

TO : customers

DATE : 2006.01.19

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# DOCUMENTATION FOR APPROVAL

**PRODUCT : CCFL BACKLIGHT INVERTER(RoHS)**

**MODEL NAME : GH027E**

**GCCT NAME : GCCT027AF**

APPROVAL	CHECKED	WRITTEN

PLEASE RETURN ONE DOCUMENT AFTER APPROVED SIGN.



GREEN C&C TECH	<b>INVERTER SPECIFICATION</b> <b>GH027E</b>	R&D DATE : 2006.01.19
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## 1. APPLICATION

This Document Specified The Detailed Product Requirements of Inverter GH027E

## 2. SUITABLE LOAD

LCD MODULE : 15" 4LAMP TFT LCD

## 3. ELECTRICAL CHARACTERISTICS

### 3-1. Absolute Maximum Ratings

ITEM	SYMBOL	SPEC	UNIT	REMARKS
INPUT VOLTAGE1	Vin1	11.0 ~ 13.0V	V	
INPUT VOLTAGE2	Vin2	4.9~5.1	V	
OPERATING TEMPERATURE	Top	-10~60	°C	
STORAGE TEMPERATURE	Tstg	-30~80	°C	
RELATIVE HUMIDITY	RH	90	%	

### 3-2. Control Signal

PIN NO.	SYMBOL	STATUS	ACTION	REMARKS
CN1 #4	BKLT_ON	HIGH	LAMP(CCFL)-ON	2.4~5.25V
		LOW	LAMP(CCFL)-OFF	0.8V MAX

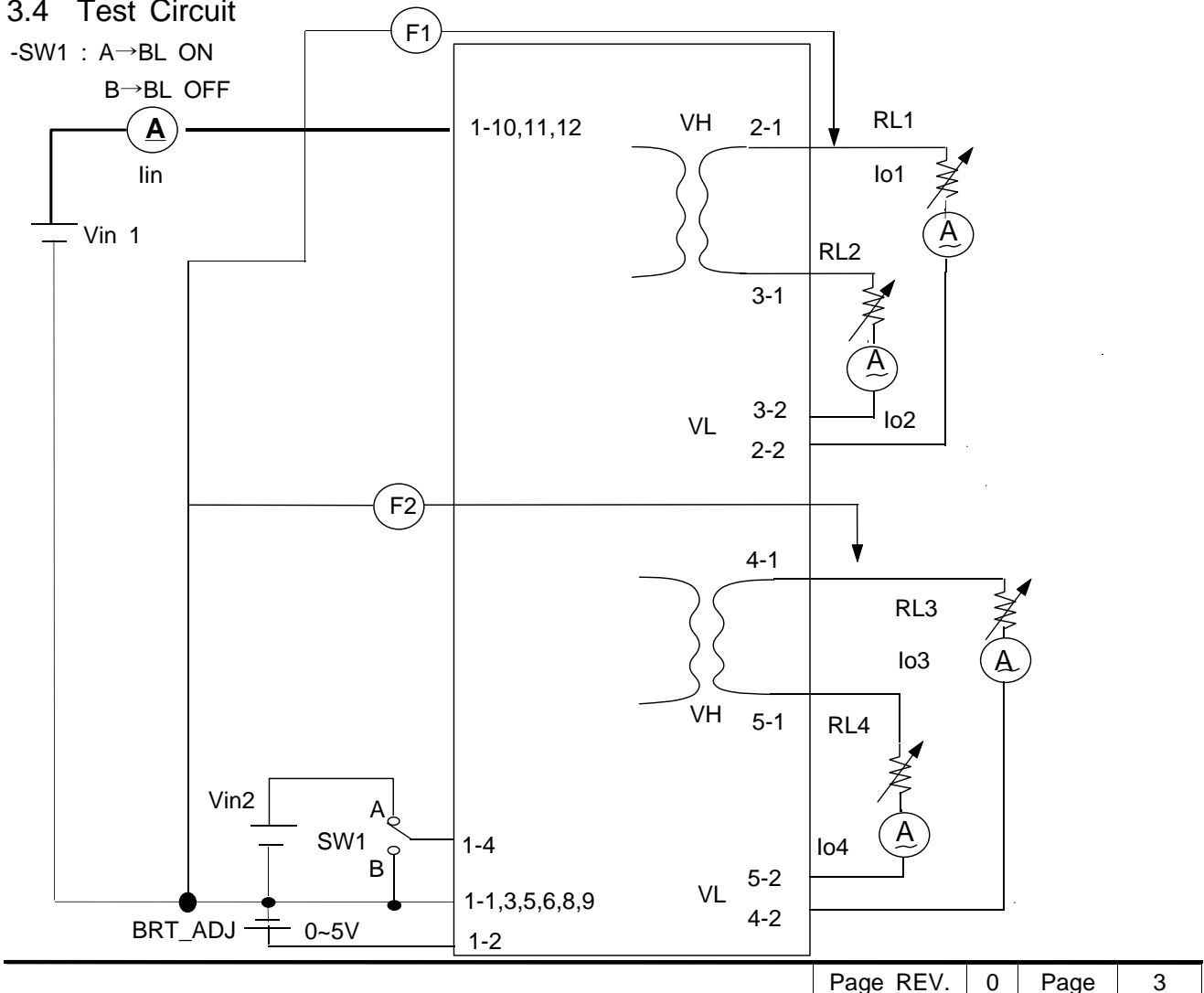
GREEN C&C TECH	<b>INVERTER SPECIFICATION</b> GH027E	R&D DATE : 2006.01.19
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### 3-3. Output Characteristics

