

# SPECIFICATION

Product : LED Backlight Driver  
Model Name : GH515A(A13) GCCT Name  
: GCCT515AM

Supportable Dimming : External Analog

January 2017

## Revision History

No	Date	Revision	Page
	Sep 2016	Engineering Sample Issued	
	Jan 2017	Addition of alternative vendor for Diodes name of vendor - "Liteon" relevant diode : D1, D2, B290, B2100, B2100	

## 1. Application

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

The target TFT LCD Modules are LG 24", LM240WU8-SLD2, LM240WU9-SLC1, 23.8", LM238WR3-SSB1, Samsung 23", LTM230HT10, LTM230HT11 & LTM230HT12 which have not been built-in the LED driver for 3 CH type Backlight.

## 2. Electrical Characteristics

### 2.1 Absolute Maximum Ratings

Item	Symbol	Spec	Unit	Remarks
Input Voltage1	Vin1	10.8 ~ 13.2	V	
	Vin2	21.6 ~ 26.4		
Input Voltage2	On/Off	2.4 ~ 5.25	V	
Operating Temperature	Top	0 ~ 50	°C	
Storage Temperature	Tstg	-20~60	°C	
Relative Humidity	RH	80	%	

### 2.2. Control Signal

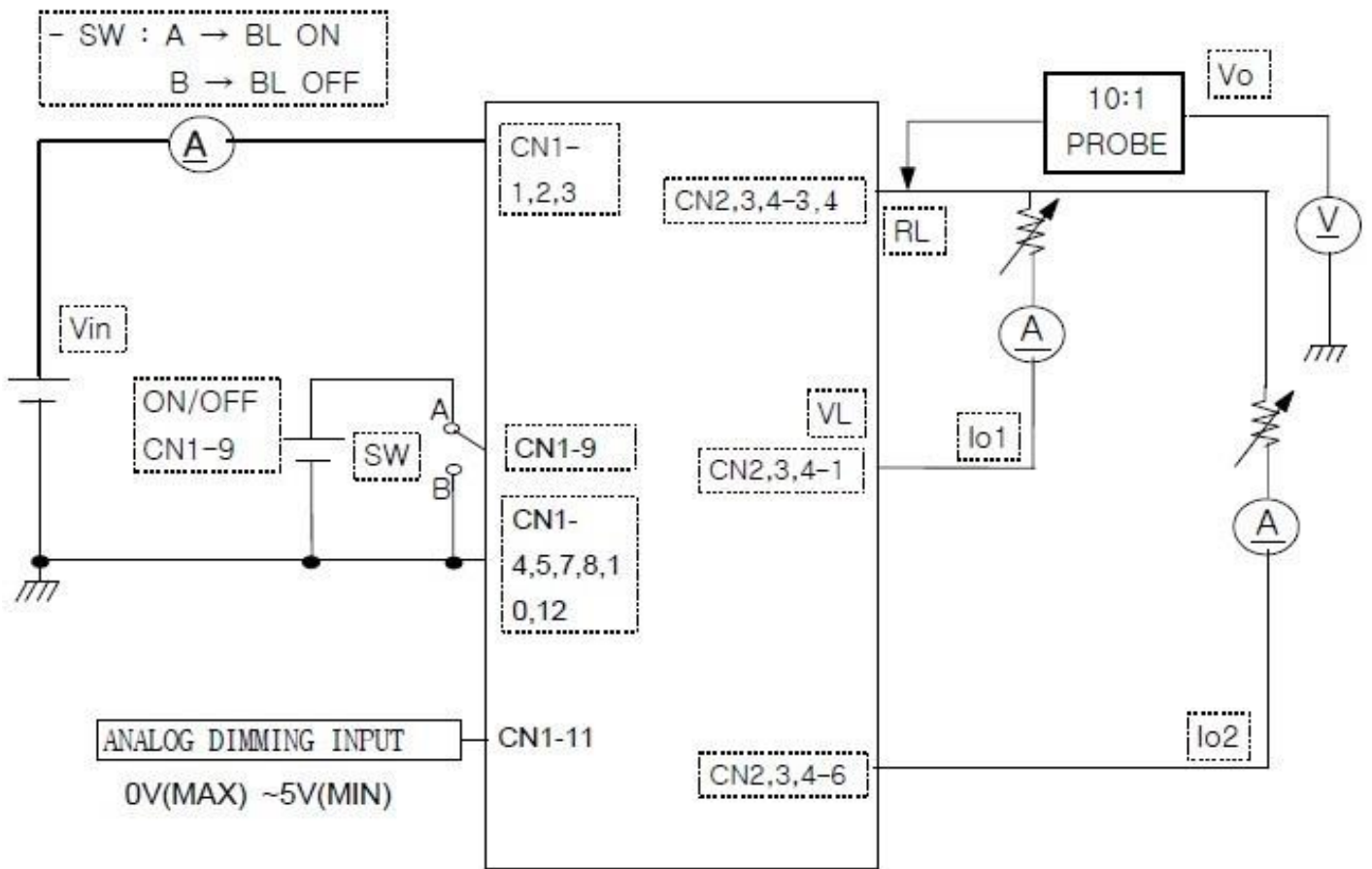
Pin No.	Symbol	Status	Action	Remarks
CN1 #9	On/Off	HIGH	LAMP-ON	2.4~5.25V
		LOW	LAMP-OFF	0.8V MAX

