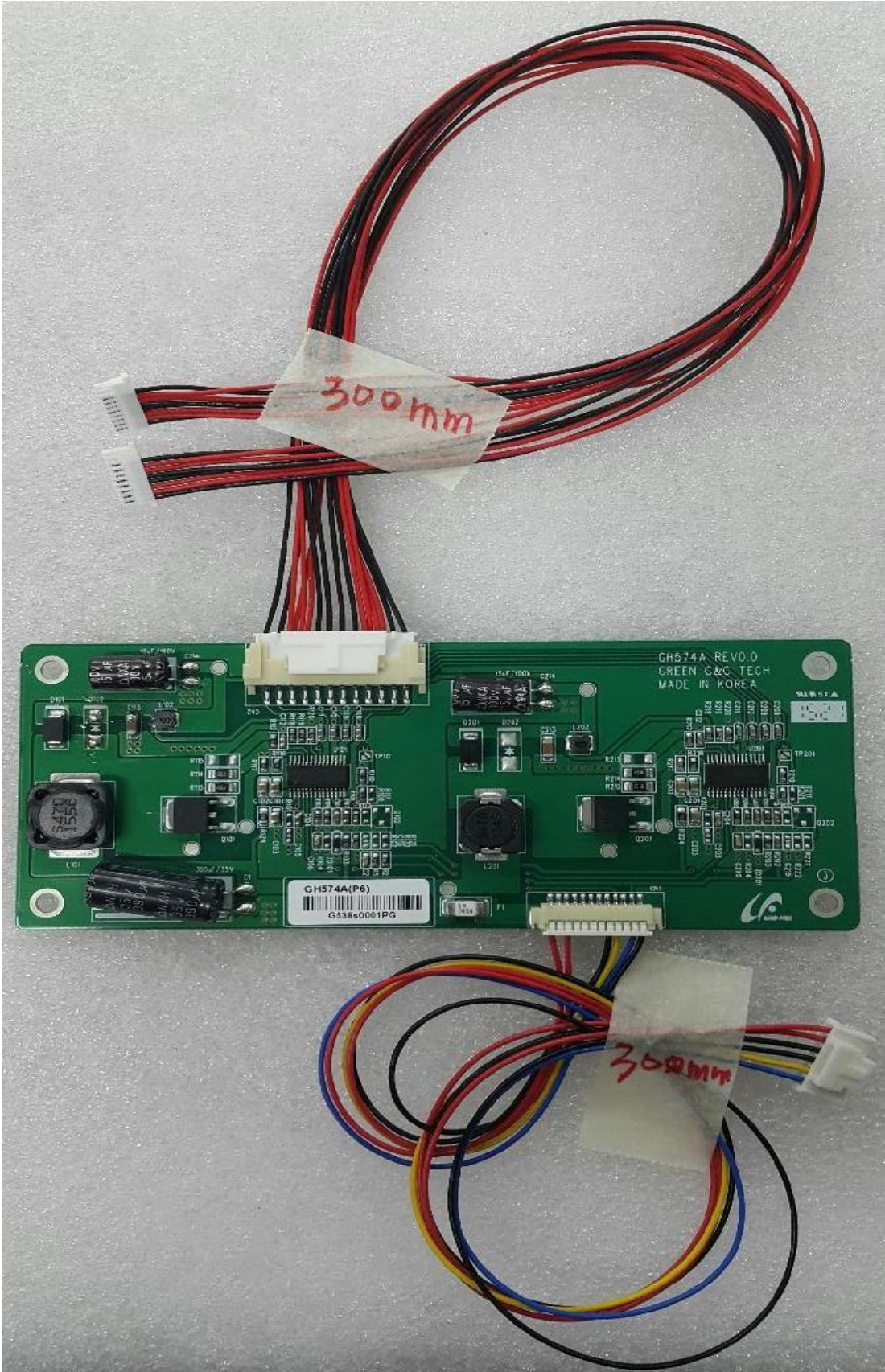
**Top View**



**Bottom View**



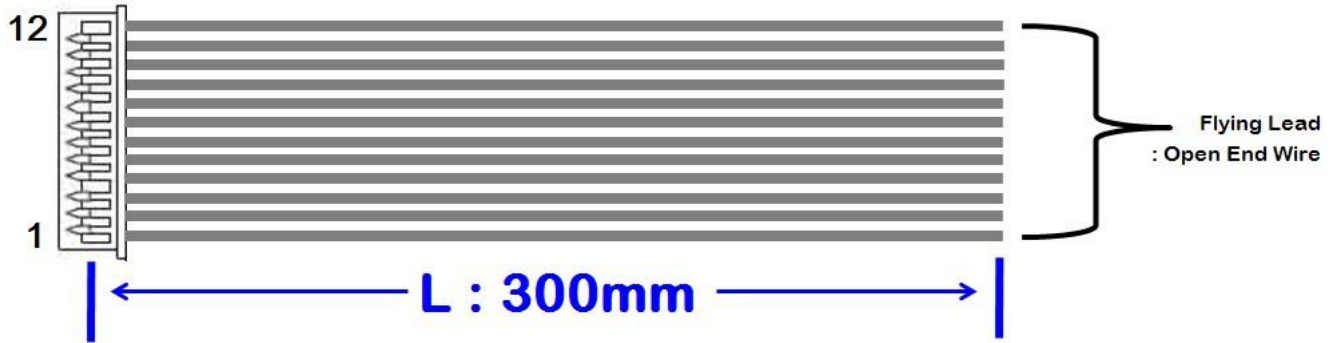






7.2 Connection between LED driver and customer's mating diver board

**PN : CBL300-LED12V-OPEN**



***12V INPUT CN1 for GH465A (Version : R3 Only)***

W A F E R : 12505WR-12 (YEONHO)  
 H O U S I N G : 12505HS-12 (YEONHO)

| PIN | SPEC          | COLOR | CONNECTION  | CABLE LENGTH |
|-----|---------------|-------|-------------|--------------|
| 1   | LED INPUT 12V | WHT   | FLYING LEAD | 300mm        |
| 2   | LED INPUT 12V | WHT   | FLYING LEAD | 300mm        |
| 3   | LED INPUT 12V | WHT   | FLYING LEAD | 300mm        |
| 4   | GND           | WHT   | FLYING LEAD | 300mm        |
| 5   | GND           | WHT   | FLYING LEAD | 300mm        |
| 6   | P-DIM         | WHT   | FLYING LEAD | 300mm        |
| 7   | GND           | WHT   | FLYING LEAD | 300mm        |
| 8   | GND           | WHT   | FLYING LEAD | 300mm        |
| 9   | ON OFF        | WHT   | FLYING LEAD | 300mm        |
| 10  | GND           | WHT   | FLYING LEAD | 300mm        |
| 11  | A-DIM         | WHT   | FLYING LEAD | 300mm        |
| 12  | GND           | WHT   | FLYING LEAD | 300mm        |