



# GUOYEXING OPTOELECTRONICS CO.LTD

## SPECIFICATION

FOR APPROVAL

ISSUED DATE :

CUSTOMER :

DESCRIPTION :

MODEL NO.: P10F01D - 44S - V1.0

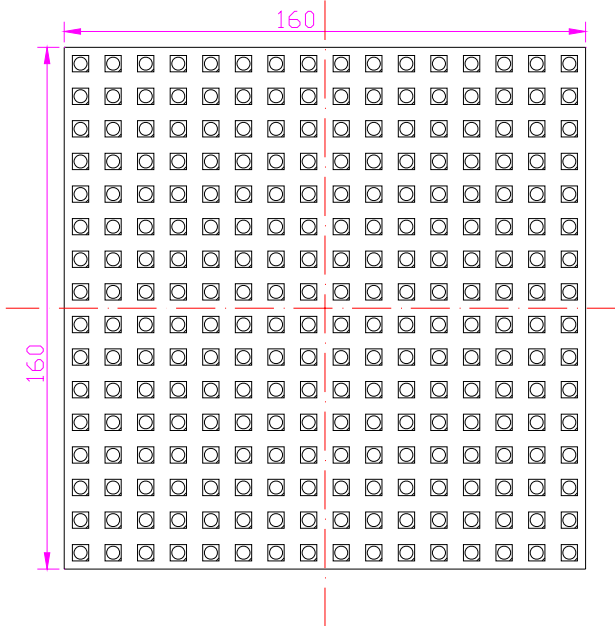
DOCUMENTNO. :

[ GUOYEXING TECH. ]

ISSUE	REVIEW	APPRL

[ CUSTOMER APPROVAL ]

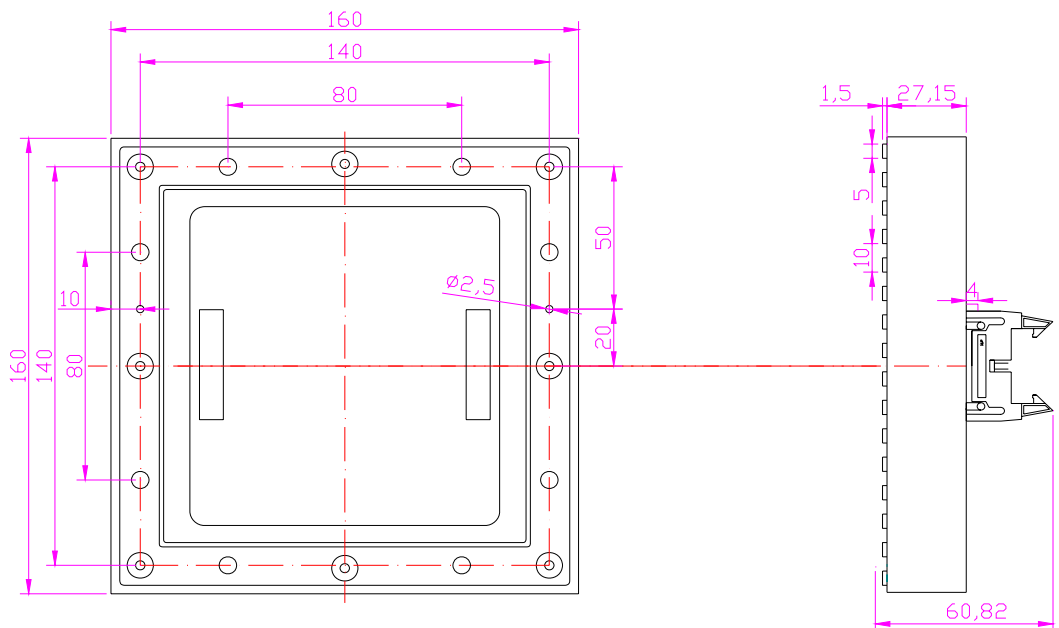

**\*DATE—CONNECTOR (JIN1、JOUT1)**



PIN NO	SIGNAL	PIN NO	SIGNAL
1	R	2	G
3	B	4	GND
5	R1	6	G1
7	B1	8	GND
9	A0	10	A1
11	CLK	12	GND
13	STB	14	GND
15	OE	16	GND

**\*POWER CONNECTOR (J POWER1)**

NO	SIGNAL	LEVEL
1	VCC	5 (V)
2	GND	0 (V)
3	GND	0 (V)
4	VDD	5 (V)



