

DATA MODUL

Specification

GH523A(P26)

Spec Revision:
Revision Date: 02.01.2024

Note: This specification is subject to change without prior notice

Passion Displayed

TO : Customer

DATE : 2024.01.02

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DOCUMENTATION FOR APPROVAL

PRODUCT : LED BACKLIGHT DRIVER (RoHS)
MODEL NAME : GH523A(P26)
GCCT NAME : GCCT523PZ

APPROVAL	CHECKED	WRITTEN

PLEASE RETURN ONE DOCUMENT AFTER APPROVED SIGN.

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		Reforming Date	

NO	Date	REVISION	Page

REVISION HISTORY

REV.														
Page														
REV.	0	0	0	0	0	0	0	0	0	0	0	0	0	
Page	1	2	3	4	5	6	7	8	9	10	11	12	13	
Page Rev.											0	Page	1	

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1. APPLICATION

This Document Specified The Detailed Product Requirement of LED driver
GH523A(P26)

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 ~ 5.25V
		LOW	LED - OFF	0.8 V Max

3.3. Output Characteristics

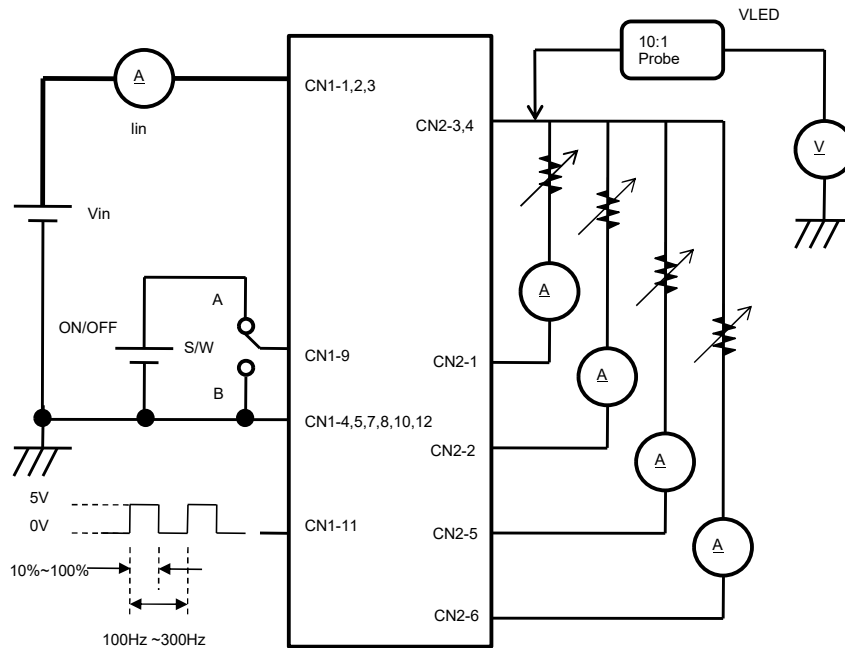
Item	Sym.	Condition	Min.	Typ.	Max.	Unit
Input Voltage	Vin	-	10.8	-	26.4	Vdc
Input Current	lin	Vin=12V, Dim=100%	-	-	2.0	A
Output Current	Iout (max)	Vin=12V, Dim=100%	80.0	90.0	100.0	mAmean
	Iout (min)	Vin=12V, Dim=10%	4.0	9.0	14.0	mAmean
PWM Signal	Vpwm	High(ON)	2.4	-	5.0	V
	Vpwm	Low(OFF)	-0.3	-	0.8	
	Fpwm	-	100	-	300	Hz
	DUTY	Active High Level	10 (Min)	-	100 (Max)	%

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

* Duty of the PWM Signal has to be more than 1% at step 1 of Brightness.

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, 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	10 ~ 100% (100Hz~300Hz PWM Freq.)

