

**TO : Customer**

**DATE : 2018.11.06**

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# **DOCUMENTATION FOR APPROVAL**

**PRODUCT : LED BACKLIGHT DRIVER (RoHS)  
MODEL NAME : GH767A(A1)  
GCCT NAME : GCCT767AA**

<b>APPROVAL</b>	<b>CHECKED</b>	<b>WRITTEN</b>

**PLEASE RETURN ONE DOCUMENT AFTER APPROVED SIGN.**

GREEN C&C TECH	<b>LED DRIVER SPECIFICATION</b> <b>GH767A(A1)</b>	Publishing Date	2018.03.22
		Reforming Date	2018.06.11

NO	Date	REVISION	Page
1	2018.05.03	.PartList Change(User Request) - R43 : 1k -> 47k - C48 : 1nF -> 1uF	6, 7
2	2018.06.11	.Circuit Change(for product stabilization) - Add Resistance : R34	6,8,9,10

REVISION HISTORY

REV.														
Page														
REV.	2	0	0	0	0	2	1	1	1	1	0	0	0	0
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## 1. APPLICATION

This Document Specified The Detailed Product Requirement of LED driver  
GH767A(A1)

## 2. SUITABLE LOAD

LCD MODULE : 8 Strings LED BLU TFT LCD

## 3. ELECTRICAL CHARATERISTICS

### 3.1. Absolute Maximum Ratings

Item	Symbol	Spec.	Unit	Remarks
Input Voltage 1	Vin	10.8~13.2	V	
Input Voltage 2	ON/OFF	5.25	V	
Operating Temperature	Top	0~60	℃	
Storage Temperature	Tstg	-30~80	℃	
Relative Humidity	RH	80	%	

### 3.2. Control Signal

PIN No.	Symbol	Status	Action	Remarks
CN1 #12	ON/OFF	HIGH	LED - ON	2.4 ~ 5.25V
		LOW	LED - OFF	0.8 V Max

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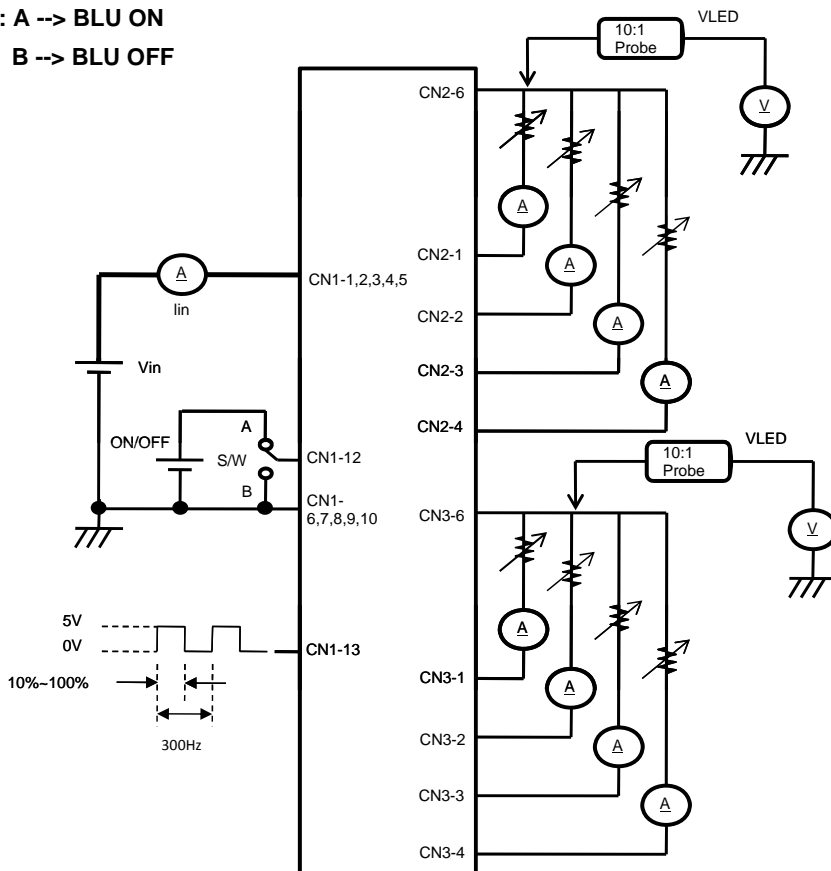
### 3.3. Output Characteristics

