



GUOYEXING OPTOELECTRONICS CO.LTD

SPECIFICATION

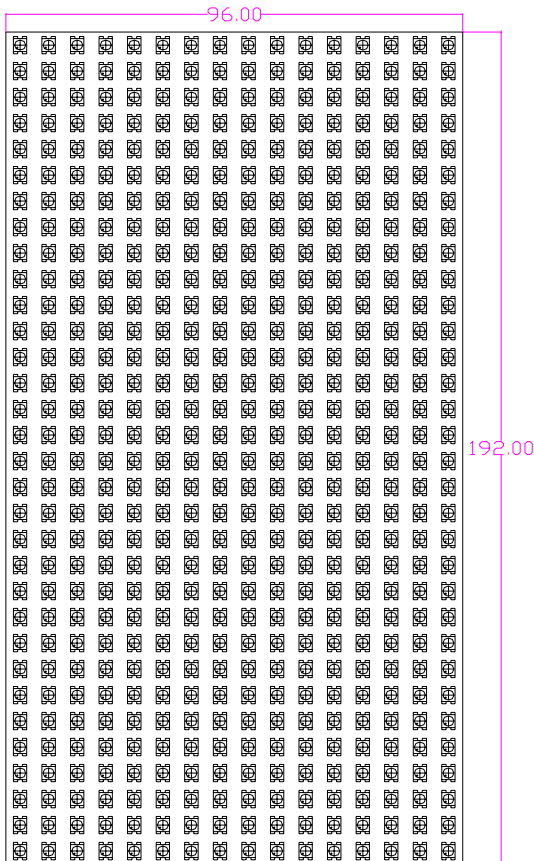
FOR APPROVAL	
ISSUED DATE :	
CUSTOMER :	
DESCRIPTION :	
MODEL NO.:	SST-96*192-111-MZ V2.0
DOCUMENTNO. :	

[GUOYEXING TECH.]

ISSUE	REVIEW	APPRL

[CUSTOMER APPROVAL]

***DATE—CONNECTOR (JIN1、JOUT1)**

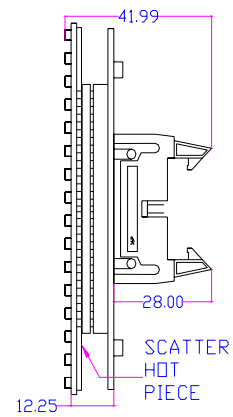
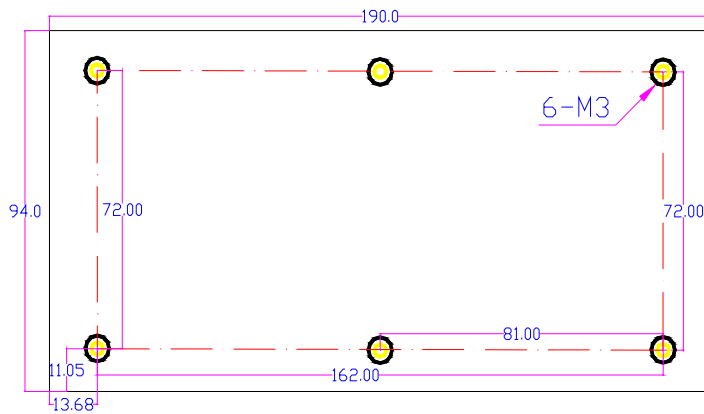


PIN NO	SIGNAL DESCRIBE	PIN NO	SIGNAL DESCRIBE
1	R1	2	G1
3	B1	4	GND
5	R2	6	G2
7	B2	8	A
9	B	10	C
11	CLK	12	GND
13	LAT	14	GND
15	OE	16	GND

***POWER CONNECTOR (J POWER1)**

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

UNIT:mm



This module designed for light emitting display device. Organize with 16x32 matrix combination with 512 of Red(1), P-G(1),Blue(1) lamps , for indoor use.