ITEM	SYMBOL	CONDITION			SPECIFICATION			UNIT
		Vin1(V) (DC-IN)	BRT- ADJ	RL1,2(k $\Omega$ ) RL3,4(k $\Omega$ )	MIN	TYP	MAX	
OUTPUT CURRENT	Io1,2(max)	12	0V	100 $\pm$ 0.5	5.7	6.2	6.7	mArms
	Io1,2(min)	12	5V	100 $\pm$ 0.5	2.7	3.2	3.7	
	Io3,4(max)	12	0V	100 $\pm$ 0.5	5.7	6.2	6.7	
	Io3,4(min)	12	5V	100 $\pm$ 0.5	2.5	3.0	3.5	
INPUT CURRENT	Iin(1)	12	0V	100 $\pm$ 0.5	1.3	1.7	2.1	ADC
FREQUENCY	F(1)	12	0V	100 $\pm$ 0.5	50	55	60	KHz
FREQUENCY	F(2)	12	0V	100 $\pm$ 0.5	50	55	60	KHz

### 3.4 Test Circuit

-SW1 : A→BL ON  
B→BL OFF



GREEN C&C TECH	INVERTER SPECIFICATION GH027E	R&D DATE : 2006.01.19
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#### 4. INTERFACE

##### 4.1 CN1 CONNECTOR : 53261-1290 or Equivalent

PIN NO	SYMBOL	REMARK
2	BRT_ADJ	0 ~ 5V
1,3,5,6,8,9	GND	GND
4	BL ON/OFF	CCFL Drive SIGNAL(Active HIGH)
7	N.C	
10,11,12	DC-IN(Vin)	DC INPUT Power (12V)