Item	Sym.	Condition	Min.	Typ.	Max.	Unit
Input Voltage	Vin	-	10.8	-	13.2	Vdc
Input Current	Iin	Vin=12V, Dim=100%	-	-	4.0	A
Output Current	Iout (max)	Vin=12V, Dim=100%	42.0	47.0	52.0	mAmean
PWM Signal	Vpwm	High(ON)	2.4	-	5.00	V
	Vpwm	Low(OFF)	-0.3	-	0.8	
	Fpwm	-	-	300	-	Hz
	DUTY	Active High Level	100 (Min)	-	10 (Max)	%

\* Output Voltage is greater than Input Voltage for at least 3V or more.

### 3.4. Test Circuit

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



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#### 4. INTERFACE

##### 4.1. CN1 Connector (Input) : 20022WR-14AML (YEONHO) or Equivalent

PIN No.	Symbol	Description
1,2,3,4,5	VIN	Voltage Input : 12V (typ.)
6,7,8,9,10	GND	Ground
11,14	N.C	No Connection
12	ON/OFF	LED DRIVER ON/OFF Control
13	DIM	10%(MAX)~100%(MIN)

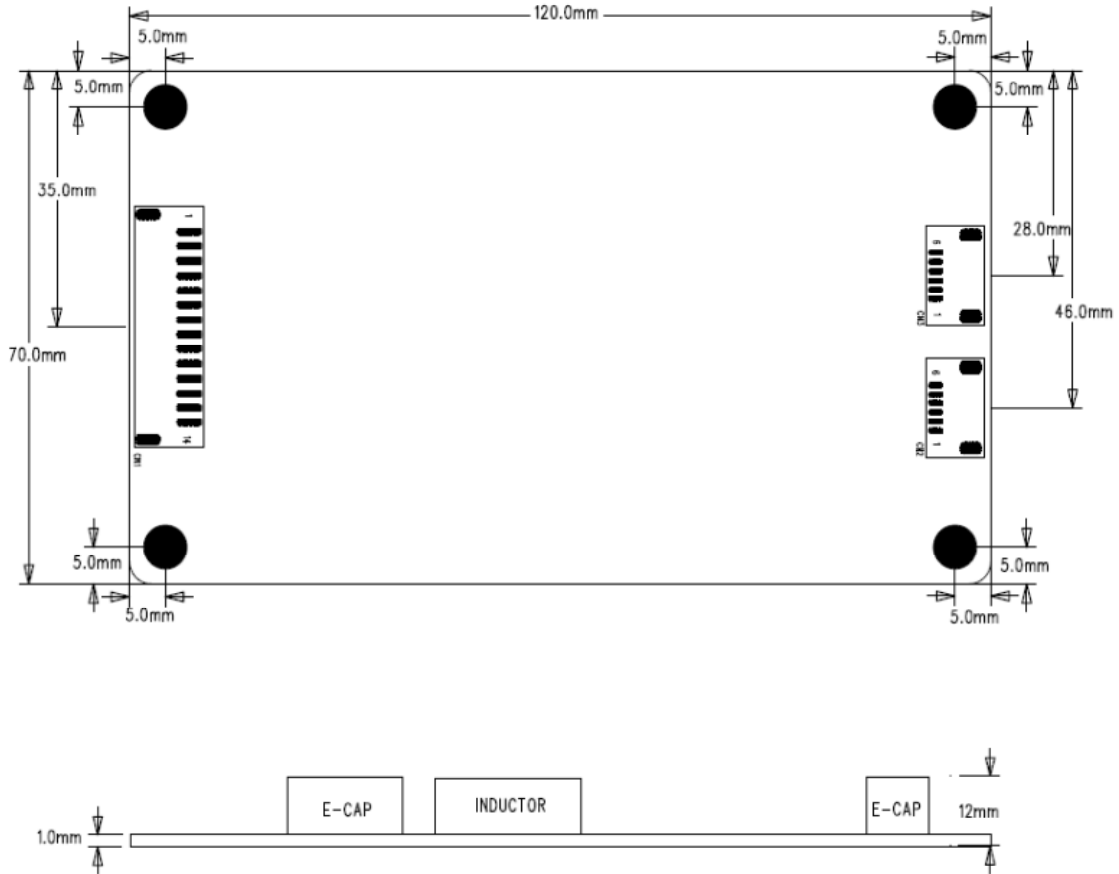
##### 4.2. CN2, CN3 Connector (Output) : 12507WR-06L (YEONHO) or Equivalent