### 2.3. Output Characteristics

No.	Item	SYM	Condition	Min.	Typ.	Max.	Unit
1	Input Voltage	Vin1	-	10.8	12.0	13.2	Vdc
		Vin2	-	21.6	24.0	26.4	
2	Input Current	Lin1	Vin=12.0V, DIM= 0 V	-	-	3.0	A
		Lin2	Vin=24.0V, DIM= 0 V	-	-	1.5	
4	Output Current	Iout (Max)	Vin=12V or 24.0V, DIM= 0 V	110	120	130	mAmean
		Iout (Min)	Vin=12V or 24.0V, DIM= 5 V	16	19	22	mAmean
5	Backlight On / Off Control	On	-	2.4	-	5.25	V
		Off	-	-0.3	-	0.8	
6	Frequency	F	Vin=12V or 24.0V, DIM= 0 V	250	280	310	KHz

[Note] the Output Voltage is 3V at least higher than input Voltage.

### 2.4 Test Circuit



### 3. Interface

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

Pin No.	Symbol	Description
1,2,3	VIN	Voltage Input : 12V (typ) or 24V (typ)
4,5,7,8,10,12	GND	Ground
6	N.C	N.C
9	On / Off	LED Driver On / Off SIGNAL(Active High)
11	DIM	0V (Max) ~ 5V (Min)

#### 3.2 CN2 Connector (Output) : 10019HR-H06B (YEONHO) or Equivalent

Pin No.	Symbol	Description
1	FB1	Feedback 1 (Return 1)
5	FB 2	Feedback 2 (Return 2)
6	FB 3	Feedback 3 (Return 3)
3,4	V <sub>LED</sub>	System Output
2	N.C	No Connection

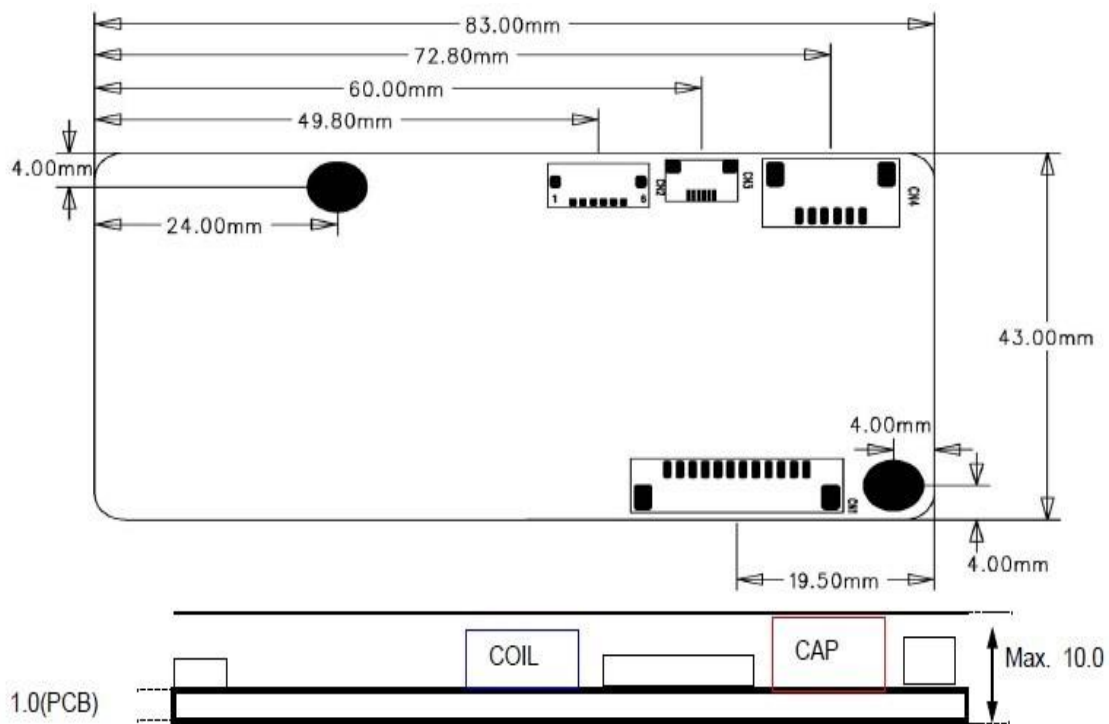
3.3 CN3 Connector (Output) : 05002HR-06C (YEONHO) or Equivalent

