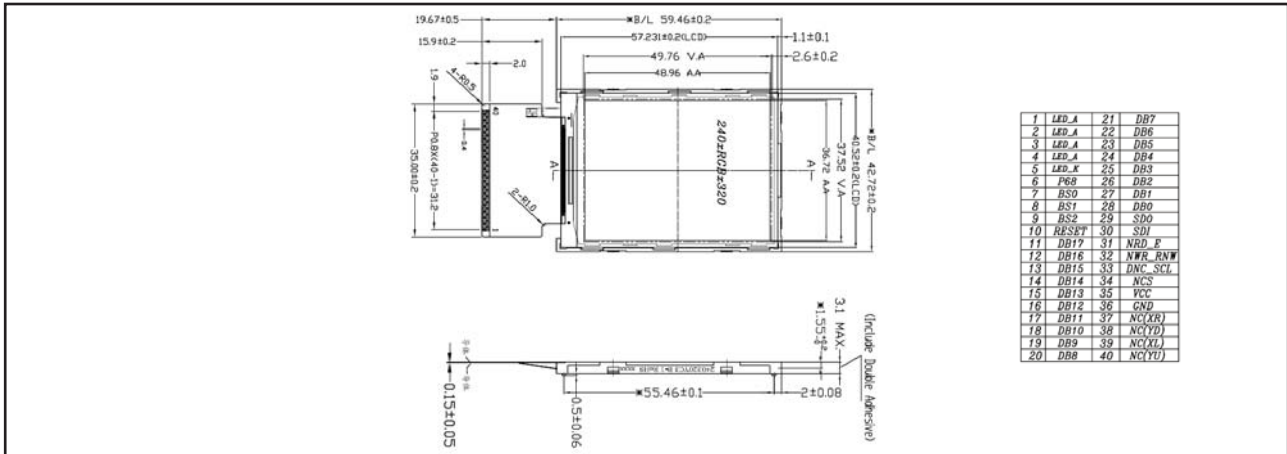


# TFT TRANSMISSIVE LCD MODULES

## YTS 240DLAC-03-100N

2.4", 240 X 320 DOTS, 1/320 DUTY

### EXTERNAL DIMENSION AND DISPLAY PATTERN



### MECHANICAL DATA

ITEM	SPECIFICATION	UNIT
Module Size (W x H)	42.72 x 59.46 x 3.1	mm
Active Area (W x H)	36.72 x 48.96	mm
Viewing Direction	6:00	o'clock
Number of Dots	240 (RGB) x 320	dots
Colors	262K	

### ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	MIN.	MAX.	UNIT
Supply Voltage 1	IOV <sub>CC</sub>	-0.3	4.6	V
Supply Voltage 2	V <sub>CL</sub>	-0.3	4.6	V
Supply Voltage 3	DDV <sub>DH</sub>	-0.3	9.0	V
Supply Voltage 4	V <sub>CL</sub>	-4.6	0.3	V
Supply Voltage 5	V <sub>GH</sub>	-0.3	18.5	V
Supply Voltage 6	V <sub>GL</sub>	-18.5	0.3	V
Input Voltage	V <sub>IN</sub>	-0.3	V <sub>CL</sub> +0.3	V
Operating Temperature		See page 8		
Storage Temperature				

### PIN CONFIGURATION

PIN	SYMBOL	SIGNAL DESCRIPTION
1-4	LED_A	Backlight LED Power
5	LED_K	Backlight LED Power
6	P <sub>68</sub>	Select the MPU Interface Mode
7	BS <sub>0</sub>	Select the MPU Interface Mode
8	BS <sub>1</sub>	Select the MPU Interface Mode
9	BS <sub>2</sub>	Select the MPU Interface Mode
10	RESET	Reset Pin
11-28	DB <sub>17</sub> -DB <sub>0</sub>	Data Bus
29	SD <sub>0</sub>	Serial Data Output
30	SD <sub>1</sub>	Serial Data Input Pin
31	NRD_E	I80 System: Serves as a Read Signal and Read Data at the Low Level. M68 System: 0 - Read/Write Disable; 1 - Read/Write Enable. Fix it to IOV <sub>CC</sub> or V <sub>SSD</sub> Level when Using Serial Buss Interface.
32	NWR_RNW	I80 System: Serves as a Write Signal and Write Data at the Rising Edge. M68 System: 0 - Write; 1 - Read. Fix it to IOV <sub>CC</sub> or V <sub>SSD</sub> Level when Using Serial Buss Interface.
33	DNC_SCL	The Signal for Command or Parameter Select under Parallel Mode (i.e. Not Serial Interface). When under Serial Interface, it serves as SCL.
34	NCS	Chip Select Signal
35	V <sub>CC</sub>	Power Supply
36	GND	Ground
37-40	NC	No Connection

### ELECTRICAL CHARACTERISTICS, Ta = 25°C

ITEM	SYMBOL	CONDITION	SPEC. VALUE			UNIT
			MIN.	TYP.	MAX.	
TFT Gate ON Voltage	V <sub>GH</sub>			15.0		V
TFT Gate OFF Voltage	V <sub>GL</sub>	Ta = +25°C		-8.0		V
TFT Common Electrode Voltage	V <sub>comH</sub> V <sub>comL</sub>		2.5 -2.0		4.5 0	V

Note (1): V<sub>com</sub> must be adjusted to optimize display quality: cross talk, contrast ratio and etc.  
 Note (2): V<sub>GH</sub> is TFT gate operating voltage.  
 Note (3): V<sub>GL</sub> is TFT gate operating voltage. The storage capacitance structure of this products is C<sub>st</sub> (Storage on Common).  
 The low voltage level of V<sub>GL</sub> signal must be fluctuated with same phase as V<sub>com</sub>, in case of Storage on Gate structure.  
 Note (4): Environmental condition: 25°C±5°C.  
 Note (5): Operating Voltage V<sub>CC</sub>=3.3V

### BACKLIGHTING CHARACTERISTICS, Ta = 25°C, LED

ITEM	SYMBOL	CONDITION	SPEC. VALUE			UNIT
			MIN.	TYP.	MAX.	
Forward Voltage	V <sub>f</sub>	I <sub>f</sub> =20mA		9.6		V
Reverse Current	I <sub>r</sub>	V <sub>r</sub> =5.0V		20		μA
Luminance	L <sub>v</sub>	I <sub>f</sub> =20mA	2900	3200		cd/m <sup>2</sup>
Average	Avg	- Aperture: 1°, 9 Point.	80			%
Colour Coordinate	X	- The Measurement Instrument is BM-7.	0.26		0.31	
	Y	- Average=min. / max. *100%	0.26		0.31	