1、FEATURE

Active display size	192mm×96mm
Dot pitch	6mm
LED MODEL	3528
Display color	Red, P-Green,Blue,White,Full color
Drive type	1/8 SCAN
Dot matrix	512(16×32)
Weight	242g

2、ABSOLUTE MAXIMUM RATINGS

Ta=25℃

ITEM	SYMBOL	RATING	UNIT	COND
Power dissipation	PD	19.2	W	
Supply voltage(DRIVE)	VCC	5	V	
Supply voltage(LED)	VDD	5	V	
Opera ting Temp	Topr	-20~+60	℃	
Storage Temp	Tstg	-20~+65	℃	

3、GUARANTEE TEMPERATURE FOR OPERATING

ITEM	ATMOSPHERIC TEMP	REMARK
Opera ting Temp	-20~+53℃(Max)	50% Lit
Storage Temp	-20~+60℃(Max)	25% Lit

4、DISPLAY CHARACTERISTICS

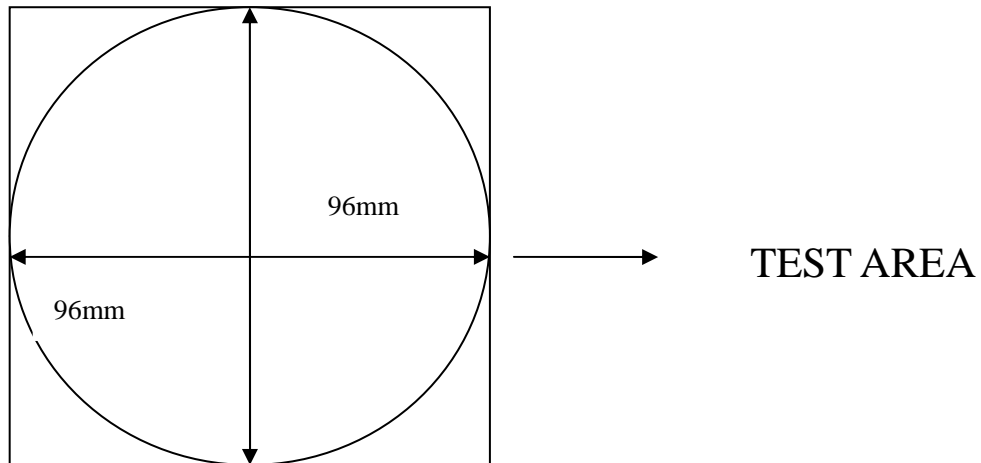
- 4-1. Half viewing angle —————±60° /30
- 4-2. Brightness of emission area.(when black-out) —————Clear
- 4-3. Brightness of non-emission area —————Black

5、OPTICAL CHARACTERISTICS

Ta=25°C

TTEM	SYMBOL	COND	MIN.	TYP	MAX	UNIT
Brightness	RED	IVr	180	320	400	Mcd
	P-GREEN	IVg	280	420	600	
	BLUE	IVb	70	130	150	
	WHITE	IVa	2300	2500	2700	Cd/m ²
Wavelength	RED	Dr	—	625	—	nm
	GREEN	Dg	—	525	—	
	BLUE	Db	—	468	—	

(*1)