PIN No.	Symbol	Description
1	FB1	Feedback1
2	FB2	Feedback2
3	FB3	Feedback3
4	FB4	Feedback4
5	N.C	No Connection
6	VLED	System Output

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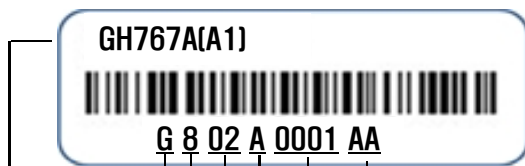
### 5. APPERANCE (Unit : mm)

(Tolerance : +0.8mm, -0.2mm)



### 6. NOTATION OF LOT NUMBER

MARKING : TOP



GH767A(A1)	: USER MODEL CODE
G	: MANUFACTURER CODE (GREEN C&C TECH.)
8	: YEAR OF PRODUCT 5 → 2015 , 6 → 2016 , ... , 9 → 2019
02	: WEEK OF PRODUCT 01,02,03,04,...52
A	: PUBLICATION NUMBER A,B,C,...,Z,0,1,2,...,9
0001	: SERIAL NUMBER 0001,0002.....9998,9999
AA	: GCCT MODEL CODE ( GCCT767AA )

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## 7. PART LIST

SYMBOL	NAME	1st		2nd	
		TYPE No	MAKER	TYPE No	MAKER
U1	IC	MP3391EF	MPS		
U5		BA10358F	ROHM	KIA358F	KEC
		AS358M	DIODES	KA358D	FAIRCHILD
Q1,Q2	FET	AOD2544	AOS	FDD390N15ALZ	FARICHILD
		MDD1051	MAGNACHIP	SUD25N15	VISHAY
		IPD530N15N3	INFINEON	AOD254	AOS
D1, D2	DIODE	SBR10200CTL	DIODES	BD10200CS	PANJIT
		MBRD10200CT	DIODES	BD8200CS	PANJIT
		VS-8CWH02FNHM3	VISHAY		
C1	C-ELEC	NXH Series 470uF/35V	SAMYOUNG	Equivalent	
C45		NFC Series 10uF/200V	SAMYOUNG	"	
C28,C44	FILM CAP	PCMT 468 Series 1uF/250V	PILKO	Equivalent	
C3,C20,C21,C51, C52,C53,C54,C55, C56,C57,C58	MLCC	GRM1885C1H101J	MURATA	"	
C4		GRM188R71H103K	"	"	
C5		GRM188R71H102K	"	"	
C11,C13		GRM21BR61E225K	"	"	
C12		GRM21BR71H105K	"	"	
C14		GRM188R71C474K	"	"	
C15,C48		GRM188R61E105K	"	"	
R1		CHIP-R	RC1608J102	SEMCO	Equivalent
R2,R6	RC1608J224		"	"	
R3,R7	RC1608J513		"	"	
R9	RC1608J153		"	"	
R11	RC2012J100		"	"	
R12	RC1608J913		"	"	
R13,R16,R19,R49	RC1608J104		"	"	
R14	RC1608J204		"	"	
R17	RC1608J273		"	"	
R18,R48	RC1608J220		"	"	
R23,R34	RC1608J101		"	"	