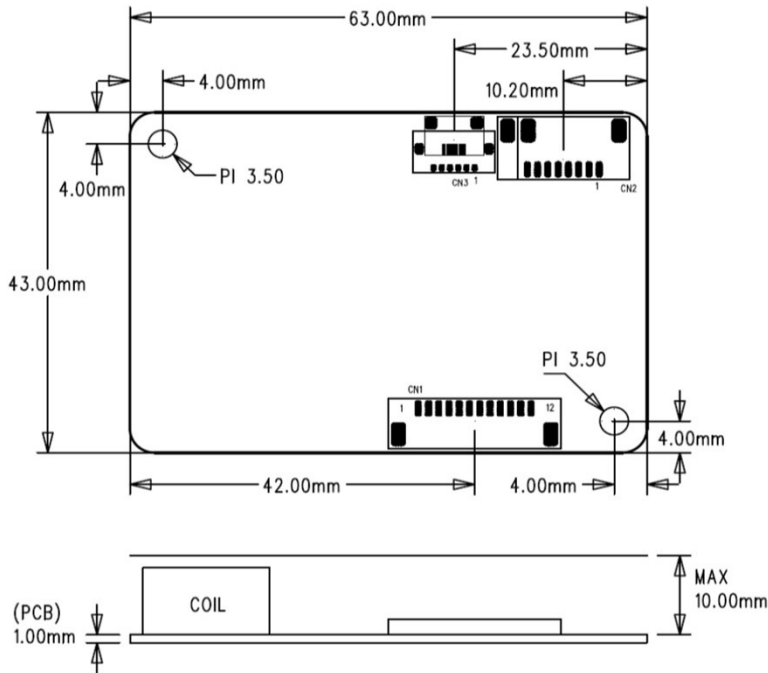
4.2. CN2 Connector (Output) : 12507WR-06L (YEONHO) or Equivalent

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

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5. APPERANCE (Unit : mm)

(Tolerance : +0.8mm, -0.2mm)



6. NOTATION OF LOT NUMBER

MARKING : BOTTOM

	GH523A(P26)	→ ① USER MODEL CODE
	G 20 01 A	→ ② PRODUCTION MANAGEMENT CODE
	0001 PZ	→ ③ SERIAL NUMBER OR CONTROL CODE

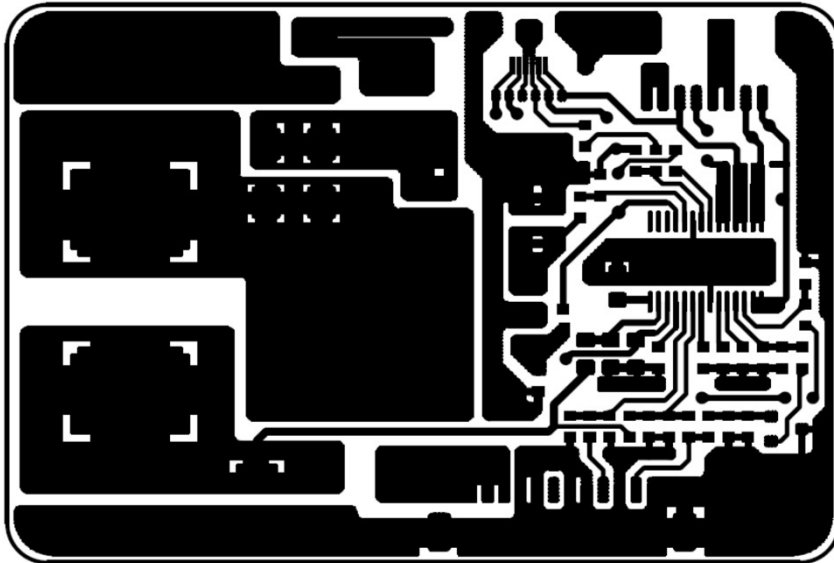
①	GH523A(P26)	: USER MODEL CODE
②	G	: MANUFACTURER CODE (GREEN C&C TECH)
	20	: YEAR OF PRODUCT 20 → 2020 , 21 → 2021 , ... , 29 → 2029
②	01	: WEEK OF PRODUCT 01,02,03,04,...52
	A	: PUBLICATION NUMBER A,B,C,...,Z,0,1,2,...,9
③	0001	: SERIAL NUMBER 0001,0002.....9998,9999
	PZ	: GCCT CONTROL MODEL CODE

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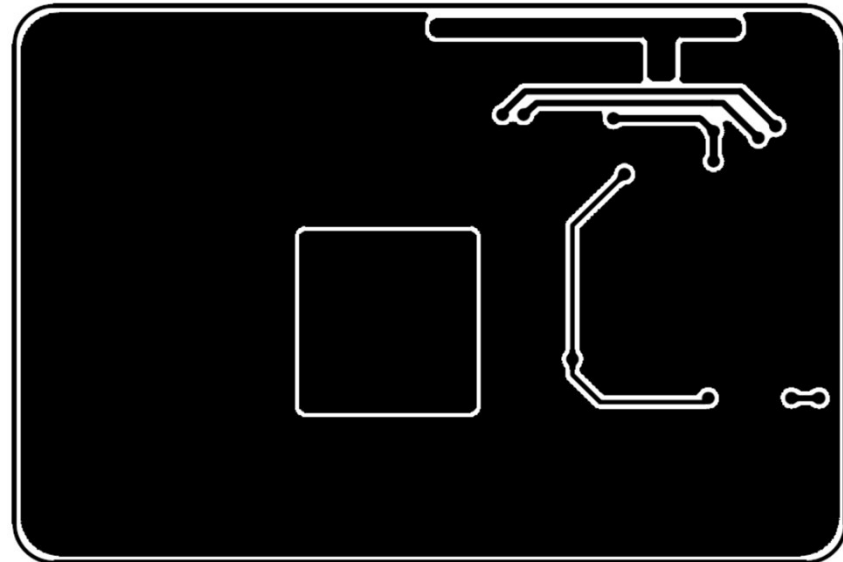
7. PART LIST