6、ELECTRICAL CHARACTERISTICS

6-1.Voltage-Current Characteristics

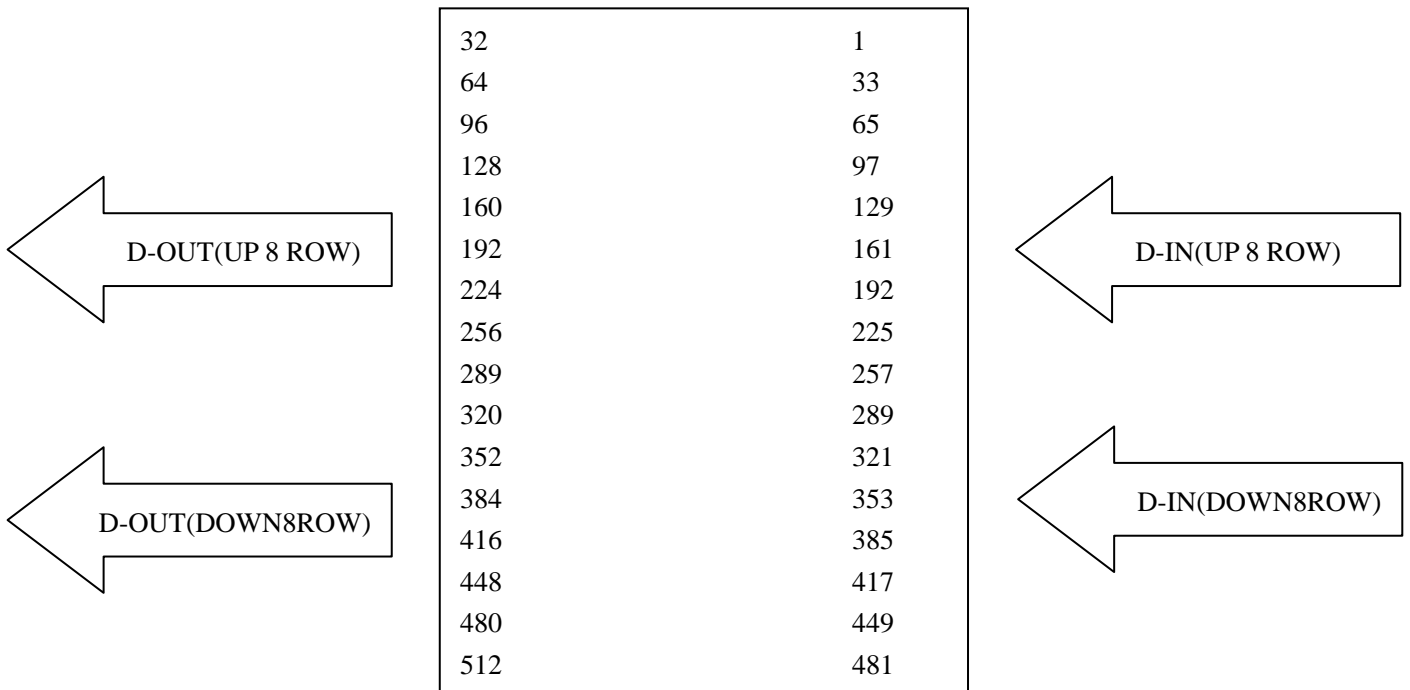
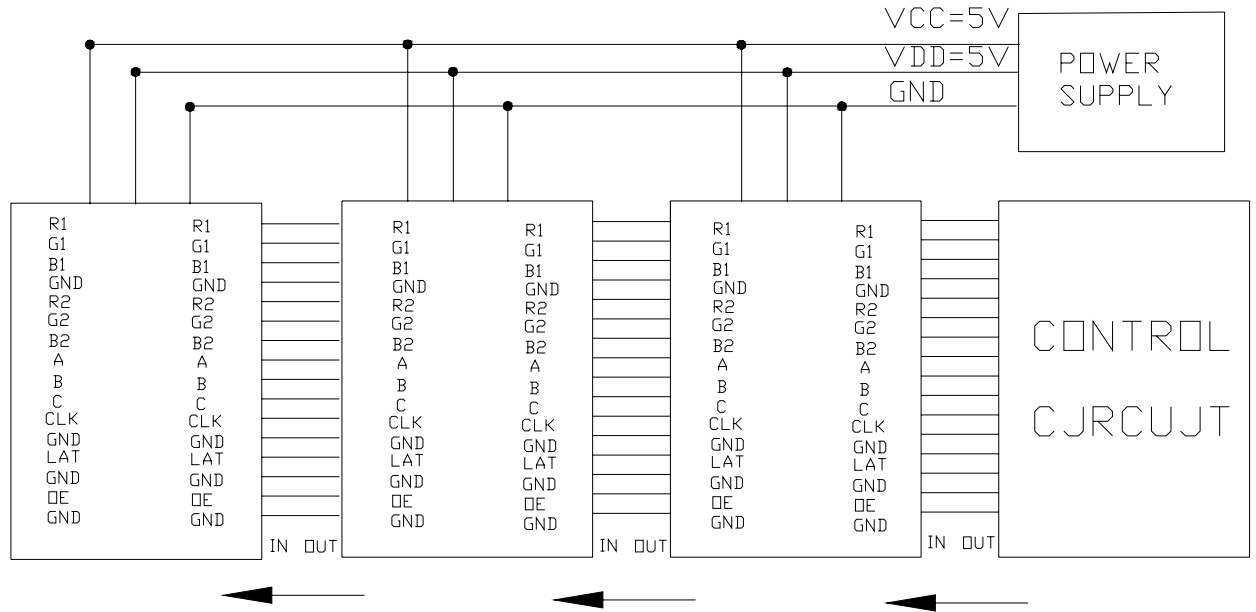
Ta=25°C

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	ILEDr	Lighting —all	3.84		A
	GREEN	ILEDg				
	BLUE	ILEDb				



