

SPECIFICATION

Product : LED Backlight Driver

Model Name : GH524A(P1) GCCT Name

: GCCT524PA

Dimming Type : Wide range PWM diming

Mating LCD model : Mitsubishi 15", AA150XS11
AA150XW11
AA150XW14

September 2015

Revision History

No	Date	Revision	Page
	June 2015	Engineering Sample Issued	
	July 2015	Mass Production	
	Sept 2015	Addition of supportable LCD panel (AA150XW14)	

1. Design concept of Product

This is a LED Driver which was developed for driving 5 channels LED backlight type modules such as Mitsubishi 15", AA150XW11 and AA150XW14. And also this can support the Mitsubishi 15", AA150XS11 models. In case of 10 channels demand (AA150XS11 model), it can be supported by the double pieces combination, i.e., 5 channels x 2 pieces. (refer to the last page picture)

2. Feature

- Wide input range : 10.8~ 13.2V
- Wide adjusted Brightness by PWM dimming
- Compact size : refer to mechanical drawing

3. Electrical Characteristics

3.1 Absolute Maximum Ratings

Item	Symbol	Spec	Unit	Remarks
Input Voltage 1	Vin	10.8~13.2	V	
Input Voltage 2	ON/OFF	2.4~5.25	V	
Wattage	Watt	34	W	
Operating Temperature	Top	-20 ~ 70	°C	
Storage Temperature	Tstg	-30~80	°C	
Relative Humidity	RH	80	%	

3.2 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

3.3 Output Characteristics

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Input Voltage	V in	-	10.8	12	13.2	Vdc
Input Current	I in	Vin=12V P-DIM=100%	-	-	2.0	A

Output Current	I out(max)	Vin=12V P-DIM=100%	120	130	140	mAmean
Output Voltage	V out	Vin=12V P-DIM=100%	20	24	30	Vdc
PWM Signal	Vpwm	High(ON)	2.0	-	5.0	V
	Vpwm	Low(OFF)	-0.3	-	0.8	V
Backlight On / Off Control	Fpwm	-	-	180	-	Hz
	Duty	Active High Level	0 (Min Bright)	-	100 (Min Bright)	%

4. Interface

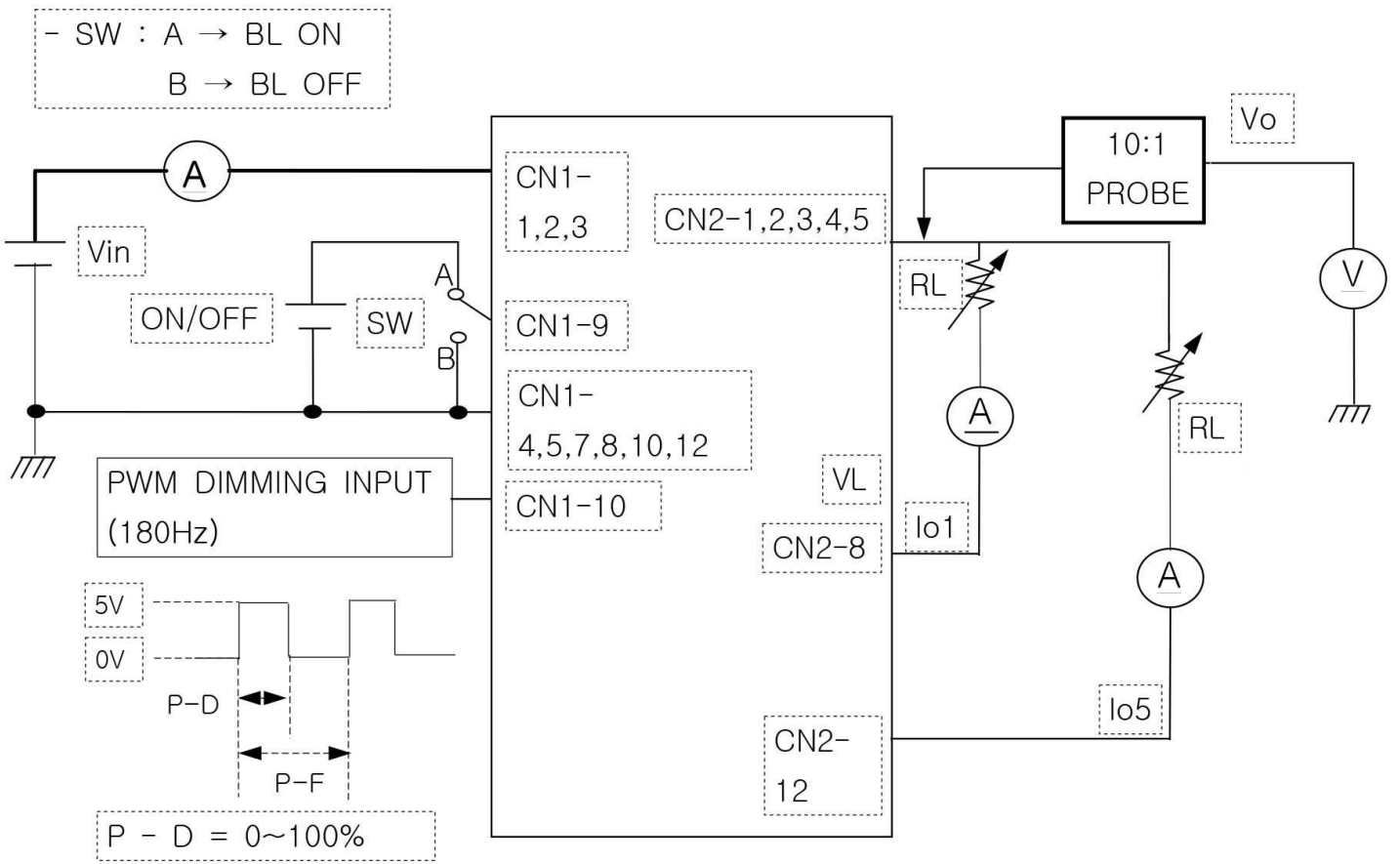
4.1 CN1 Connector : 12505WR-12 (Yeon-Ho) or equivalent