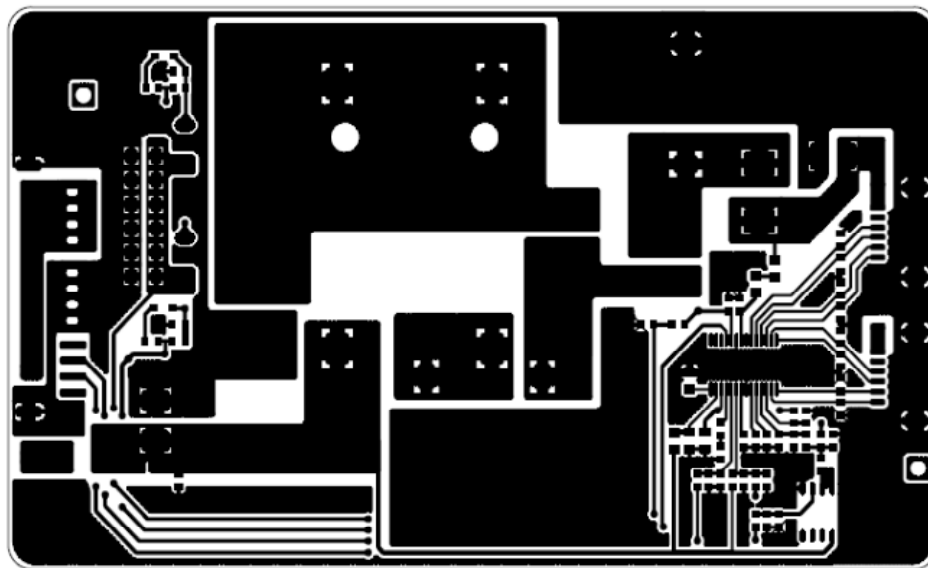
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SYMBOL	NAME	1st		2nd	
		TYPE No	MAKER	TYPE No	MAKER
R24,R25,R26,R27, R28,R29	CHIP-R	RC3216FR10	"	"	
R37, R38		RC2012J104	"	"	
R39		RC1608J222	"	"	
R43		RC1608J473	"	"	
R44		RC1608J105	"	"	
R46		RC1608J183	"	"	
F1		FUSE	CCF1N7	KOA	CB61F7A
	451007		LITTELFUSE	453007	LITTELFUSE
L1	Inductor	GTS24-502B	DONG HEUNG	Equivalent	
L2		SFCB7050-100	SAMWHA TECOM	"	
CN1	Connector	20022WR-14AML	YEONHO	Equivalent	
CN2,CN3		12507WR-06L	YEONHO	"	
PCB	PCB	GH767A REV0.0	SEOKANG	GH767A REV0.0	WONKYUNG
		GH767A REV0.0	JDM	GH767A REV0.0	TECOS