7. OTHER ITEM

7—1. Connection example between products



8. INTERFACE

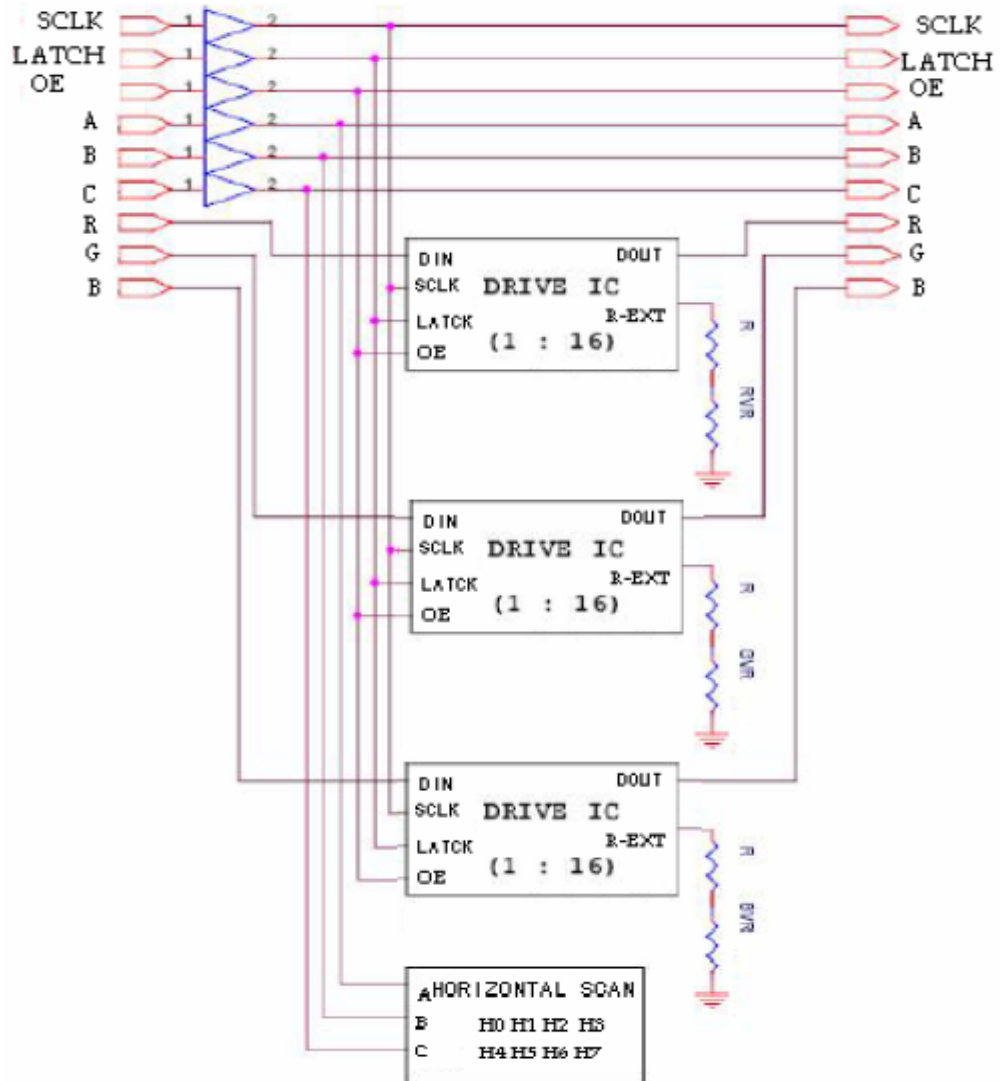
8-1. IN/OUT PUT connector pin number & signal function

TRANSVERSE INPUT/ OUTPUT SIGNAL (IN) PORT	Pin No.	SIGNAL	SIGNAL-FUNCTION
	1	R1	RED DATA (UP 8 ROW)
	2	G1	Y-GREEN DATA (UP 8 ROW)
	3	B1	BULE DATA (UP 8 ROW)
	4	GND	GROUND
	5	R2	RED DATA (DOWN 8 ROW)
	6	G2	Y-GREEN DATA (DOWN 8 ROW)
	7	B2	BULE DATA (DOWN 8 ROW)
	8	A	HORIZONTAL SCAN ADDRESS 0
	9	B	HORIZONTAL SCAN ADDRESS 1
	10	C	HORIZONTAL SCAN ADDRESS2
	11	CLK	SHIFT CLOCK
	12	GND	GROUND
	13	LAT	DATA LATCH
	14	GND	GROUND
	15	OE	OUTPUT ENABLE
16	GND	GROUND	

