

TO : Customer

DATE : 2020.06.24

**GREEN C&C TECH Co.,Ltd
75,SANEOP-RO 92BEON-GIL, GWONSEON-GU,
SUWON-CITY, KYEONGGI-DO
KOREA 16643
TEL : 82-31-373-3623~3625
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DOCUMENTATION FOR APPROVAL

**PRODUCT : LED BACKLIGHT DRIVER (ROHS)
MODEL NAME : GH766A(A13)
GCCT NAME : GCCT766AM**

APPROVAL	CHECKED	WRITTEN

PLEASE RETURN ONE DOCUMENT AFTER APPROVED SIGN.

GREEN C&C TECH	LED DRIVER SPECIFICATION GH766A(A13)	Publishing Date	2020.06.24
		Reforming Date	2024.10.30

NO	Date	REVISION	Page
1	2024.10.30	- Changed Part List	6,7,14
REVISION HISTORY			

REV.														
Page														
REV.	1	0	0	0	0	1	1	0	0	0	0	0	0	1
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1. APPLICATION

This Document Specified The Detailed Product Requirement of LED driver
GH766A(A13)

2. SUITABLE LOAD

LCD MODULE : 4 Strings LED BLU TFT LCD

3. ELECTRICAL CHARATERISTICS

3.1. Absolute Maximum Ratings

Item	Symbol	Spec.	Unit	Remarks
Input Voltage 1	Vin	10.8~26.4	V	
Input Voltage 2	ON/OFF	5.25	V	
Operating Temperature	Top	-20~70	℃	
Storage Temperature	Tstg	-30~80	℃	
Relative Humidity	RH	80	%	

3.2. Control Signal

PIN No.	Symbol	Status	Action	Remarks
CN1 #9	ON/OFF	HIGH	LED - ON	2.4 ~ 5.0V
		LOW	LED - OFF	0.8 V Max

