

# PRODUCT Information

## FUNCTION CHARACTERISTICS

Resolution: 256x64

OLED: highlight PM\_OLED

Color: white

Grayscale type: 16 grayscale

LCM working voltage (VCC in): 3 ~ 5V

OLED panel working voltage (VDD): 3V (1.65 ~ 3.5V)

OLED driving voltage VOP: 12V (11.5 ~ 12.5V)

Working temperature: - 40 °C ~ 70 °C

Storage temperature: - 40 °C ~ 85 °C

Connection mode / drive IC: cog / sh1122

24P spacing 0.7mm welding

Interface: 4-wire SPI

Perspective direction: full perspective

## MECHANICAL SPECIFICATIONS

Module size: 75.5mm (L) × 19.35mm (W) × 5.9mm (H)

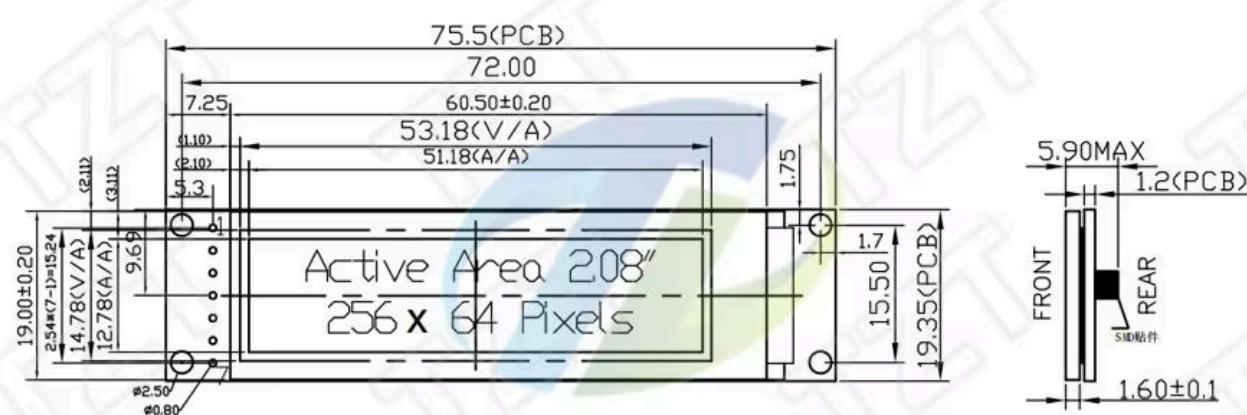
Visual area (V/A): 53.18mm (L) \*14.78mm (W)

Effective area (A / a): 51.18mm (L) × 12.78mm (W)

Point distance: 0.20mm (L) × 0.20mm (W)

Point size: 0.18mm (L) × 0.18mm (W)