8-2. Power connector pin number & signal function

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

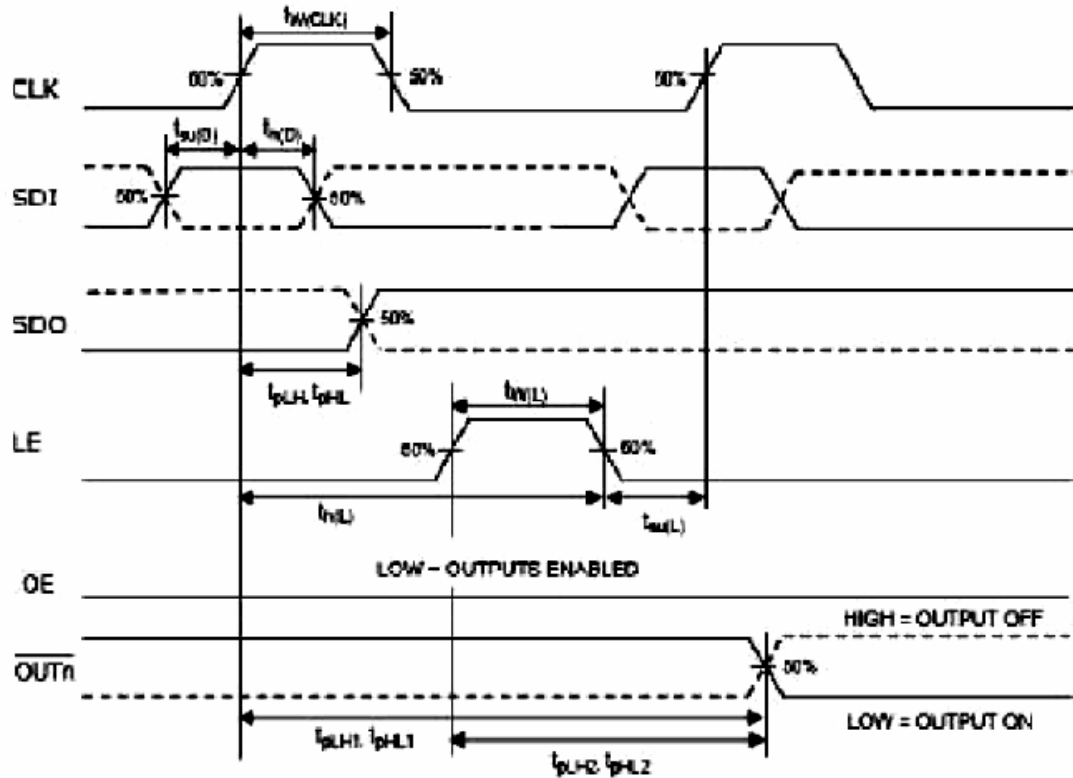
9.BLOCK DIAGRA



ROUT1	ROUT2	ROUT3	ROUT4		BOUT1
{1:16}	{1:16}	{1:16}	{1:16}		{1:16}
					BOUT2
					{1:16}
					BOUT3
					{1:16}
					BOUT4
					{1:16}
GOUT1	GOUT2	GOUT3	GOUT4		
{1:16}	{1:16}	{1:16}	{1:16}		