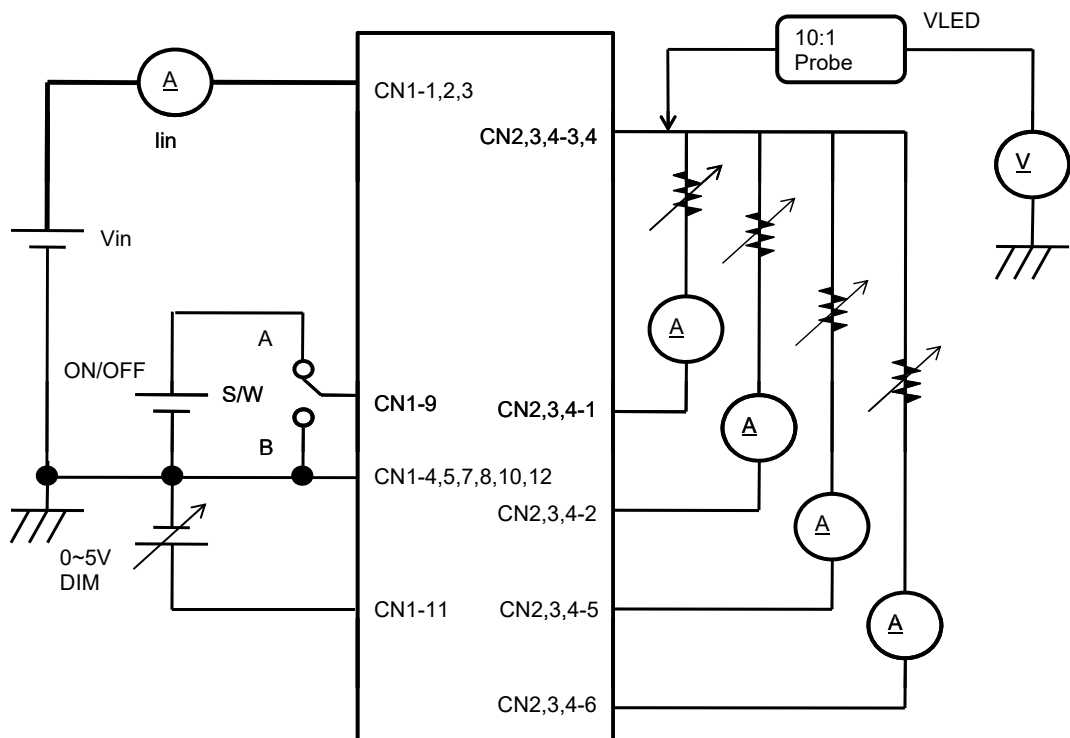
3.3. Output Characteristics

Item	Sym.	Condition	Min.	Typ.	Max.	Unit
Input Voltage	Vin	-	10.8	-	26.4	Vdc
Input Current	Iin	Vin=12V, Dim=0V	-	-	3.0	A
Output Current	Iout (Max)	Vin=12V, Dim=0V	85.0	95.0	105.0	mAmean
	Iout (Max)	Vin=12V, Dim=5V	15.0	20.0	25.0	
Backlight ON/OFF Control	ON	-	2.4	-	5.0	Vdc
	OFF	-	-0.3	-	0.8	

* 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) : 12505WR-12A (YEONHO) or Equivalent

PIN No.	Symbol	Description
1,2,3	VIN	Voltage Input : 12V or 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	0V(MAX)~5V(MIN)

4.2 CN2 Connector (OUTPUT) :12507WR-06L (YEONHO) OR Equivalent

PIN No.	Symbol	Description
1	FB1	Feedback 1
2	FB2	Feedback 2
3,4	VLED	System Output
5	FB3	Feedback 3
6	FB4	Feedback 4

4.3 CN3 Connector (OUTPUT) : 10019HR-H06B (YEONHO) OR Equivalent

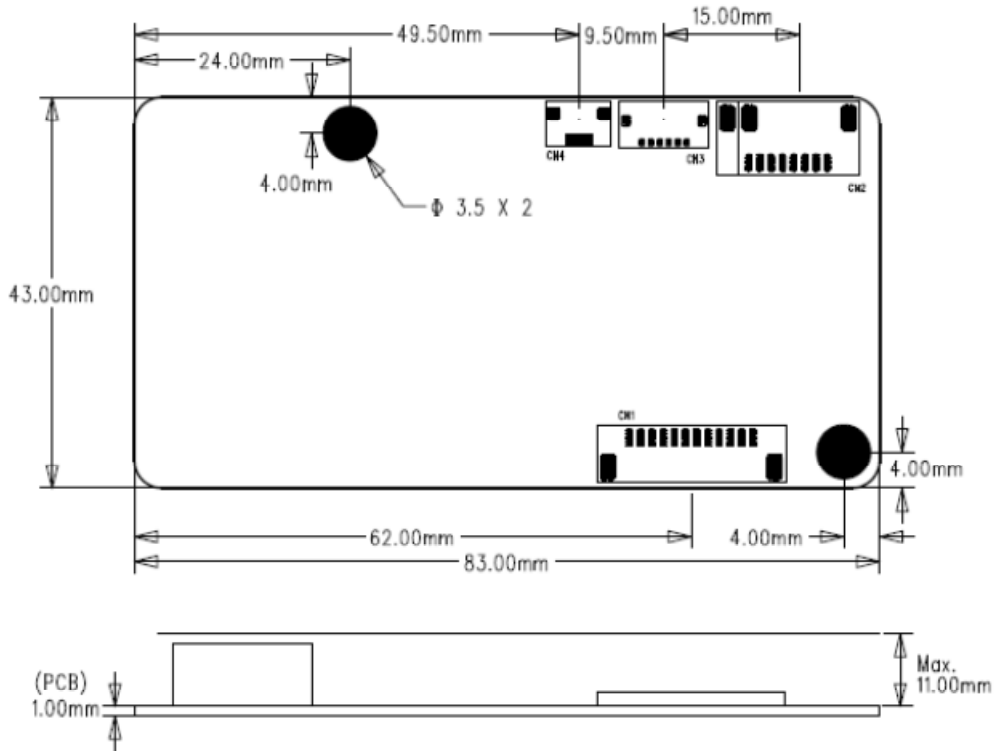
PIN No.	Symbol	Description
1	FB1	Feedback 1
2	FB2	Feedback 2
3,4	VLED	System Output
5	FB3	Feedback 3
6	FB4	Feedback 4