SYMBOL	NAME	1st		2nd	
		TYPE No	MAKER	TYPE No	MAKER
U1	IC	MP3391EF	MPS	Equivalent	
Q1	FET	AP9997GH	APEC	Equivalent	
D1	DIODE	B2100	DIODES/LITEON	Equivalent	
C1	C-ELEC	NXH Series 220uF/35V	SAMYOUNG	Equivalent	
C16		NXA Series 15uF/100V	SAMYOUNG	"	
C2,C4	MLCC	CL21A225KA	SEMCO	Equivalent	
C3		CL21B105KB	"	"	
C5,C8		CL10A105KA	"	"	
C7,C14		CL10C101JB	"	"	
C9		CL10B104KB	"	"	
C15		CL31B105KC	"	"	
R1	CHIP-R	RM10JTN100	TA-I TECH	Equivalent	
R3,R12		RM06JTN224	"	"	
R4,R5		RM06JTN513	"	"	
R6,R9,R18, R21,R22		RM06JTN104	"	"	
R7,R10		RM06JTN273	"	"	
R11,R24		RM06JTN102	"	"	
R16		RM06JTN101	"	"	
R17		RM06JTN100	"	"	
R19,R20		RL12FTNR200	"	"	
R23		RM06JTN432	"	"	
F1	FUSE	CCF1N4	KOA	CB61F4A	Cooper Bussmann
		451004	LITTELFUSE	453004	LITTELFUSE
L1	Inductor	SPI-1260SDN-470	SEJIN ELEC	Equivalent	
L2		PNL4020-100M	Dong An Elec	"	
CN1	Connector	12505WR-12(P)	YEONHO	Equivalent	
CN2		12507WR-06L(P)	YEONHO	"	
PCB	PCB	GH523A REV1.0	SEOKANG TECH	GH523A REV1.0	AMC KOREA
		GH523A REV1.0	DAUN ENG	GH523A REV1.0	SKY TECHNOLOGY