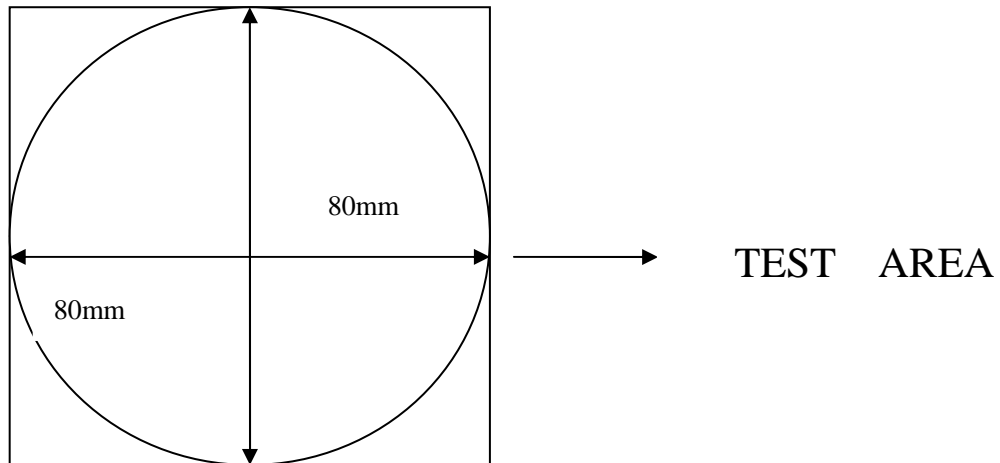


5、 OPTICAL CHARACTERISTICS

Ta=25°C

TTEM	SYMBOL	COND	MIN.	TYP	MAX	UNIT
Brightness	RED	Vcc=5V VDD=5V	700	750	800	MCD
	GREEN		750	850	950	
	BLUE		200	225	250	
	WHITE		2200	2500	2800	CD/m²
Wavelength	RED	—	—	630	—	Nm
	GREEN		—	525	—	
	BLUE		—	470	—	

(\*1)

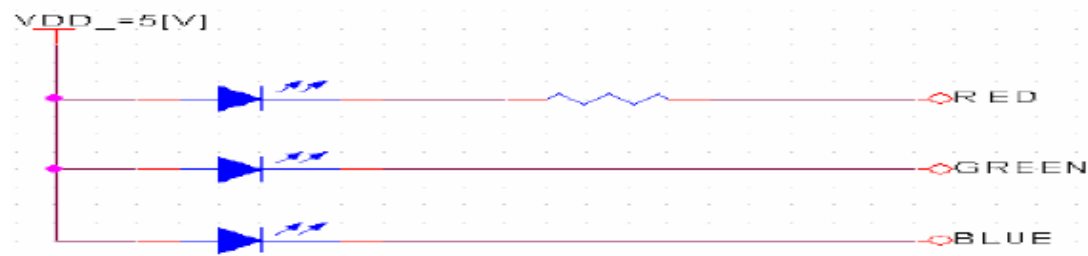


6、 ELECTRICAL CHARACTERISTICS

6-1.Voltage-Current Characteristics

Ta=25°C

ITEM	SYMBOL	COND	MIN	TYP.	MAX	UNIT
Supply voltage(LOGIC)	Vcc	—		5		V
Supply voltage(LED)	Vdd	—		5		V
Supply current(LOGIC)	Icc	Vcc=5V	—	200		mA
Supply-current	RED	Lighting —all		3.84		A
	GREEN					
	BLUE					