4.4 CN4 Connector (OUTPUT) : 05002HR-H06CE (YEONHO) OR Equivalent

PIN No.	Symbol	Description
1	FB1	Feedback 1
2	FB2	Feedback 2
3,4	VLED	System Output
5	FB3	Feedback 3
6	FB4	Feedback 4

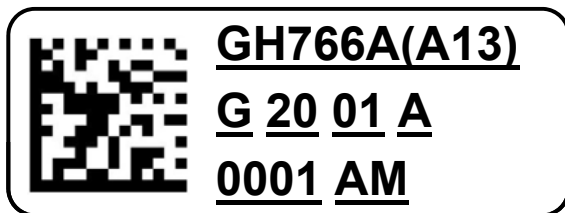
5. APPERANCE (Unit : mm)

(Tolerance : +0.8mm, -0.2mm)



6. NOTATION OF LOT NUMBER

MARKING:BOTTOM



- ① USER MODEL CODE
- ② PRODUCTION MANAGEMENT CODE
- ③ SERIAL NUMBER OR CONTROL CODE

①	GH766A(A13)	: USER MODEL CODE
	G	: MANUFACTURER CODE (GREEN C&C TECH)
	20	: YEAR OF PRODUCT 20 → 2020 , 21 → 2021 , ... , 29 → 2029
②	01	: WEEK OF PRODUCT 01,02,03,04,...52
	A	: PUBLICATION NUMBER A,B,C,...,Z,0,1,2,...,9
③	0001	: SERIAL NUMBER 0001,0002.....9998,9999
	AM	: GCCT CONTROL MODEL CODE

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7. PART LIST

SYMBOL	NAME	1st		2nd	
		TYPE No	MAKER	TYPE No	MAKER
U1	IC	MP3391EF	MPS		
Q1	FET	AOD2544	AOS	Equivalent	
Q2	TR	MMBT2907A	DIODES	Equivalent	
D1, D2	DIODE	B2100	DIODES	Equivalent	
C1	C-ELEC	BXJ Series 220uF/35V	SAMYOUNG	Equivalent	
C16		BXJ Series 10uF/100V	SAMYOUNG	"	
C2,C4	MLCC	CL21A225KA	SEMCO	Equivalent	
C3		CL21B105KB	"	"	
C5,C6,C8		CL10A105KA	"	"	
C7		CL10B102KB	"	"	
C9		CL10B104KB	"	"	
C14		CL10C101JB	"	"	
C15		CL31B105KC	"	"	
R1		CHIP-R	RM10JTN100	TA-I Tech	Equivalent
R3,R12	RM06JTN224		"	"	
R4,R5	RM06JTN513		"	"	
R6,R9,R19, R25,R26	RM06JTN104		"	"	
R7	RM06JTN124		"	"	
R27	RM06JTN362		"	"	
R10	RM06JTN273		"	"	
R11	RM06JTN102		"	"	
R13	RM06JTN184		"	"	
R14	RM06JTN393		"	"	
R15	RM06JTN203		"	"	
R17	RM06JTN101		"	"	
R18	RM06JTN100		"	"	
R20,R21	RL12FTNR200		"	"	