##### 4.2 CN2 CONNECTOR : SM02B-BHSS-1-TB(JST) or Equivalent

PIN NO.	SYMBOL	REMARK
1	HOT	HIGH
2	COLD	LOW

##### 4.3 CN3 CONNECTOR : SM02B-BHSS-1-TB(JST) or Equivalent

PIN NO.	SYMBOL	REMARK
1	HOT	HIGH
2	COLD	LOW

##### 4.4 CN4 CONNECTOR : SM02B-BHSS-1-TB(JST) or Equivalent

PIN NO.	SYMBOL	REMARK
1	HOT	HIGH
2	COLD	LOW

##### 4.5 CN5 CONNECTOR : SM02B-BHSS-1-TB(JST) or Equivalent

PIN NO.	SYMBOL	REMARK
1	HOT	HIGH
2	COLD	LOW

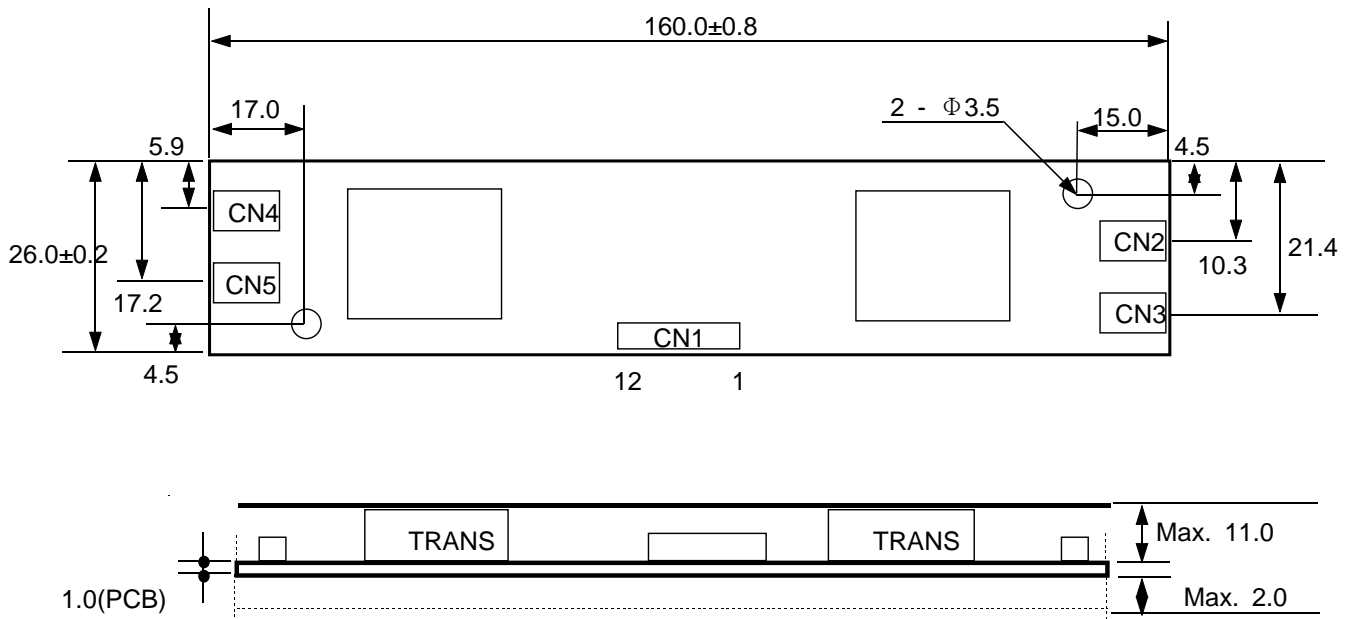
##### 4.6 CN4 CONNECTOR : SM02B-BHSS-1-TB(JST) or Equivalent

PIN NO.	SYMBOL	REMARK
1	HOT	HIGH
2	COLD	LOW

GREEN C&C TECH	INVERTER SPECIFICATION GH027E	R&D DATE : 2006.01.19
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5. APPEARANCE (UNIT : mm)

(TOLERANCE: ±0.2mm)



6. NOTATION OF LOT NUMBER

MARKING : BOTTOM OF PCB.

GH027E
YYWWMMMM

GH027E : MODEL NAME  
 YY : YEAR OF PRODUCT '01,'02,'03,'04,...'10,'11,'12  
 WW : WEEK OF PRODUCT 01,02,03,04,...53  
 MMMM : SERIAL NUMBER 0001,0002.....9998,9999

GREEN C&C TECH	INVERTER SPECIFICATION GH027E	R&D DATE : 2006.01.19
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### 7.PART LIST

SYMBOL	NAME	1st		2nd	
		TYPE NO	MAKER	TYPE NO	MAKER
U1	IC	BD9883	ROHM		
U2,3	FET	STM8405	SAMHOP	AO4606	AOS
		SP8M3	ROHM	AP4503GM	APEC
Q3,4	TR	SST2222A	ROHM	MMBT2222A	DIODES
		SBT2222A	AUK		
Q1	TR	SST2907A	ROHM	MMBT2907A	DIODES
		SBT2907A	AUK		
D2,3,4,5	DIODE	1SS355	ROHM	1N4148WS	DIODES
D1,6	DIODE	BAV99	DIODES	DAN217	ROHM
		SDS7000F	AUK	1SS357	TOSHIBA
ZD1,2	ZENER	UDZ5.6B	ROHM	UDZ5V6B	DIODES
C1,C2	C-ELEC	220uF/25V NXB Series	SAMYOUNG	220uF/25V WB Series	SAMHWA
		220uF/35V NXH Series	SAMYOUNG		
C13	MLCC	CL32F106Z	SEMCO	EQUIVALENT	
C6	"	CL10B103K	"	"	
C5	"	CL10C561J	"	"	
C9,12	"	CL10B473K	"	"	
C8	"	CL10B333K	"	"	
C10,11	"	CL10F105Z	"	"	
C3	"	CL10C221J	"	"	
C7	"	CL10F224Z	"	"	
C4	"	CL10B222K	"	"	
R1	CHIP-R	RC1608J273	"	"	
R3	"	RC1608J564	"	"	
R4	"	RC1608J124	"	"	
R5	"	RC1608J333	"	"	
R6	"	RC1608J623	"	"	
R7	"	RC1608J272	"	"	
R8	"	RC1608J102	"	"	
R9,13,18	"	RC1608J103	"	"	
R10,11,14,15	"	RC1608J470	"	"	
R16,17,21,22	"	RC1608F911	"	"	
R23	"	RC1608J104	"	"	
R19,20	"	RC1608J684	"	"	