Pin No.	Symbol	Remarks
1,2,3	Vin	Voltage Input : 12V (typ)
4,5,6,7,8	GND	GND
11, 12	N.C	No Connection
9	On/Off	LED drive On/Off Signal (Active HIGH)
10	P Dim	External PWM Dimming (0 ~ 100%, 180Hz)

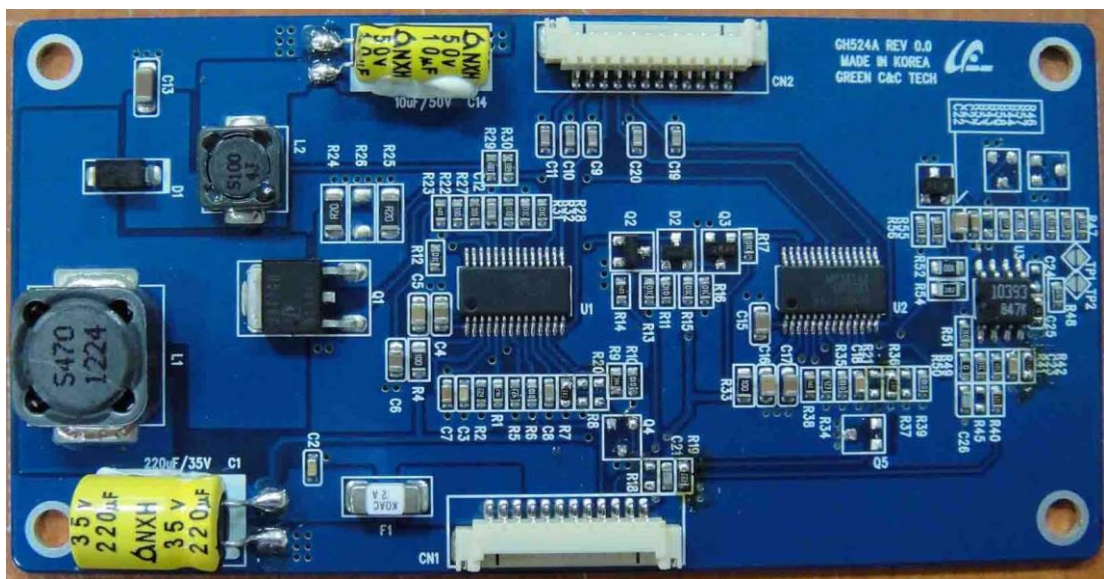
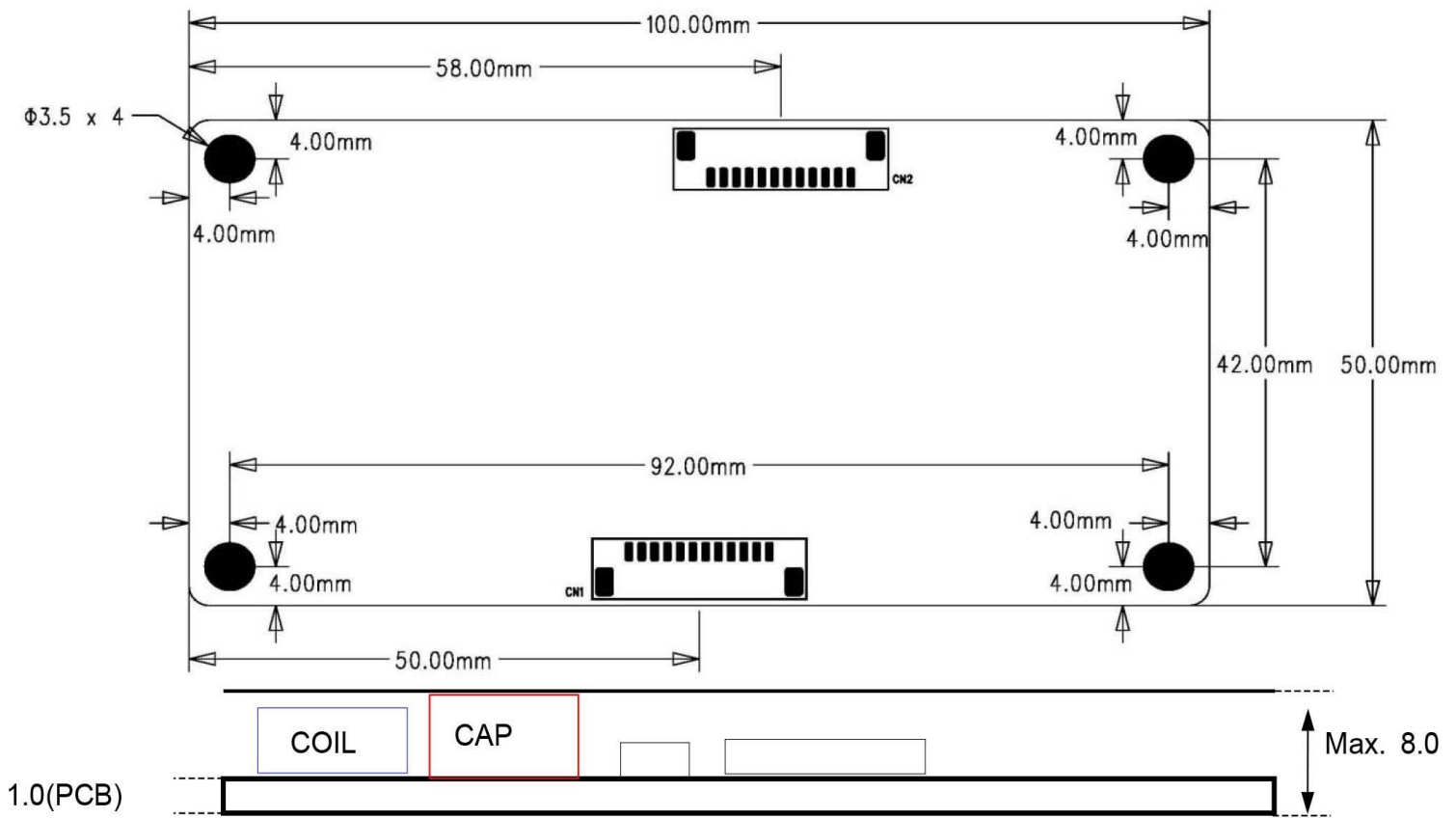
4.2 CN2 Connector : 12505WR-12 (Yeon-Ho) or equivalent

Pin No.	Symbol	Remarks
1,2,3,4,5	Vout	System Output (Anode)
6, 7	N.C	No Connection
8	RTN1	Cathode 1 (Return 1)
9	RTN2	Cathode 2 (Return 2)
10	RTN3	Cathode 3 (Return 3)
11	RTN4	Cathode 4 (Return 4)
12	RTN5	Cathode 4 (Return 5)

