

ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Min.	Max.	Unit
Supply Voltage(Logic)	V _{DD} - V _{SS}	-0.3	4.0	V
Supply Voltage(OLED)	V _{CC} - V _{SS}	-0.3	15.0	V
Input Voltage	V _I	-0.3	V _{DD} + 0.3	V
Operating Temp.	T _{opr}	-40	70	°C
Storage Temp.	T _{stg}	-40	80	°C

MECHANICAL DATA

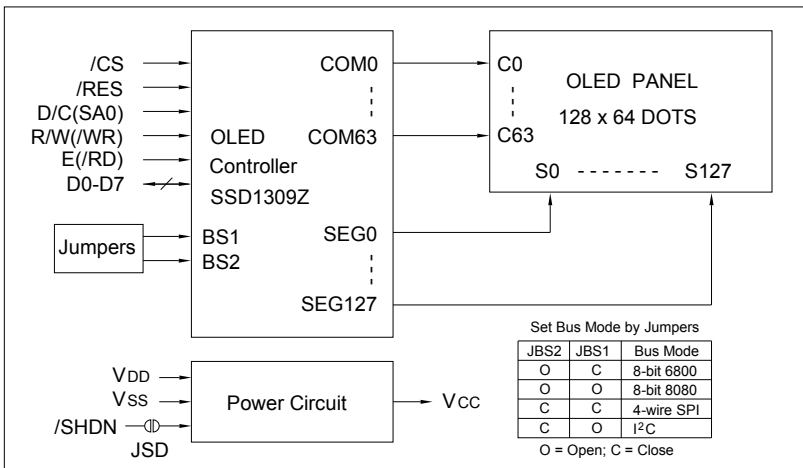
Item	Nominal Dimensions	Unit
Module Size (W x H x T)	55.0 x 36.0 x 8.0	mm
Viewing Area (W x H)	37.5 x 19.5	mm
Dot Pitch (W x H)	0.274 x 0.274	mm
Dot Size (W x H)	0.254 x 0.254	mm
Weight	Approx. 12	g

ELECTRICAL CHARACTERISTICS (V_{DD}=2.8V to 3.3V)

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Input High Voltage	V _{IH}	--	0.8V _{DD}	--	V _{DD}	V
Input Low Voltage	V _{IL}	--	0	--	0.2V _{DD}	V
Output High Voltage	V _{OH}	I _{OH} = - 0.1mA	0.9V _{DD}	--	V _{DD}	V
Output Low Voltage	V _{OL}	I _{OL} = 0.1mA	0	--	0.1V _{DD}	V
Supply Current	I _{DD} ^{Note 1}	V _{DD} = 3.3V	--	95.0	120.0	mA
	I _{DD} ^{Note 2}	V _{DD} = 3.3V	--	170.0	210.0	mA

Note 1: White color, 50% display area turned on, contrast register is set to CFH
 Note 2: White color, 100% display area turned on, contrast register is set to CFH

BLOCK DIAGRAM



PIN CONNECTIONS (CN1/CN2)

Pin	Symbol	Level	Function
1	V _{SS}	0V	Ground
2	V _{DD}	2.8V to 3.3V	Power supply for logic
3	NC or /SHDN	-	JSD open: No connection JSD close: Shutdown input for V _{CC} converter /SHDN="H": V _{CC} converter is on /SHDN="L": V _{CC} converter is off
4	D/C (SA0)	H/L	Data/Command selection for parallel or SPI mode "H": Display data; "L": Instruction code Slave address SA0 for I ² C mode
5	R/W (/WR)	H/L	R/W for 68 MPU. "H": Read; "L": Write /WR for 80 MPU. Write data at the rising edge of /WR.
6	E (/RD)	H/L	Enable for 68 MPU. Read data when E is "H"; write data at the rising edge. /RD for 80 MPU. Active "L".
7	D0	H/L	For 6800/8080 parallel mode: D0 to D7 are 8-bit bi-directional data bus
8	D1	H/L	
9	D2	H/L	For 4-wire SPI mode: D0 is serial clock input SCLK D1 is serial data input SDIN
10	D3	H/L	
11	D4	H/L	For I ² C mode: D0 is serial clock SCL D1 is serial data input SDA _{IN} D2 is serial data output SDA _{OUT} Connect D1 and D2 together to serve as SDA
12	D5	H/L	
13	D6	H/L	
14	D7	H/L	
15	/RES	L	Reset signal. Active "L".
16	/CS	L	Chip selection signal. Active "L".