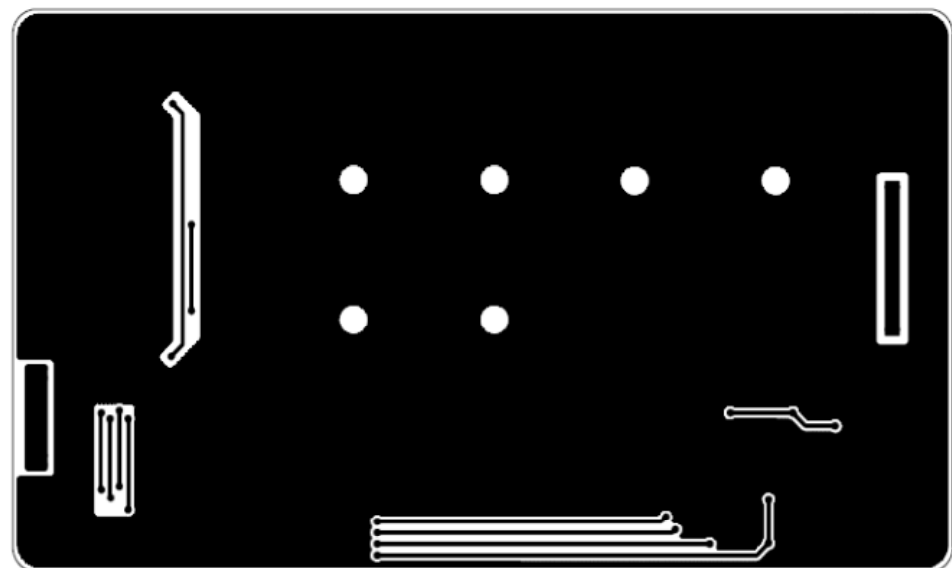


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## 8. PCB LAYOUT

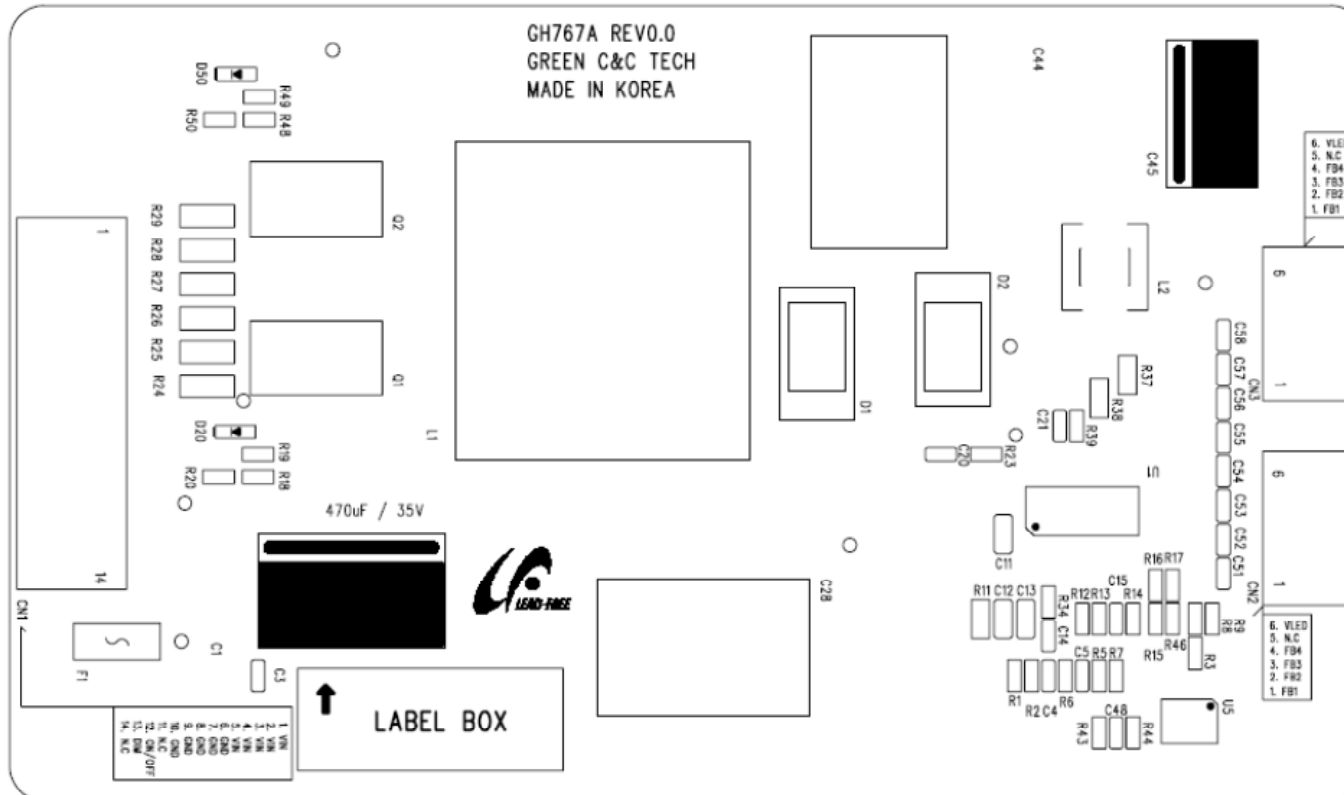


TOP LAYER



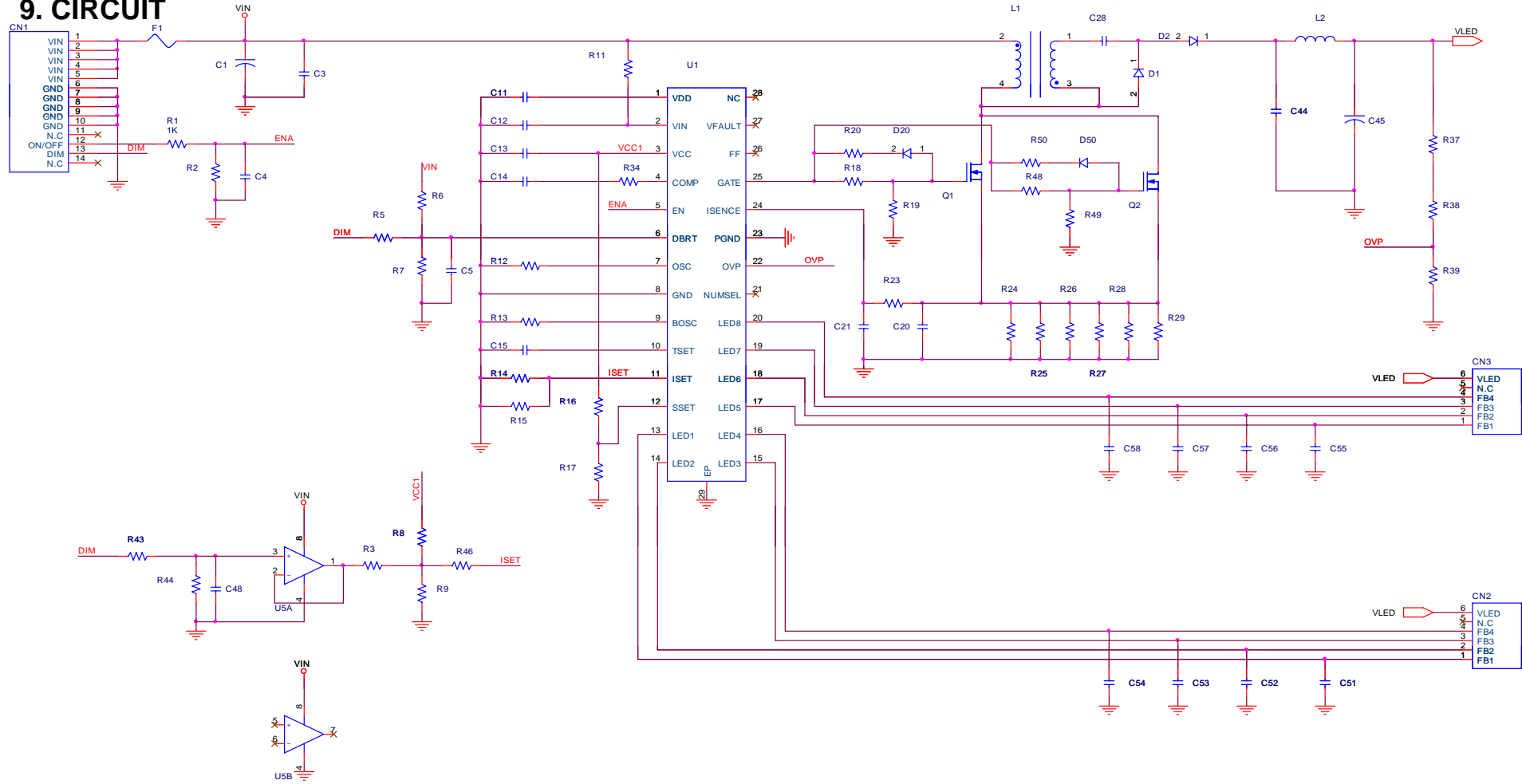
BOTTOM LAYER

LED DRIVER SPECIFICATION  
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SILK SCREEN TOP

9. CIRCUIT



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## 10. RELIABILITY TEST SPEC.