GREEN C&C TECH	<b>INVERTER SPECIFICATION</b>  <b>GH027E</b>	R&D DATE : 2006.01.19
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SYMBOL	NAME	1st		2nd	
		TYPE NO	MAKER	TYPE NO	MAKER
T1,2	TRANS	oGT-209	NAMYANG	oGT-209	DONGHEUNG
		oGT-209	JINYOUNG	oGT-209	SEJIN
		oGT-209	TRANSTEK	oGT-209	GCCT
F1	FUSE	KE32 & KMS32	DAITO	BA100 3A	SAVEFUSE
		F1206FA3000V032T	AEM INC		
CN1	CONNECTOR	53261-1290	MOLEX	12050WR-12A	YEONHO
CN2,3,4,5	"	SM02B-BHSS	JST	35001WR-02	YEONHO
PCB	PCB	GH027A REV5.0	WONKYENG	GH027A REV5.0	SOOJOO
		GH027A REV5.0	YOUNG EUN	GH053A REV5.0	FINE CIRCUIT
No Component	Q5,D7,D8,C14,C15,C16,C17,C19,C20, R2,R12,R24,R25,R26,R27,R28,R29, R30,R31,R32,R33,R34,R35,R36				

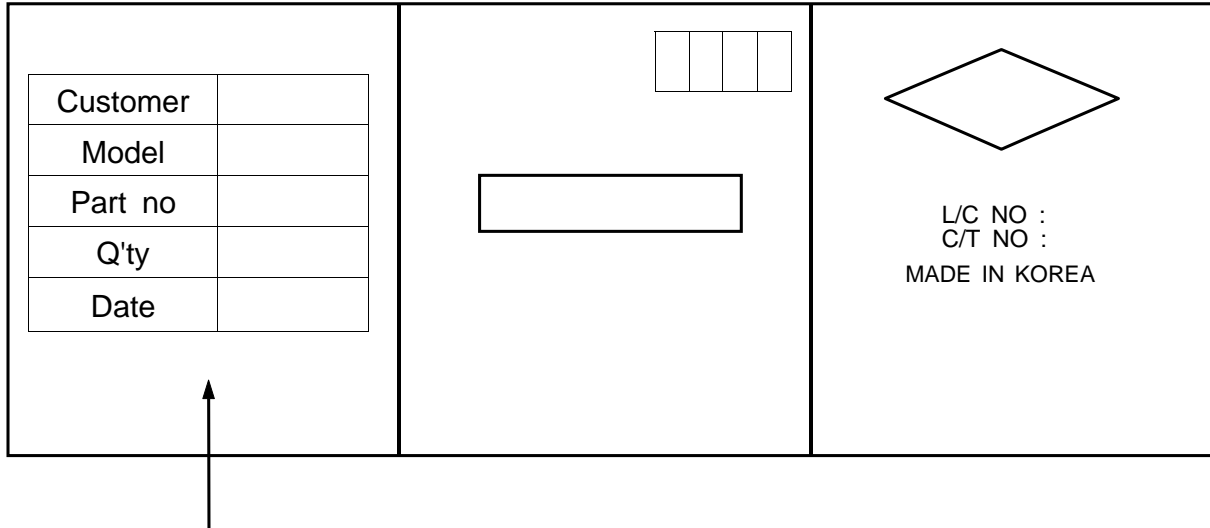
GREEN C&C TECH	<b>INVERTER SPECIFICATION</b> <b>GH027E</b>	R&D DATE : 2006.01.19
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## 11. RELIABILITY TEST SPEC