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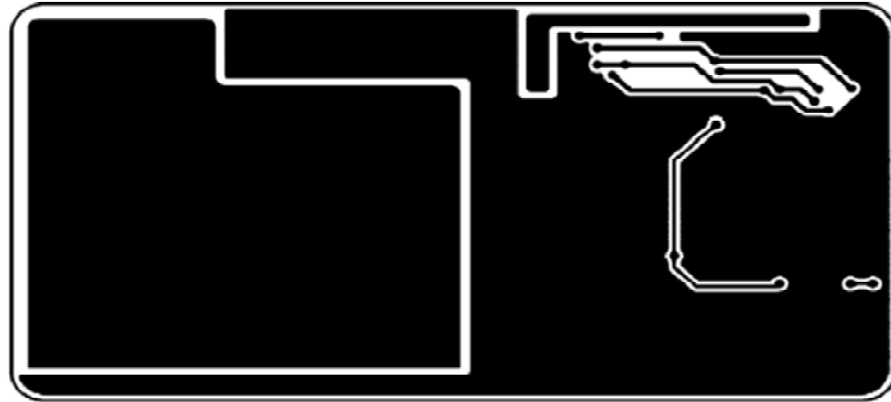
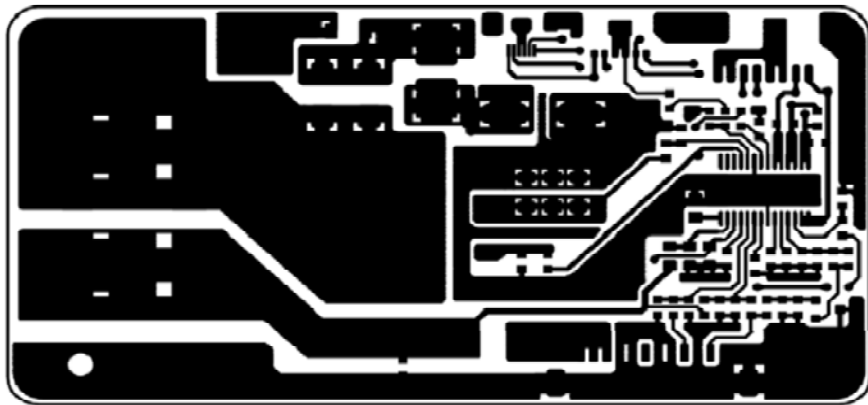
SYMBOL	NAME	1st		2nd	
		TYPE No	MAKER	TYPE No	MAKER
F1	FUSE	CCF1N4	KOA	CB61F4A	Cooper Bussmann
		451004	LITTELFUSE	453004	LITTELFUSE
L1	Inductor	SPI-1580SDM-470	SEJIN	Equivalent	
L2		SFCB7050-100	SAMWHA TECOM	"	
CN1	Connector	12505WR-12A	YEONHO	Equivalent	
CN2		12507WR-06L	YEONHO	"	
CN3		10019HR-H06B	YEONHO	"	
CN4		05002HR-H06CE	YEONHO	"	
PCB	PCB	GH766A REV0.0	SEOKANG	GH766A REV0.0	DAUN ENG
		GH766A REV0.0	CSP	GH766A REV0.0	SKY TECHNOLOGY

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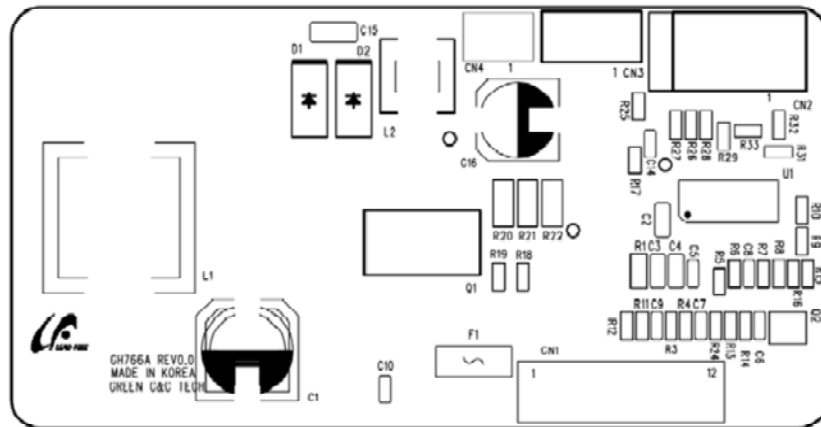
8. PCB LAYOUT