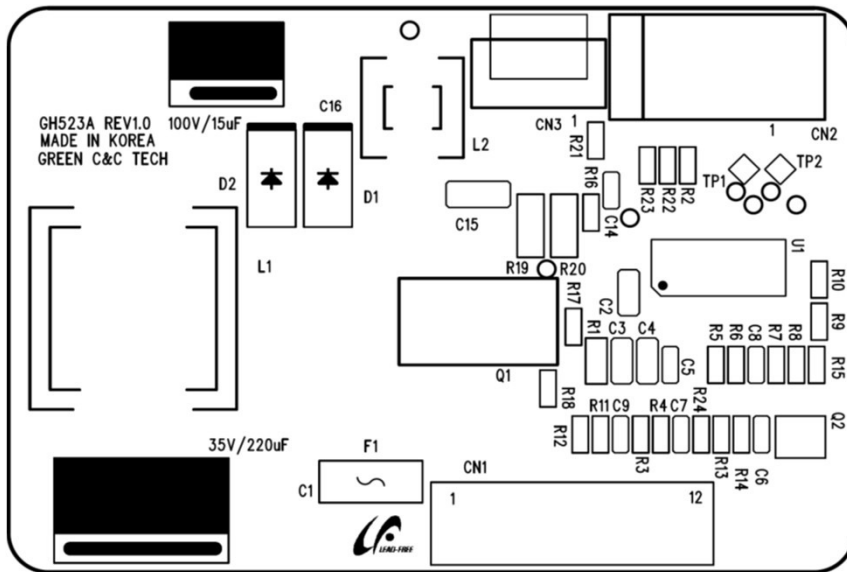
8. PCB LAYOUT



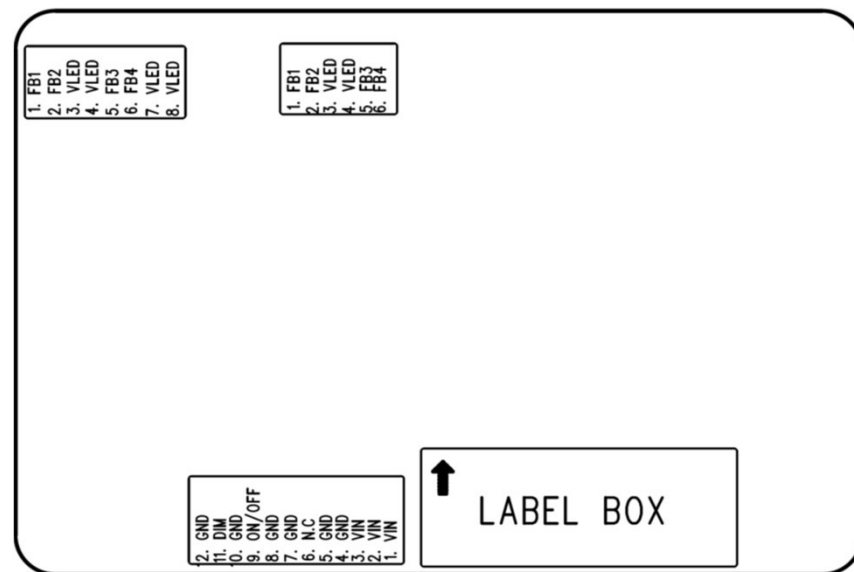
TOP LAYER



BOTTOM LAYER



SILK SCREEN TOP



SILK SCREEN BOTTOM

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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 30,000 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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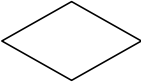

11. FLOW CHART

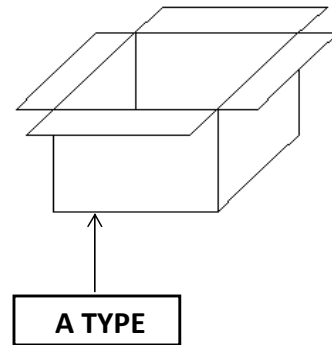
MODEL (TYPE)	GH523A(P26)	REVISION	0
WRITER	J.H.KIM	FLOW CHART	
FLOW CHART	PROCESS	EQUIPMENTS	Remark
<p>The flowchart illustrates the production process for GH523A(P26). It starts with 'Raw Material' and proceeds through 'Solder Printing', 'Surface Mounting', 'Reflow Soldering (CTQ)', 'Visual Inspection (AOI)', 'Label attachment', 'Preparing Process', 'Soldering by Hand for Discrete Parts', 'Spreading Silicon', 'Insert Lead Parts', 'Wave-Soldering', 'Visual Inspection', 'PCB Division', 'Aging', 'Electrical Characteristics inspection', 'Insulator Attachment', 'Bar-Code Reading', 'Package', 'Outgoing Inspection', and finally 'Shipping'. There are two 'Repair' loops: one after 'Visual Inspection (AOI)' and another after 'Electrical Characteristics inspection'. Both loops lead to 'Waste' if the part is not repaired ('N') and back to the process if repaired ('O'). Other inputs include 'Cream-Solder', 'SMD Parts', 'Film, Condenser, fuse, tube', 'Trans', 'Silicon', 'Lead Parts', 'Insulator', and 'Buffer tray, External Box Pad, tape'. A 'Re-inspection' step is shown at the end of the process.</p>	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	GCCT523PZ		

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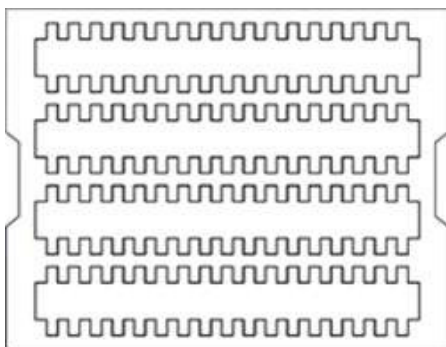
12. PACKING

12.1. BOX

 <small>LEAD-FREE</small>			 L/C NO : C/T NO : MADE IN KOREA
1. Customer			
2. PART NAME	GH523A(P26)		
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*53
PACKING-BOX	415*340*332
PACKING-PAD	393*324*4

1 TRAY : 68EA (GR2052)
1BOX : 6 TRAY (408EA) - A TYPE

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13. Material list for safety GH523A(P26)

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 Writing Board	FR4	SEOKANG TECH	UL FILE NO. : E150774
			AMC KOREA	UL FILE NO. : E475806
			DAUN ENG	UL FILE NO. : E529627
			SKY TECHNOLOGY	UL FILE NO. : E513927
CN1	Connector	12505WR-12A	YEONHO	UL FILE NO. : E108706
CN2	Connector	12507WR-06L	YEONHO	UL FILE NO. : E108706

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