10. TIMING

10-1.MAP

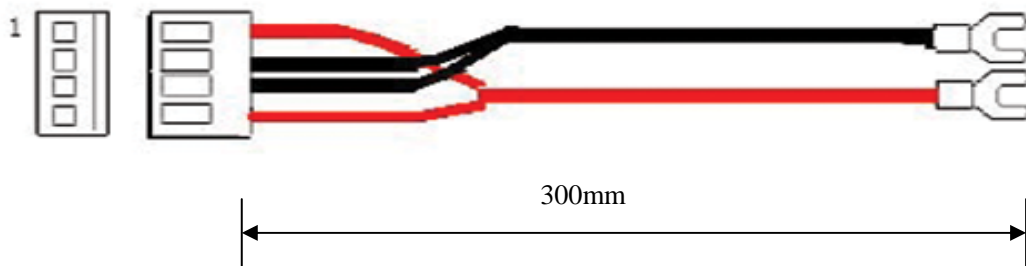


10-2.OPERATION TIMING

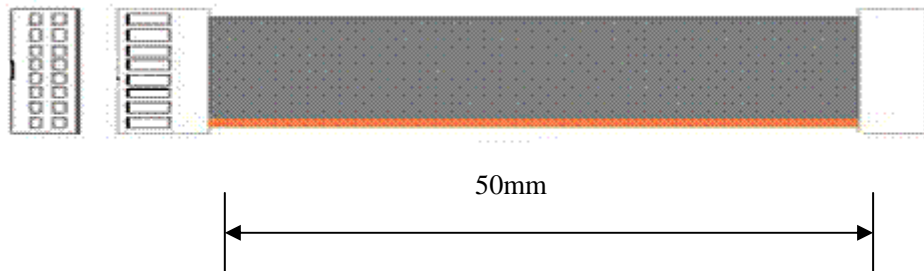
Characteristic	Symbol	condition	min	typ	max	unit
Propagation Delay Time ("L" To "H")	$\overline{CLK} \cdot \overline{OUTn}$	T_{plh1}	-	50	100	ns
	$\overline{LE} \cdot \overline{OUTn}$	T_{plh2}	-	50	100	ns
	$\overline{OE} \cdot \overline{OUTn}$	T_{plh3}	$V_{IH}=V_{DD}$	-	20	100
Propagation Delay Time ("H" To "L")	$\overline{CLK} \cdot \overline{SDO}$	T_{plh}	15	20	-	ns
	$\overline{CLK} \cdot \overline{OUTn}$	T_{phl1}	-	100	150	ns
	$\overline{LE} \cdot \overline{OUTn}$	T_{phl2}	-	100	150	ns
	$\overline{OE} \cdot \overline{OUTn}$	T_{phl3}	$R_{ac1}=300$ $V_L=4.0v$ $R_1=52$ $C_L=10PF$	-	50	150
Pulse width	\overline{CLK}	$T(\text{clk})$	16	20	-	ns
	\overline{LE}	$T(l)$	20	-	-	ns
	\overline{OE}	$T(\text{oe})$	200	-	-	ns
Hold time for LE	$T_{h(l)}$		5	-	-	ns
Setup time for LE	$T_{su(l)}$		6	-	-	ns
Hold time for SDI	$T_{n(d)}$		10	-	-	ns
Setup time for SDI	$L_{su(d)}$		5	-	-	ns
Clock Frequency	F_{clk}	Cascade operation	-	-	25.0	MHz
Maximum CLK rise time	t_{cr}		-	-	500	ns
Maximum CLK fall time	T_{cf}		-	-	500	ns
Output rise time of vout (turn off)	T_{er}		-	40	120	ns
Output fall time of vout (turn on)	T_{ef}		-	70	200	ns

11. 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	

MODEL NO SST-96*192-111-MZ V2.0	PAGE 9/10
-------------------------------------------	---------------------

12. PART LIST

NO	PART LIST	DWG NO	QUAN.	TYPE	PART NAME	MAKER	NOTE
1	3-IN-1 SMD LED		512	SMD			
2	PCB1(Display)		1	4Layer/1.6t			192mm*96mm
3	Radiator		1	Aluminous			
4	DRIVE IC		12	SOP-24	MBI5026C(GF)		
5	IC		2	SSOP-20	74AHC541D		
6	IC		2	SSOP-16	74HCI38D		
7	IC		2	SOP-16	74HCI23		
8	Transistor		16	So-8	CEM4953		DRIVE
9	CONDENSER		1	DIP	470uF/16V		POWER
10	CONDENSER		1	DIP	100uF/16V		POWER
11	CHIP SEAMIC CON.		12	0805	0.1 uF		DRIVE
12	CHIP SEAMIC CON.		6	0805	0.1 uF		POWER
13	CHIP RESISTOR		1	0805	150k Ω		
14	CHIP RESISTOR		8	0805	330 Ω		
15	CHIP RESISTOR		4	0805	210 Ω		
16	CHIP RESISTOR		64	0805	33 Ω		
17	CHIP RESISTOR		12	0805	10 k Ω		
18	VAR RESISTOR		1	0805	150 Ω		
19	POWERHOUSING		2		XH 4*4 p		
20	SOCKET 1		2	DIP	2X8FPC2.54mm		
21	SOCKET 2		6	SMD	1X32-2.0mm		
22	SOCKET 3		2	SMD	1X16-2.0mm		
23	PCB2(Drive)		1		2Layer/1.6t		189*93.3mm
24							
25							

MODEL NO SST-96*192-111-MZ V2.0	PAGE 10/10
-------------------------------------------	-----------------------------

13. 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 SO₂ 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.

14 .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.
-