TOP LAYER

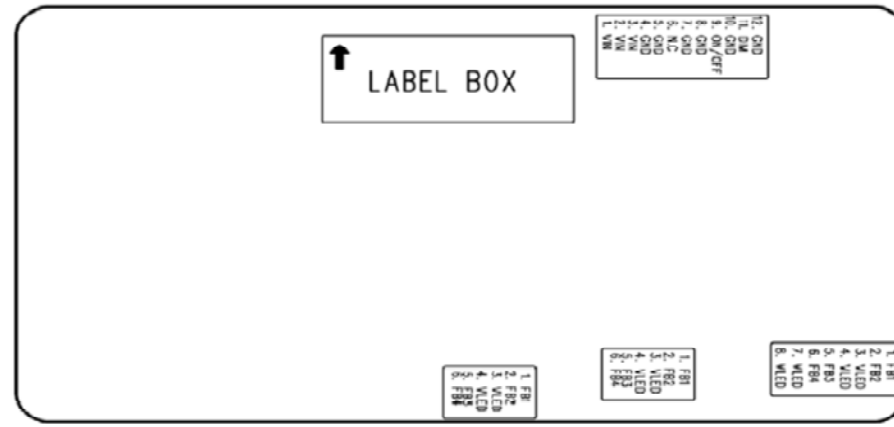
BOTTOM LAYER



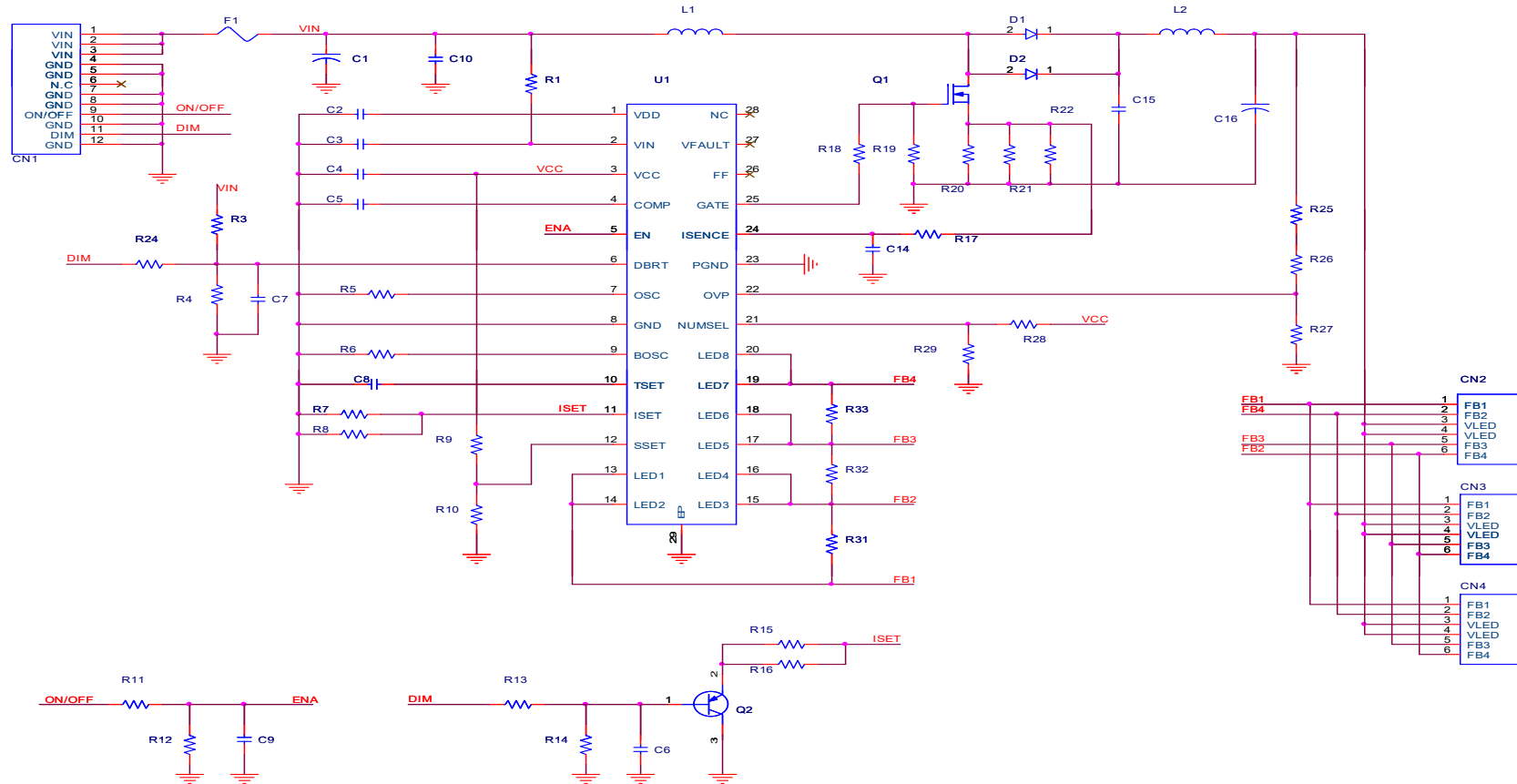
SILK SCREEN TOP



SILK SCREEN BOTTOM



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 : 70 °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 10,000 cycles
5	Thermal Shock Test	Temp : -30 °C ↔ 80 °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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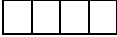
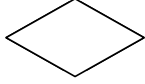

11. FLOW CHART

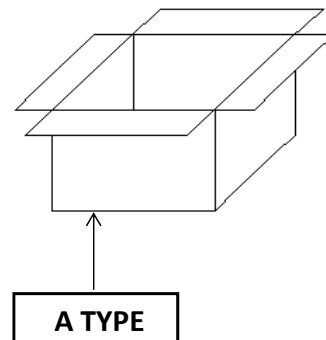
MODEL (TYPE)	GH766A(A13)	REVISION	0	
WRITER	K.S.LEE			
FLOW CHART	PROCESS	EQUIPMENTS	Remark	
	Raw Material		PART LIST	
	Solder Printing	Cream-solder Printer		
	Discrete Device Assembly	Low-high Mounter		
	Reflow Soldering	Reflower		
	Visual Inspection	Microscope		
	Label attachment	Marking		
	Preparing Process			
	Soldering by Hand for Discrete Components			
	Visual Inspection			
	Spreading Silicon	Silicon Dispenser		
	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	GCCT766AM		

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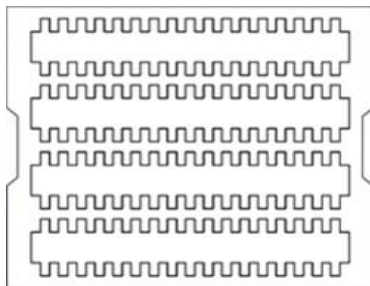
12. PACKING

12.1. BOX

 <small>LEAD-FREE</small>			 L/C NO : C/T NO : MADE IN KOREA													