Pin No.	Symbol	Description
1	FB1	Feedback 1 (Return 1)
5	FB 2	Feedback 2 (Return 2)
6	FB 3	Feedback 3 (Return 3)
3,4	V <sub>LED</sub>	System Output
2	N.C	No Connection

3.4 CN4 Connector (Output) : 12507WR-06 (YEONHO) or Equivalent

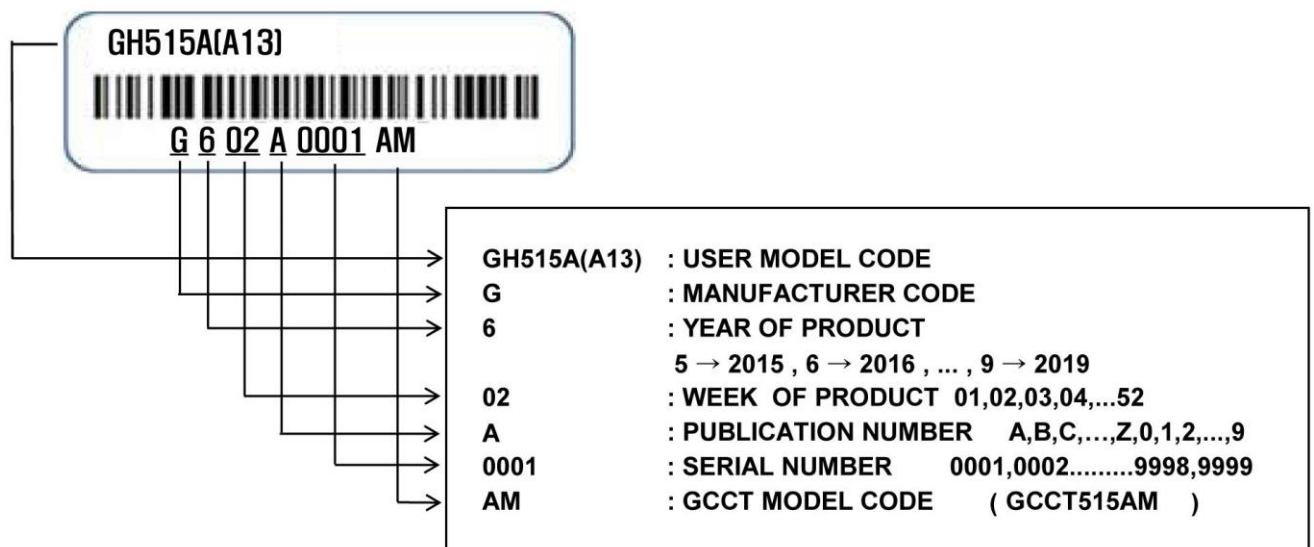
Pin No.	Symbol	Description
1	FB1	Feedback 1 (Return 1)
5	FB 2	Feedback 2 (Return 2)
6	FB 3	Feedback 3 (Return 3)
3,4	V <sub>LED</sub>	System Output
2	N.C	No Connection