7. INTERFACE

7-1.IN/OUT PUT connector pin number & signal function

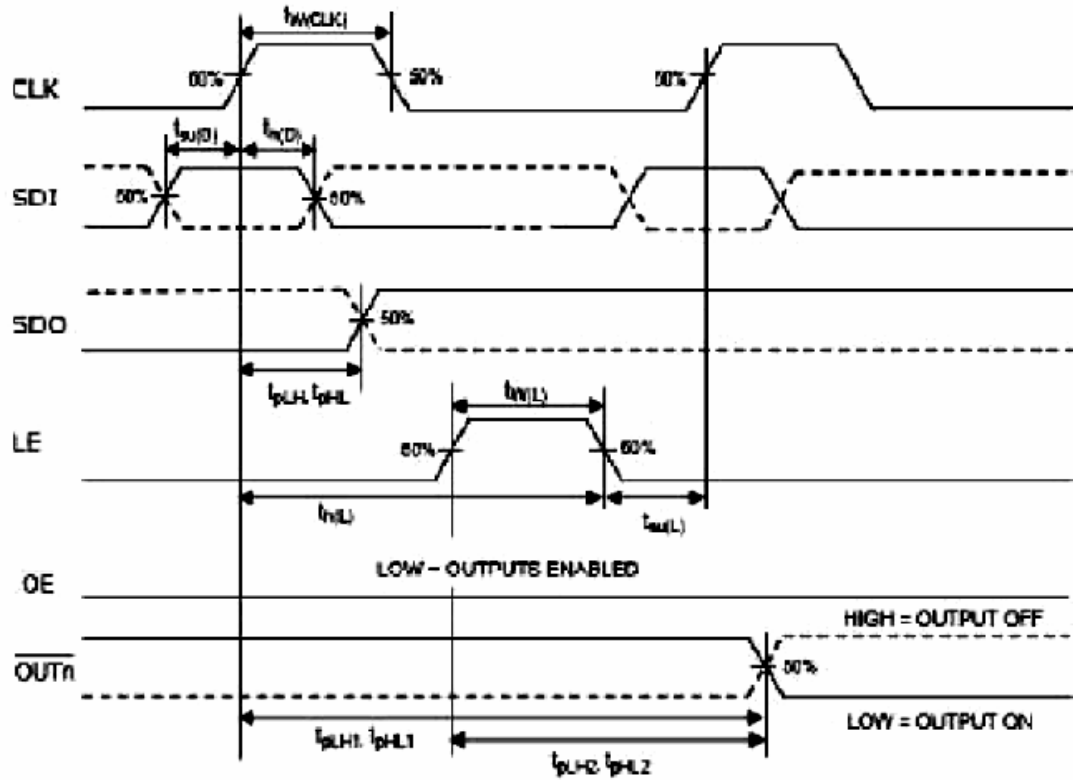
PORT	Pin No.	SIGNAL	SIGNAL-FUNCTION
INPUT/ OUTPUT SIGNAL (IN)	1	R0	RED DATA (UP 8 ROW)
	2	G0	GREEN DATA (UP 8 ROW)
	3	B0	BLUE DATA (UP 8 ROW)
	4	GND	GROUND
	5	R1	RED DATA (DOWN 8 ROW)
	6	G1	GREEN DATA (DOWN 8 ROW)
	7	B1	BLUE DATA (DOWN 8 ROW)
	8	GND	GROUND
	9	A0	HORIZONTAL SCAN ADDRESS 0
	10	A1	HORIZONTAL SCAN ADDRESS 1
	11	CLK	SHIFT CLOCK
	12	GND	GROUND
	13	STB	DATA LATCH
	14	GND	GROUND
	15	OE	OUTPUT ENABLE
	16	GND	GROUND

7-2. Power connector pin number & signal function

NO	SIGNAL	LEVEL	FUNCTION	WIRE
1	VCC	5 (V)	LOGIC	RED
2	GND	0 (V)	GROUND	BLACK
3	GND	0 (V)	GROUND	BLACK
4	VDD	5 (V)	POWER OF LED	RED