<table border="1"> <tr><td>1. Customer</td><td></td></tr> <tr><td>2. PART NAME</td><td>GH766A(A13)</td></tr> <tr><td>3. PO NO</td><td></td></tr> <tr><td>4. Q'ty</td><td>000 EA</td></tr> <tr><td>5. Date</td><td>00.00.00</td></tr> <tr><td>6. LOT NO</td><td></td></tr> <tr><td></td><td></td></tr> </table>	1. Customer			2. PART NAME	GH766A(A13)	3. PO NO		4. Q'ty	000 EA	5. Date	00.00.00	6. LOT NO				
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2. PART NAME	GH766A(A13)															
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*58
PACKING-BOX	415*340*332
PACKING-PAD	400*325*5

1 TRAY : 54EA (GR2054)
1BOX : 5 TRAY (270EA)

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13. Material list for safety GH766A(A13)

SYMBOL	NAME	TYPE No	MANUFACTURER	DESCRIPTION
F1	FUSE	CCF1N4	KOA	UL FILE NO. : E171861
		451004	LITTELFUSE	UL FILE NO. : E10480
		453004		CSA FILE NO : LR29862
		CB61F4A	COOPER BUSSNANN	UL FILE NO. : E19180
PCB	Printed Wiring Board	FR4	SEOKANG	UL FILE NO. : E150774
			DAUN ENG	UL FILE NO. : E529627
			CSP	UL FILE NO. : E470424
			SKY TECHNOLOGY	UL FILE NO. : E513927
CN1	Connector	12505WR-12A	YEONHO	UL FILE NO. : E108706
CN2	Connector	12507WR-06L	YEONHO	UL FILE NO. : E108706
CN3	Connector	10019HR-H06B	YEONHO	UL FILE NO. : E108706
CN4	Connector	05002HR-H06CE	YEONHO	UL FILE NO. : E108706