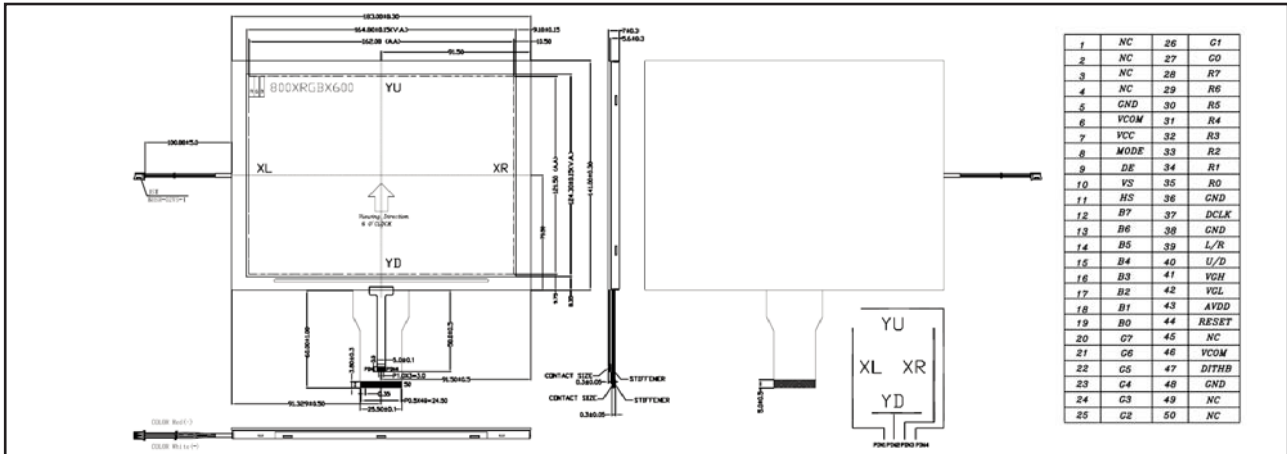


TFT TRANSMISSIVE LCD MODULES

YTS 800SLAA-01-100T

8", 800 X 600 DOTS, 1/600 DUTY

EXTERNAL DIMENSION AND DISPLAY PATTERN



MECHANICAL DATA

ITEM	SPECIFICATION	UNIT
Module Size (W x H x D)	183.0 x 141.0 x 7.0	mm
Active Area (W x H)	162.0 x 121.5	mm
Viewing Direction	6:00	o'clock
Number of Dots	800 (RGB) x 600	dots
Color Sturation (NTSC)	16.7M	%

ABSOLUTE MAXIMUM RATINGS (1,2)

PARAMETER	SYMBOL	MIN.	MAX.	UNIT
Digital Supply Voltage	V _{CC}	-0.5	5.0	V
Analog Power Supply Voltage	AV _{DD}	-0.5	15.0	V
TFT Device ON Voltage	V _{GH}	-0.3	42.0	V
TFT Device OFF Voltage	V _{GL}	V _{GH} -42.0	0.3	V
Operating Temperature		See page 8		
Storage Temperature		See page 8		

Note (1): Voltage listed above are with respect to GND=0V, Ta=25°C.
 Note (2): Device is subject to be damaged permanently if stresses beyond those absolute maximum ratings listed above.

