



WINSTAR Display Co.,Ltd.
華凌光電股份有限公司



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SPECIFICATION

MODEL NO. : WLOF00039000QGAAASA00

Summary

3.9 Inch Smart Display Feature

1. DC 5V working voltage, low power consumption for USB to drive.
2. Self testing after booting function.
3. CAN bus communication interface.
4. Support CANopen negotiation. Default baud rate is 250Kbps.
5. Built in 16MB flash memory, store the font and Object Dictionary Data.
6. Support capacitive touch panel (CTP).
7. Smart Display scenario is slave device display and action from Master Device instruction.
8. Embedded buzzer controlled by Master Device.
9. Demo set HOST can be used on multiple platforms, such as Computer (with USB to CAN Dongle), MCU, Raspberry Pi (with PiCAN2).

Product information

Mechanical Data

Item	Standard Value	Unit
LCD panel	105.5(W) x 37.0(H) x 5.13	mm
PCB	157(W)*42(H)*1.6	mm
Housing outline	NA	mm

General information

Item	Standard Value	Unit
Operating voltage	5	Vdc
Communication Interface	CAN bus differential ± 3.3	Vpp
MCU	STM32F750	N/A
Flash Memory	16	MB
SDRAM Frequency	108	MHz
LCD display size	3.9	inch
Dot Matrix	480x128 x RGB (TFT)	dot
Module dimension	105.5(W) x 37.0(H) x 5.13	mm
Active area	95.04 x 25.34	mm
Dot pitch	0.066(W)x 0.198(H)	mm
LCD type	TFT, Normally White, Transmissive	
View Direction	6 o'clock	
Aspect Ratio	Bar Type	
Touch Panel	With CTP	
Surface	Glare	

The technical drawing illustrates the dimensions and pin configurations for a 3.9 inch TFT LCD module. The top view shows a rectangular module with a central display area labeled "480*128*RGB" and "CTP Zero Point (0,0)". Dimensions include PCB OD 157.00±0.5, TFT OD 105.50, TP OD 104.50, TP_AA 97.04, TP_VA 96.04, and TFT_AA 95.04. The side view shows the module's profile with dimensions like 6.95±0.6, TP 2.15 (include adhesive), 3.05±0.2, and 1.60(PCB). The drawing also includes a detailed view of the pin headers (CN1, CN2, CN3) and a table of pin configurations.

Pin Configurations:

CN1	PIN	SYMBOL
CN1	1	+5V
	2	DGND
	3	GND
	4	D-
	5	CAN High
	6	D+
	7	CAN Low
	8	+5V
	9	GND
	10	NC
	11	GND
	12	NC
	13	NC
	14	NC
	15	NC
	16	NC

CN2	PIN	SYMBOL
CN2	1	NC
	2	VDD3V
	3	NC
	4	TAG SWCLK
	5	NC
	6	GND
	7	NC
	8	TAG SWDI
	9	NC
	10	NRST
	11	NC
	12	TAG SWDO
	13	DGND
	14	DGND
	15	+5V
	16	NC

CN3	PIN	SYMBOL
CN3	1	NC
	2	NC
	3	NC
	4	NC
	5	NC
	6	NC
	7	NC
	8	NC

Module Specifications Table:

No.	Item	Value
1	Lcd Type	TFT
2	View Direction	6 O'clock
3	Gray Scale Inversion Direction	12 O'clock
4	Screen size	3.9" (diagonal)
5	Surface	Glare
6	Display format	480x128xRGB
7	Operating Temperature	-10°C ~70°C
8	Storage Temperature	-30°C ~80°C
9	Active area	95.04(H)x25.34(V)mm
10	Dot pitch	0.198(H)x0.66(V)mm
11	Color arrangement	RGB-STRIFE
12	Brightness	300min, 400typ. cd/m2
13	CTP Driver IC	CYTM568 or equivalent
14	CTP Resolution	480*128

The non-specified tolerance of dimension is ±0.3 mm .

Absolute Maximum Ratings

Item	Symbol	Min	Typ	Max	Unit
Operating Temperature	TOP	-10	—	+70	°C
Storage Temperature	TST	-30	—	+80	°C

Electrical Characteristics

Item	Symbol	Min	Typ	Max	Unit
Supply Voltage For Analog	VCC	4.75	5	5.25	V
Interface Operation Voltage	ICC		350		mA

BOM

Item	Description
LCM	WF39QTIBSDBG0# w/o PCBA (Upside down used)
PCBA	SV100039000QA00N0100

Interface

CN1 definition:

Pin	Symbol	Function	Remark
1	+5V	Power supply 5V input	Input
2	DGND	GND for USART interface	Output
3	GND	Power supply GND input	Input
4	D-	Differential signal D-	I/O
5	CAN High	CAN bus D+	I/O
6	D+	Differential signal D+	I/O
7	CAN Low	CAN bus D-	I/O
8	+5V	5V output for USART interface	Output
9	DGND	GND for USART interface	Output
10	NC		
11	DGND	GND for USART interface	Output
12	NC		
13	NC		
14	NC		
15	NC		
16	NC		

CN2 definition:

Pin	Symbol	Function	Remark
1	NC		
2	VMCU	Power supply 3V3 input	Input
3	NC		
4	TAG_SWCLK	JTAG Serial Wire Clock interface	Clock
5	NC		
6	GND	GND for USART interface	I/O
7	NC		
8	TAG_SWDIO	JTAG Serial Wire debug Data Input/Output interface	I/O
9	NC		
10	NRST	Reset input Connect this pin to the (active low) reset input of the target MCU.	I/O
11	NC		
12	TAG_SWO	JTAG Serial Wire trace Output - Optional interface	Output
13	DGND	GND for USART interface	I/O
14	DGND	GND for USART interface	I/O
15	+5V	Power supply 5V input	Input
16	NC		

CN3 definition:

Pin	Symbol	Function	Remark
1	NC		
2	NC		
3	NC		
4	NC		
5	NC		
6	NC		
7	NC		
8	NC		