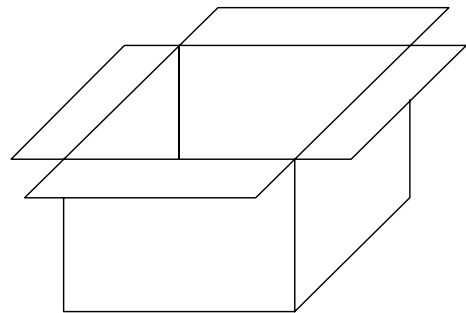
NO.	ITEM	CONDITIONS AND METHOD
1	High Temperature Storage Test	Temp : 70℃ Duration 500hrs
2	Low Temperature Storage Test	Temp : -30℃ Duration 500hrs
3	High Temperature High Humidity Storage	Temp : 40℃ Humid 95%RH Duration 500hrs
4	High Temperature High Humidity Operation test	Temp : 40℃ Humid 95%RH Duration 1000hrs
5	Thermal Shock Test	Temp -30℃ ↔ 70℃,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℃ Duration 72hrs
8	Low Temperature Operation test	Temp : 0℃ Duration 72hrs

GREEN C&C TECH	INVERTER SPECIFICATION GH027E	R&D DATE : 2006.01.19
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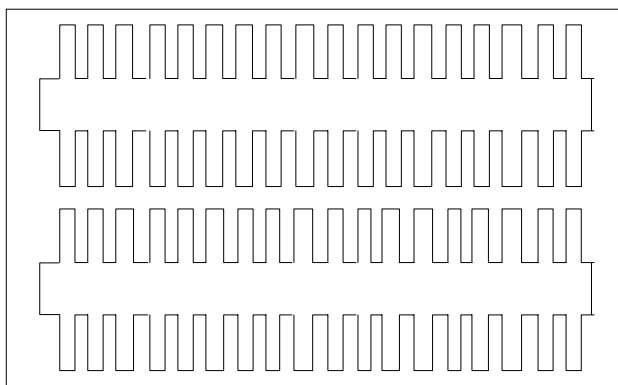
11. PACKING  
11.1 BOX



Customer	
Model	GH027E
Part no	
Q'ty	000 EA
Date	00.00.00



11.2 TRAY



1 TRAY : 36EA  
1 BOX : 10TRAY (360EA)

SYMBOL	TYPE NO
PACKING-TRAY	383*319*36
PACKING-BOX	393*324*358
PACKING-PAD	393*324*3

## 12. MATERIAL LIST FOR SAFETY GH027E

### 12.1 LIST

SYMBOL	NAME	TYPE NO.	MANUFACTURER	DESCRIPTION
F1	FUSE	KE32 & KMS32	DAITO COMMUNICATION APPARATUS CO LTD	UL FILE NO. E59783
		F1206FA3000V032T	aem inc	UL NO : E232989
		BA100(3A)	SAVEFUSE	UL file NO. E146895 CSA file No. LR98127
PCB	PRINTED WIRING BOARD	FR-4	SOOJOO	UL FILE NO :E173459
			YOUNG EUN	UL FILE NO : E173507
			WONKYENG	UL FILE NO :E202541
			FINE CIRCUIT	UL FILE NO :E129799
CN1	CONNECTOR	12505WR-12A00	YEONHO	UL:E108706
		53261-1290	MOLEX	UL FILE NO:E29179 NYLON 66 UL94V-0
CN2,3,4,5	CONNECTOR	35001WR-02	YEONHO	UL:E108706
		SM02B-BHSS	JST	UL FILE NO : E60389 POLYAMIDE RESIN UL94V-0
T1,T2	TRANSFORMER	oGT-209	NAMYANG ELECTRONICS	CLASS A (105 de.C) SEE TRANS SPEC
			JIN YOUNG ELECTRONICS	CLASS A (105 de.C) SEE TRANS SPEC
			SEJIN	CLASS A (105 de.C) SEE TRANS SPEC
			DONG HEUNG	CLASS A (105 de.C) SEE TRANS SPEC
			TRANSTEK	CLASS A (105 de.C) SEE TRANS SPEC
			GCCT	CLASS A (105 de.C) SEE TRANS SPEC