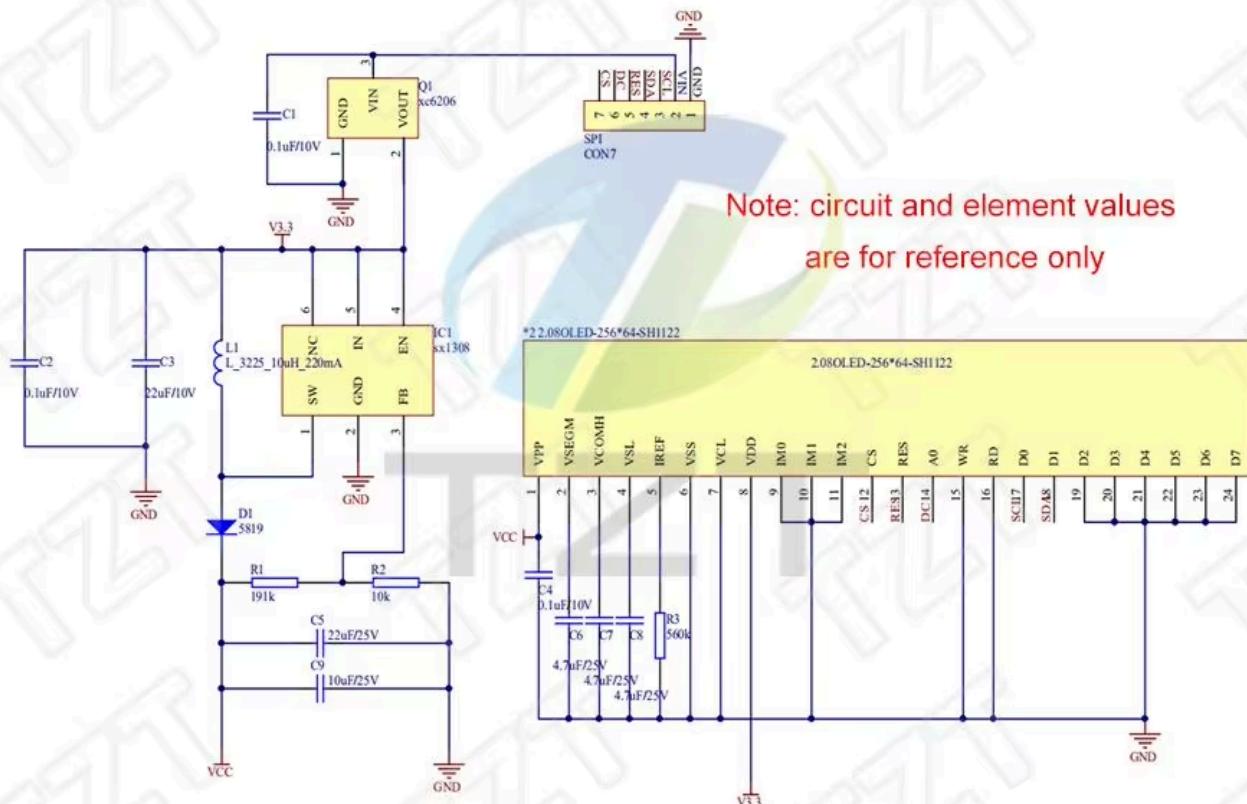
## OUTLINE DRAWING



No.	Symbol
1	GND
2	VCC

3	SCL
4	SDA
5	RST
6	DC
7	CS

## SCHEMATIC DIAGRAM



## PIN DESCRIPTION

Pin no.	Symbol	Function
1	GND	Negative pole of power supply
2	VIN	Positive pole of power supply
3	SCL	Clock
4	SDA	data
5	RES	reset
6	DC	Command / data
7	CS	Chip selection

## DC CHARACTERISTICS

Characteristics	Symbol	Conditions	Min	Typ	Max	Unit
Supply Voltage for Operation	$V_{DD}$		1.65	3.0	3.5	V
Supply Voltage for Display	$V_{CC}$	Note 5	11.5	12.0	12.5	
High Level Input	$V_{IHC}$		$0.8 \times V_{DD}$	-	$V_{DD}$	V
Low Level Input	$V_{ILC}$		$V_{SS}$	-	$0.2 \times V_{DD}$	V
High Level Output	$V_{OHC}$	$I_{OH} = -0.5\text{mA}$	$0.8 \times V_{DD}$	-	$V_{DD}$	V
Low Level Output	$V_{OLC}$	$I_{OL} = 0.5\text{mA}$	$V_{SS}$	-	$0.2 \times V_{DD}$	V
SDA low-level output voltage	$V_{OLCS}$	$V_{DD} < 2V, I_{OL} = 0.3\text{mA}$	$V_{SS}$	-	$0.2 \times V_{DD}$	V
		$V_{DD} > 2V, I_{OL} = 0.3\text{mA}$	$V_{SS}$	-	0.4	V
Operating Current for $V_{DD}$	$I_{DD}$		-	110	160	$\mu\text{A}$
		Note 6		12.0	15.0	mA
Operating Current for $V_{PP}$	$I_{PP}$	Note 7	-	19.3	24.1	mA
		Note 8	-	37.2	46.5	mA
Sleep Mode Current for $V_{DD}$	$I_{DD, SLEEP}$		-	-	5	$\mu\text{A}$
Sleep Mode Current for $V_{PP}$	$I_{PP, SLEEP}$		-	-	5	$\mu\text{A}$

Note 5: Brightness ( $L_{br}$ ) and Supply Voltage for Display ( $V_{PP}$ ) are subject to the change of the panel characteristics and the customer's request.