NO.	ITEM	Conditions and Method
1	High Temperature Storage Test	Temp : 80 °C Duration : 250hrs
2	Low Temperature Storage Test	Temp : -30 °C Duration : 250hrs
3	High Temperature High Humidity Operation Test	Temp : 60 °C Humidity : 95%RH Duration : 250hrs
4	Signal On/Off Test	Temp : Normal Temperature On-Off Signal On 10sec / Off 10sec Power on full Load 30,000 cycles
5	Thermal Shock Test	Temp : -20 °C ↔ 70 °C, 100 cycles (30min) (30min)
6	High Temperature Operation Test	Temp : 70 °C Duration : 250hrs
7	Low Temperature Operation Test	Temp : -20 °C Duration : 250hrs

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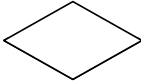

### 11. FLOW CHART

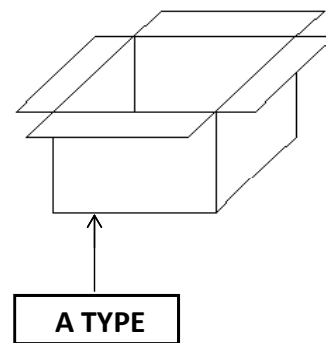
MODEL (TYPE)	GH767A(A1)	REVISION	0
WRITER	T.W.LEE	FLOW CHART	
FLOW CHART	PROCESS	EQUIPMENTS	Remark
	Raw Material		PART LIST
	Solder Printing	Cream-solder Printer	
	Surface Mounting	Low-high Mounter	
	Reflow Soldering (CTQ)	Reflower	
	Visual Inspection (AOI)	Microscope, Vision-Master	
	Label attachment	Marking	
	Preparing Process		
	Soldering by Hand for Discrete Parts		
	Spreading Silicon	Silicon Dispenser	
	Insert Lead Parts		
	Wave-Soldering	Wave-Soldering Machine	
	Visual Inspection		
	PCB Division		
	Aging	Power Supply, Aging Box	2hrs
	Electrical Characteristics inspection	Testing System, Testing JIG	
	Insulator Attachment		
	Bar-Code Reading	Bar-Code Reader	
	Package		
	Outgoing Inspection	Testing System, Testing JIG	List of Inspection
	Shipping		
Based on Standard Rule	GCCT767AA		

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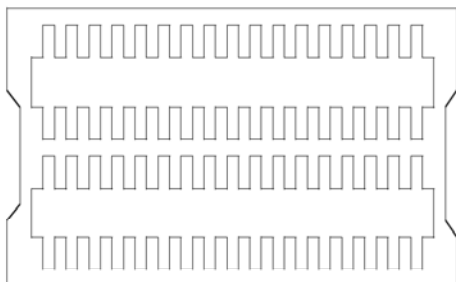
## 12. PACKING

### 12.1. BOX

 <small>LEAD-FREE</small>			  L/C NO : C/T NO : MADE IN KOREA
1. Customer			
2. PART NAME	GH767A(A1)		
3. PO NO			
4. Q'ty	000 EA		
5. Date	00.00.00		
6. LOT NO			



### 12.2. TRAY



SYMBOL	TYPE NO
PACKING-TRAY	393*324*78
PACKING-BOX	415*340*332
PACKING-PAD	400*324*5

1 TRAY : 34EA (GR2048)  
1BOX : 4 TRAY (136EA) - A TYPE

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### 13. Material list for safety GH767A(A1)

SYMBOL	NAME	TYPE No	MANUFACTURER	DESCRIPTION
F1	FUSE	CCF1N7	KOA	UL FILE NO. : E171861
		451007	LITTELFUSE	UL FILE NO. : E10480 CSA FILE NO : LR29862
		453007	LITTELFUSE	UL FILE NO. : E10480 CSA FILE NO : LR29862
		CB61F7A	COOPER BUSSNANN	UL FILE NO. : E19180
PCB	Printed Writing Board	FR4	SEOKANG	UL FILE NO. : E150774
			WONKYUNG	UL FILE NO. : E202541
			JDM	UL FILE NO. : E343057
			TECOS	UL FILE NO. : E214879
CN1	Connector	20022WR-14AML	YEONHO	UL FILE NO. : E108706
CN2,CN3	Connector	12507WR-06L	YEONHO	UL FILE NO. : E108706