4.3 Test Circuit



6. Dimension (100 x 50 mm, Tolerance -0.2mm, +0.8mm) and Pictures



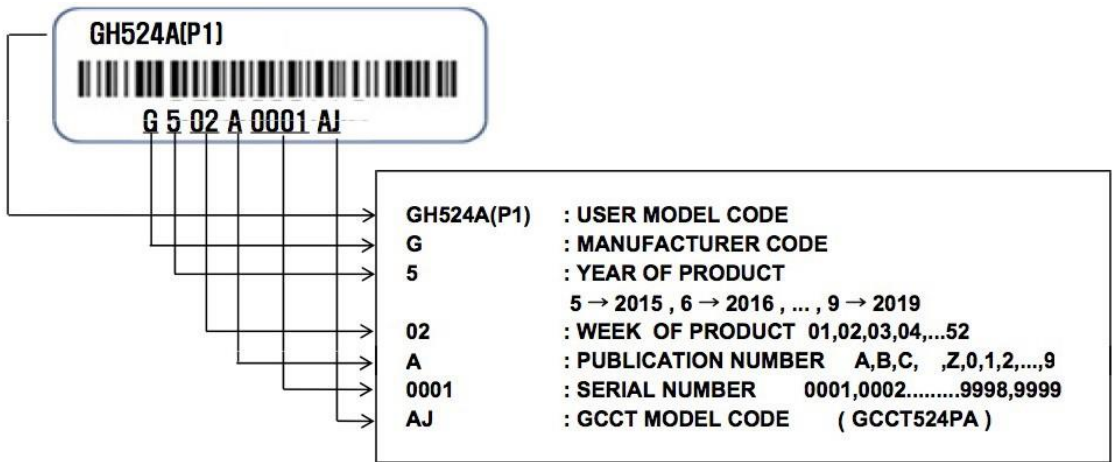
7. The Criteria of Reliability Test

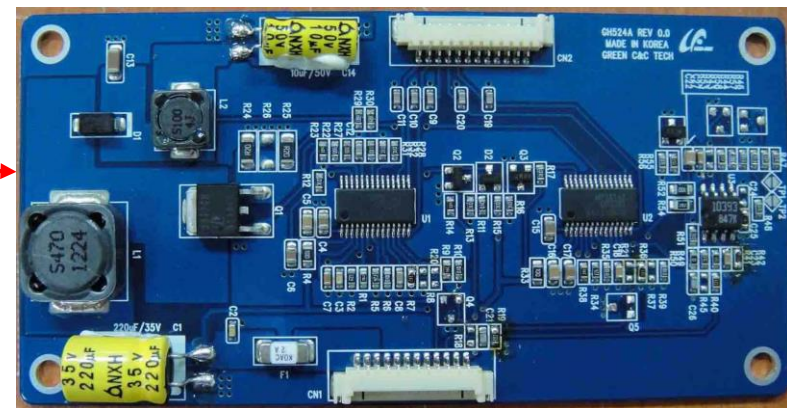
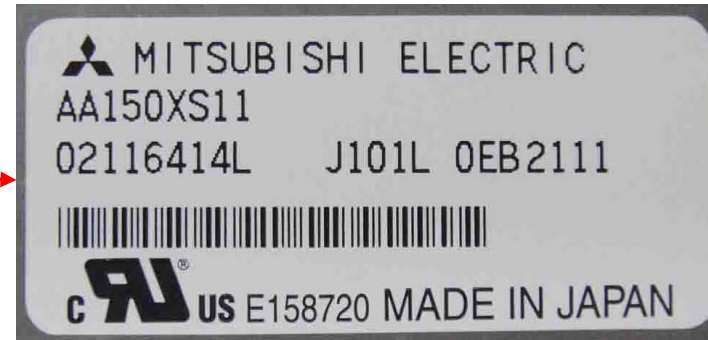
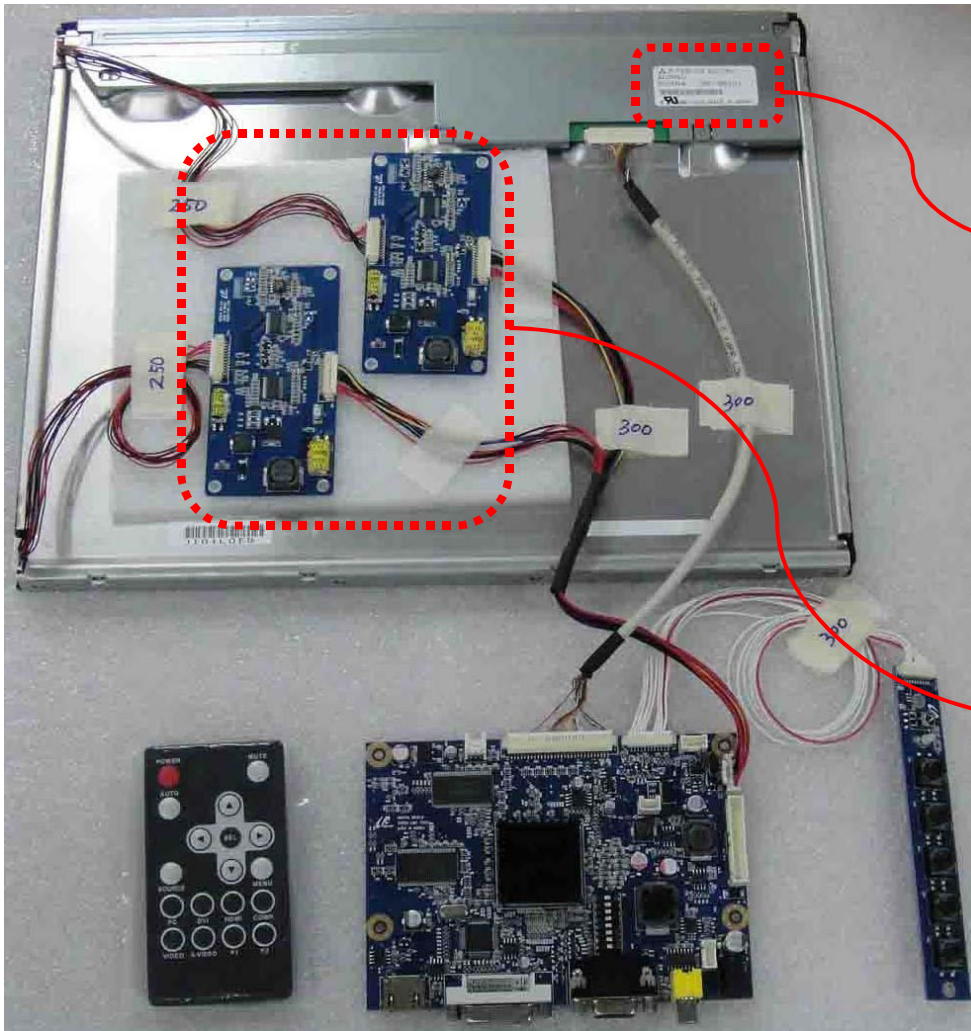
No.	ITEM	Conditions and Method
1	High Temperature, Storage Test	Temp : 60°C , Duration 500hrs
2	Low Temperature, Storage Test	Temp : -20°C, Duration 500hrs
3	High Temperature, High Humidity Storage	Temp : 40°C, Humid 95%RH, Duration 500hrs
4	High Temperature, High Humidity Operation test	Temp : 40°C, Humid 95%RH, Duration 1000hrs
5	Thermal Shock Test	Temp -30°C ↔ 70°C,250cycle, (30min) (30min)
6	Vibration test	Amplitude :1.5mm, Frequency :10~55Hz Position : three perpendicular planes, Duration 1000hrs
7	High Temperature Operation test	Temp : 50°C, Duration 72hrs
8	Low Temperature Operation test	Temp : 0°C, Duration 72hrs

8. The applied norms for Safety of each component

Symbol	Name	Type No.	Manufacturer	Description
F1	FUSE	CCF1N7	KOA	UL FILE NO : E171861
		6123FF07-R	COOPER BUSSMAN	UL FILE NO : E19180
PCB	PRINTED WIRING BOARD	FR-4	WONKYUNG	UL FILE NO : E202541
			SEOKANG	UL FILE NO : E150774
			SONGDO	UL FILE NO : E250018
			BACKSONG	UL FILE NO : E205233
CN1	CONNECTOR	12505WR-12A00	YEONHO	UL:E108706
CN2,,CN3	CONNECTOR	12505WR-8A00	YEONHO	UL:E108706

9. The Notation of Lot Management (bottom label)





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