8.TIMING

8-1.MAP

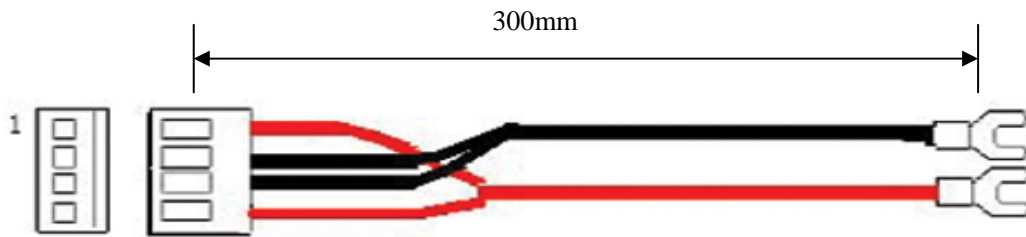


8-2.OPERATION TIMING

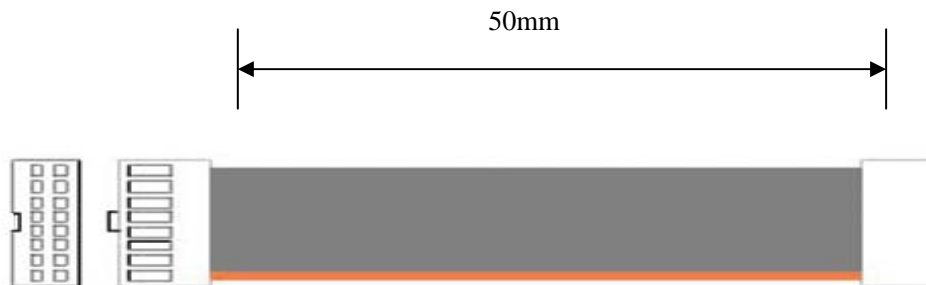
Characteristic	Symbol	condition	min	typ	max	unit	
Propagation Delay Time ("L" To "H")	CLK • OUTn	Tplh1	-	50	100	ns	
	LE • OUTn	Tplh2	-	50	100	ns	
	OE • OUTn	Tplh3	-	20	100	ns	
	CLK • SDO	Tplh	$V_{IH}=V_{DD}$ $V_{IL}=GND$	15	20	-	ns
Propagation Delay Time ("H" To "L")	CLK • OUTn	Tphl1	-	100	150	ns	
	LE • OUTn	Tphl2	-	100	150	ns	
	OE • OUTn	Tphl3	$R_{ac1}=300$ $V_L=4.0v$ $R_1=52$ $C_L=10PF$	-	50	150	ns
	CLK • SDO	Tphl		16	20	-	ns
Pulse width	CLK	T(clk)	20	-	-	ns	
	LE	T(l)	20	-	-	ns	
	OE	T(oe)	200	-	-	ns	
Hold time for LE	T h(l)		5	-	-	ns	
Setup time for LE	T su(l)		6	-	-	ns	
Hold time for SDI	Tn(d)		10	-	-	ns	
Setup time for SDI	Lsu(d)		5	-	-	ns	
Clock Frequency	F <sub>clk</sub>	Cascade operation	-	-	25.0	MHz	
Maximum CLK rise time	t <sub>c+</sub>		-	-	500	ns	
Maximum CLK fall time	T <sub>c-</sub>		-	-	500	ns	
Output rise time of vout (turn off)	T <sub>er</sub>		-	40	120	ns	
Output fall time of vout (turn on)	T <sub>et</sub>		-	70	200	ns	

9.CABLE SPEC

<POWER CABLE>



<SIGNAL CABLE>



PART NO.	STANDARD	VENDOR
FL01-14D-50mm	2.54mm PITCH 16 P WIRE (FLAT CABLE/50mm)	
Gu396-0418-300R	4mm PITCH 4 P WIRE	

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10. PART LIST

NO	PART LIST	DWG NO	QUAN.	TYPE	PART NAME	MAKER	NOTE
1	3-IN-1 SMD LED		256				
2	PCB(Display)		1	2Layer/1.6t			160mm*160mm
3	DRIVE IC		12	SSOP-24	MBI5026C(GF)		
4	IC		2	SOJ-20	74AHC245D		
5	IC		1	SO-16	74HC138D		
6	IC		8	SOP-8	CEM4953		
7	CONDENSER		1	DIP	1000uF/16V		POWER
8	CHIP SEAMIC CON.		14	0805	0.1 uF		DRIVE
9	CHIP SEAMIC CON.		1	0805	0.1 uF		POWER
10	CHIP RESISTOR		32	0805	510 $\phi$		
11	CHIP RESISTOR		2	0805	100 $\phi$		
12	CHIP RESISTOR		1	0805	1K $\phi$		
13	CHIP RESISTOR		1	0805	51 $\phi$		
14	CHIP RESISTOR		1	0805	82 $\phi$		
15	CHIP RESISTOR		1	0805	82 $\phi$		
16	VAR RESISTOR		11	0805	104 $\phi$		
17	POWERHOUSING		1	DIP	XH 4*4 p		
18	SOCKET 1		16	DIP	1X8-2.54mm		

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## 11. INSTALLATION NOTICES

- 1) Please apply this modules at a safe surrounding against noise because the error or mis-operation may occur at fragile place of noise.
- 2) Check surely the power condition to operation test in order to prevent module damage which might be caused by the excessive power.
- 3) Modules should be set up within the guarantee limitation and especially kept away from salt dust, soot and SO<sub>2</sub> gas etc.
- 4) When there is no data transmission at operation test just turn power off immediately. Otherwise operating gets damaged.
- 5) Please apply this product under the range of guarantee, considering the sufficient radiation in case of the assembled multi-module.
- 6) V led is recommended the maximum of rating voltage for best result under the low temperature such as -15° C below.
- 7) Please check the insert direction when you attach SIGNAL CONNECTOR or link the power.

## 12 .REFERENCES

- 1) Check SYSTEM weight before apply modules into housing.
  - 2) Operation test or anti-static electricity need for the COMS attached in circuit board.
  - 3) Sufficient power capability is necessary to deal with the excessive power which might be drastically caused depending on the condition of the on/off of unit.(peak current times 1.5 and higher)
  - 4) power for logic or LED requires Switching Mode Supply.
  - 5) Use power bus bar when connecting power. It helps power to keep from falling down..
  - 6) Please don't change "switch was set as outgoing" The switch was set as out-going.
  - 7) Any further question or trouble herein will be worked out mutually by customer and supplier through sales manager.
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