Note 6:  $V_{DD} = 2.8\text{V}$ ,  $V_{PP} = 12.0\text{V}$ , 30% Display Area Turn on.

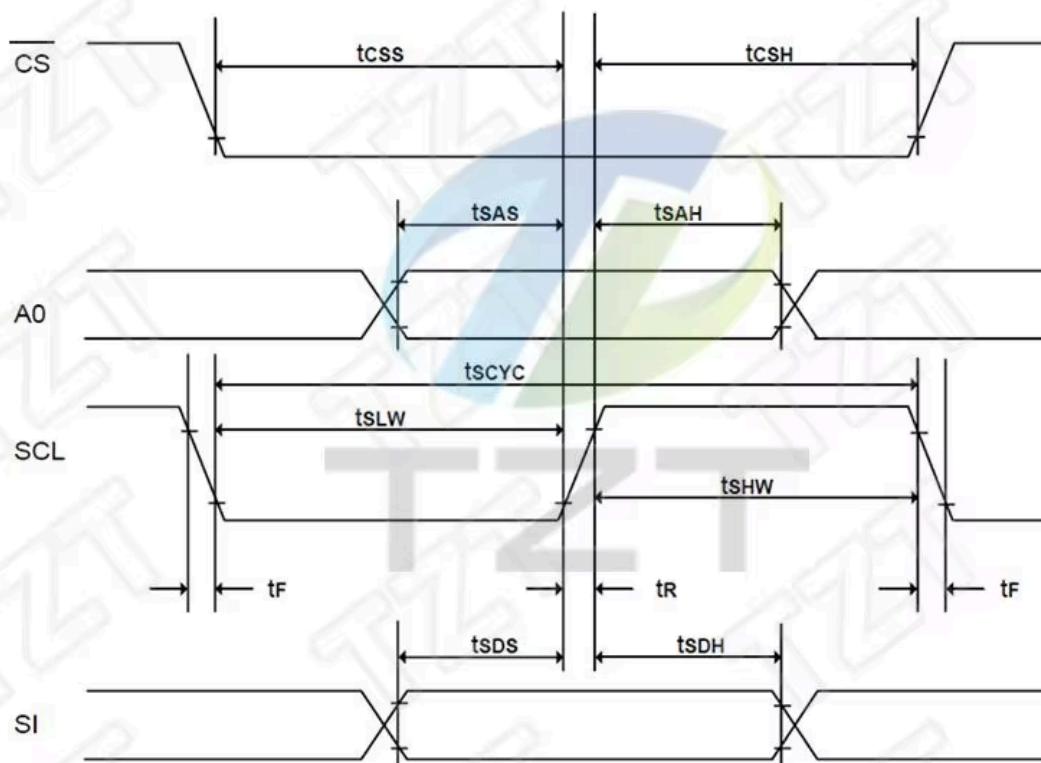
Note 7:  $V_{DD} = 2.8\text{V}$ ,  $V_{PP} = 12.0\text{V}$ , 50% Display Area Turn on.

Note 8:  $V_{DD} = 2.8\text{V}$ ,  $V_{PP} = 12.0\text{V}$ , 100% Display Area Turn on.

\* Software configuration follows Section 4.5 Initialization.

## AC ELECTRICAL CHARACTERISTICS

Serial Interface Timing Characteristics: (4-wire SPI)



Symbol	Description	Min	Max	Unit
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$t_{cycle}$	Clock Cycle Time	500	-	ns
$t_{SAS}$	Address Setup Time	300	-	ns
$t_{SAH}$	Address Hold Time	300	-	ns
$t_{SDS}$	Write Data Setup Time	200	-	ns
$t_{SDH}$	Write Data Hold Time	200	-	ns
$t_{CSS}$	CS Setup Time	240	-	ns
$t_{CSH}$	CS Hold Time	120	-	ns
$t_{SHW}$	Serial Clock H pulse Time	200	-	ns
$t_{SLW}$	Serial Clock L pulse Time	200	-	ns
$t_R$	Rise Time	-	30	ns
$t_F$	Fall Time	-	30	ns

\* (VDD -VSS = 1.65V ~ 3.5V, TA = 25°C)