PIN CONFIGURATION

PIN	SYMBOL	I/O	SIGNAL DESCRIPTION
1-4	NC		No Connection
5	GND	P	Power Ground
6	V _{COM}	I	Common Voltage
7	V _{CC}	P	Power for Digital Circuit
8	MODE	I	DE / SYNC Mode Select ⁽⁶⁾
9	DE	I	Data Input Enable
10	VS	I	Vertical SYNC Input
11	HS	I	Horizontal SYNC Input
12	B ₇	I	Blue Data (MSB)
13-18	B ₆ - B ₁	I	Blue Data
19	B ₀	I	Blue Data (LSB)
20	G ₇	I	Green Data (MSB)
21-26	G ₆ - G ₁	I	Green Data
27	G ₀	I	Green Data (LSB)
28	R ₇	I	Red Data (MSB)
29-34	R ₆ - R ₁	I	Red Data
35	R ₀	I	Red Data (LSB)
36	GND	P	Power Ground
37	DCLK	I	Sample Clock
38	GND	P	Power Ground
39	L/R	I	Right / Left Selection ⁽⁹⁾
40	U/D	I	Up / Down Selection ⁽⁹⁾
41	V _{GH}	P	Gate ON Voltage
42	V _{GL}	P	Gate OFF Voltage
43	AV _{DD}	P	Power for Analog Circuit
44	RESET	I	Global Reset Pin ⁽⁷⁾
45	NC		No Connection
46	V _{COM}	I	Common Voltage
47	DITHB	I	Dithering Function ⁽⁸⁾
48	GND	P	Power Ground
49-50	NC		No Connection

Note (6): DE/SYNC mode select, normally pull high: High - DE Mode; Low - SYNC Mode.

Note (7): Global Reset Pin. Active low to enter reset state. Suggest to connecting with an RC reset circuit for stability. Normally pull high.

Note (8): Dithering function enable control. Normally pull high: DITHB="1". Disable internal dithering function. For 18 bits RGB interface, connect two LSB bits of all the R/G/B data buses to GND.

Note (9): The 39 and 40 pin (L/R, U/D) scanning direction set section.

Setting of Scan Control Input		Scanning Direction
U/D	L/R	
GND	V _{CC}	Up to Down, Left to Right
V _{CC}	GND	Down to Up, Right to Left
GND	GND	Up to Down, Right to Left
V _{CC}	V _{CC}	Down to Up, Left to Right

ELECTRICAL CHARACTERISTICS, Ta = 25°C

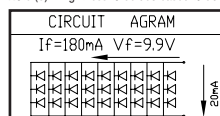
ITEM	SYMBOL	SPEC. VALUE			UNIT
		MIN.	TYP.	MAX.	
Digital Power Supply Voltage ⁽³⁾	V _{CC}	3.0	3.3	3.6	V
Analog Power Supply Voltage	AV _{DD}	10.2	10.4	10.6	V
Digital Operating Current ⁽³⁾	I _{CC}		10.0		mA
Analog Operating Current	IA V _{DD}		25.0		mA
Frame Frequency	F _{Frame}		60.0		Hz
TFT Device ON Voltage	V _{GH}	15.3	16.0	16.7	V
TFT Device OFF Voltage	V _{GL}	-7.7	-7.0	-6.3	V
Common Power Supply Voltage ⁽⁴⁾	V _{COM}		3.6		V
Logic High Input Voltage	V _{IH}	0.7 V _{CC}		V _{CC}	V
Logic Low Input Voltage	V _{IL}	0		0.3 V _{CC}	V

Note (3): Test condition: V_{CC}=3.3V; Test pattern: Black
 Note (4): Please adjust V_{COM} to make the flicker level be minimum.

BACKLIGHTING CHARACTERISTICS, Ta = 25°C, LED

ITEM	SYMBOL	CONDITION	SPEC. VALUE			UNIT
			MIN.	TYP.	MAX.	
Backlight Voltage	V _{BL}			9.9	10.5	V
LED Current	I _F			180	225	mA
Power Consumption	P _{BL}			1782	2362.5	mW
Life Time ⁽⁵⁾			10000			hr

Note (5): Brightness to be decreased to 50% of the initial value.