4. Dimension (83 mm x 43 mm) (Tolerance :  
+0.8mm, -0.2mm)



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

Label on the rear surface of PCB



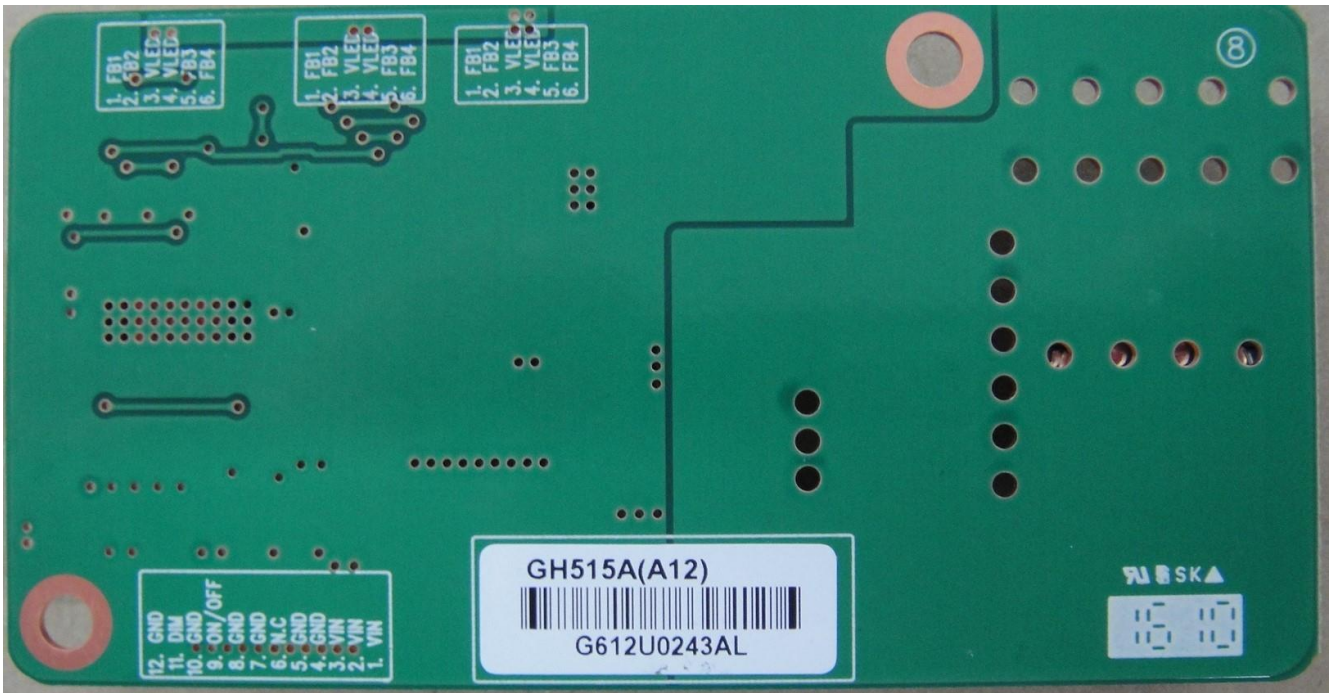
## 6. Product Pictures

Top View



Bottom View





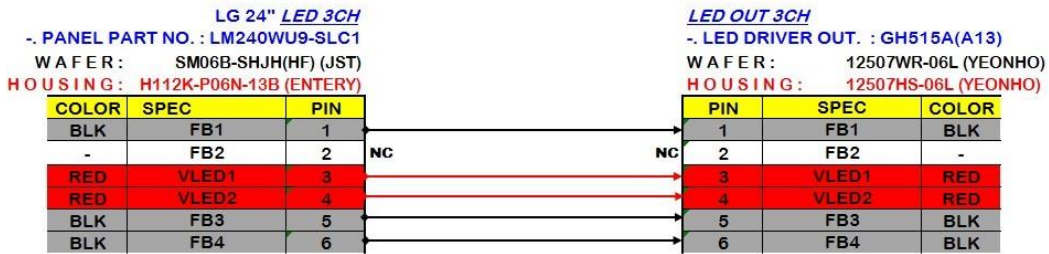
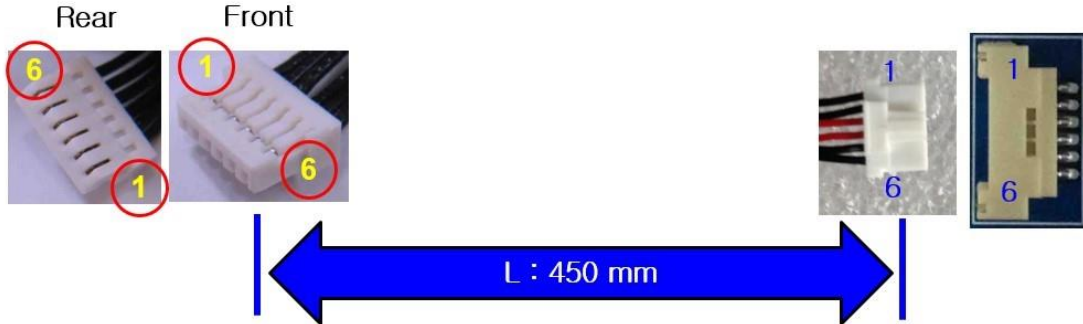
GH515A (A13)

## 7. Connection Cables

### 7.1 Connection between LED driver and mating LCD panel

[ LG 24" LM240WU9-SLC1 ]

**PN : CBL451-LED3CH-GH515A-LM240WU9-SLC1**



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

**PN : CBL301-LED12VIN-OPEN**