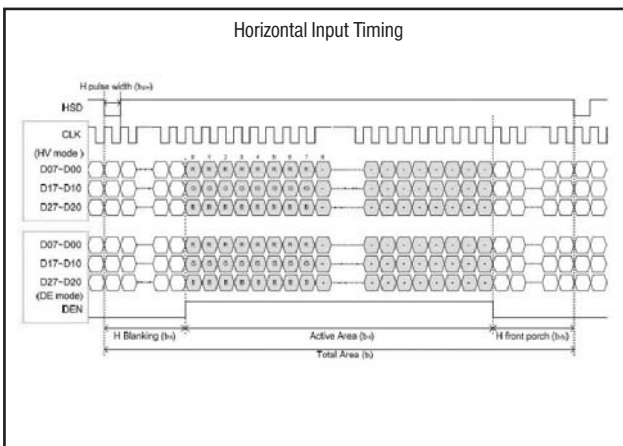
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YTS 800SLAA-01-100T

8", 800 X 600 DOTS, 1/600 DUTY

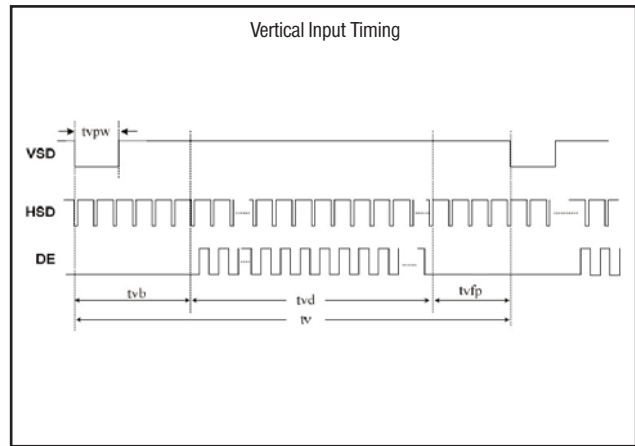
TIMING CHARACTERISTICS: HORIZONTAL

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT
Horizontal Display Area	T_{HD}		800		CLK
CLK Frequency	F_{CLK}		40	50	MHz
One Horizontal Line	T_H	862	1056	1200	CLK
HS Pulse Width	T_{HPW}	1		40	CLK
HS Back Porch	T_{HB}	46			CLK
HS Front Porch	T_{HFP}	16	210	354	CLK



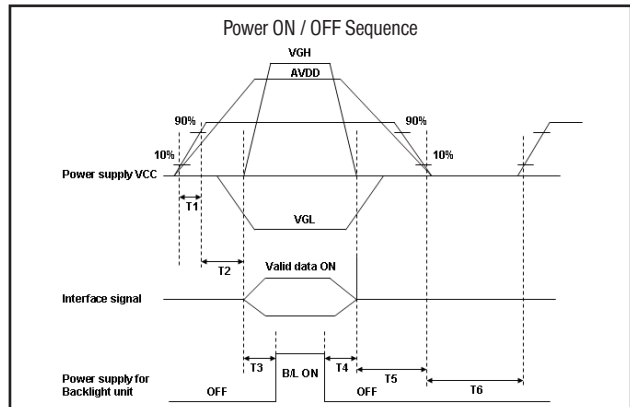
TIMING CHARACTERISTICS: VERTICAL

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT
Vertical Display Area	T_{VD}		600		th
VS Period Time	T_V	624	635	700	th
VS Pulse Width	T_{VPW}	1		20	th
VS Back Porch	T_{VB}	23			th
VS Front Porch	T_{VFP}	1	12	77	th



AC CHARACTERISTICS

PARAMETER	MIN.	TYP.	MAX.	UNIT
T_1	1		2	ms
T_2	0	60		ms
T_3	200			ms
T_4	200			ms
T_5	1			ms
T_6	1000			ms



AC CHARACTERISTICS

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT
CLKIN Cycle Time	T_{CPH}	20			ns
CLKIN Pulse Duty	T_{CWH}	40	50	60	%
VSD Setup Time	T_{VST}	8			ns
VSD Hold Time	T_{VHD}	8			ns
HSD Setup Time	T_{HST}	8			ns
HSD Hold Time	T_{HHD}	8			ns
Data Setup Time ⁽¹⁾	T_{DSU}	8			ns
Data Hold Time ⁽¹⁾	T_{DHD}	8			ns
DEN Setup Time	T_{ESU}	8			ns
DEN Hold Time	T_{EHD}	8			ns

Note (1): D₀ [7:0], D₁ [7:0], D₂ [7:0] to CLKIN.

