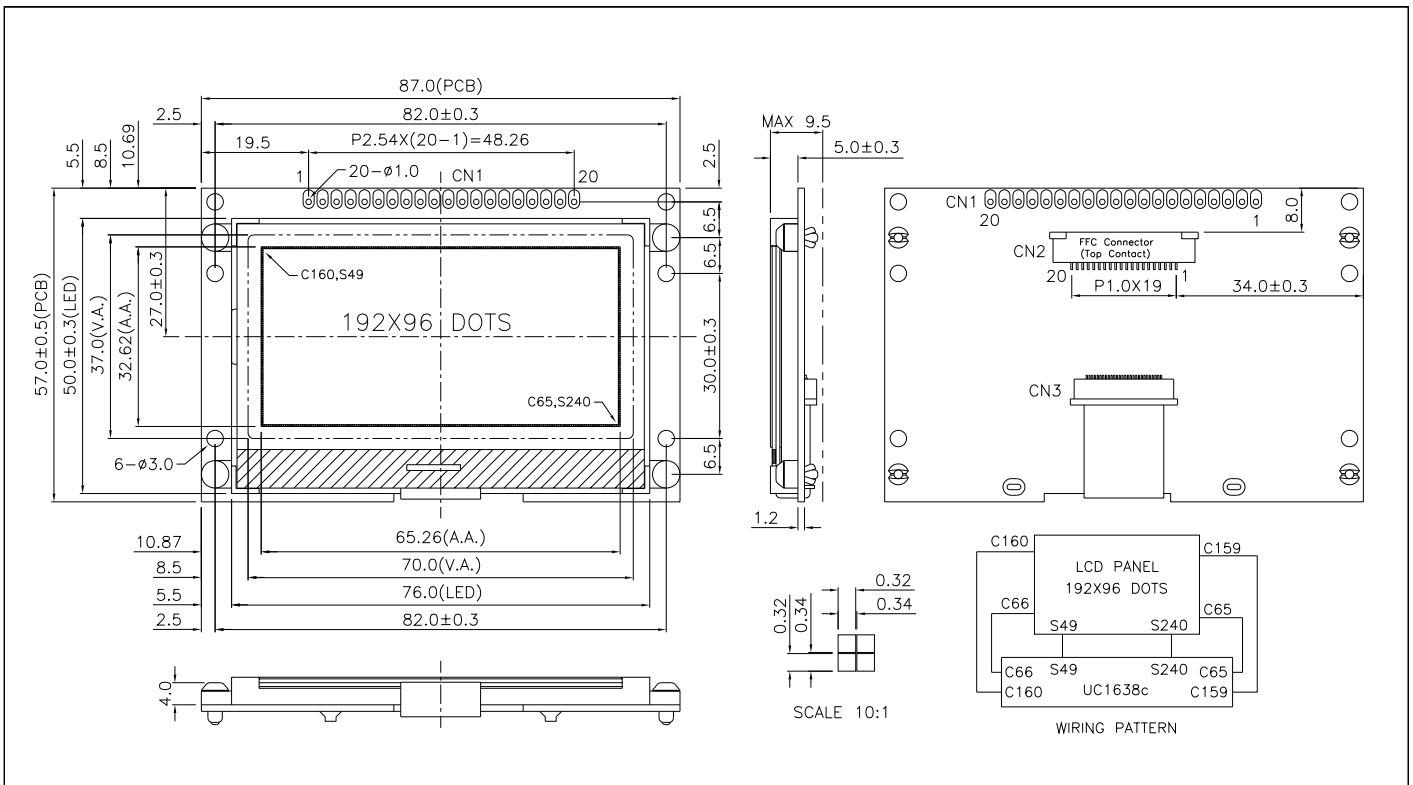


# VS192962-DW 192 x 96 dots + white led backlight, 8-bit parallel or SPI, 3.3V to 5.5V



## ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Min.	Max.	Unit
Supply Voltage(Logic)	$V_{DD} - V_{SS}$	-0.3	6.0	V
Supply Voltage(LCD)	$V_{LCD} - V_{SS}$	-0.3	19.8	V
Input Voltage	$V_I$	-0.3	$V_{DD} + 0.3$	V
Operating Temp.	$T_{opr}$	-20	70	°C
Storage Temp.	$T_{stg}$	-30	80	°C

## MECHANICAL DATA

Item	Nominal Dimensions	Unit
Module Size (W x H x T)	87.0 x 57.0 x 9.5	mm
Viewing Area (W x H)	70.0 x 37.0	mm
Dot Pitch (W x H)	0.34 x 0.34	mm
Dot Size (W x H)	0.32 x 0.32	mm
Weight	Approx. 42	g

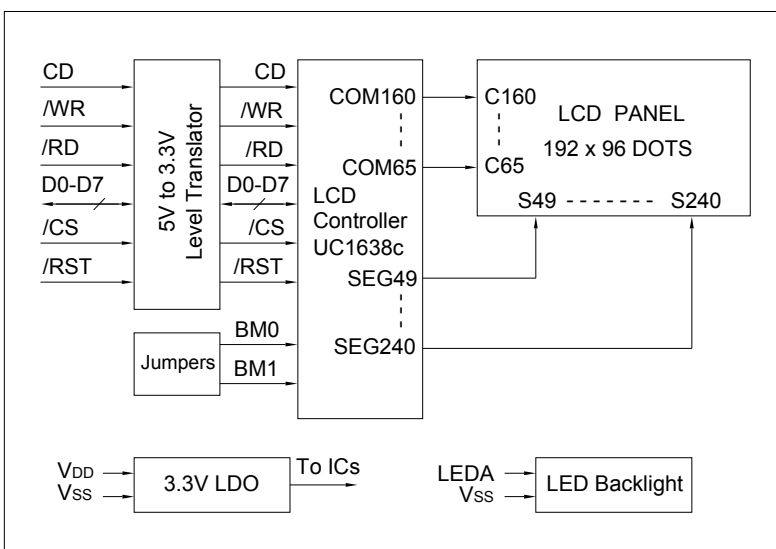
## ELECTRICAL CHARACTERISTICS ( $V_{DD}=3.3V$ to $5.5V$ )

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Input High Voltage	$V_{IH}$	--	2.0	--	$V_{DD}$	V
Input Low Voltage	$V_{IL}$	--	0	--	0.8	V
Output High Voltage	$V_{OH}$	$I_{OH} = -0.1mA$	$V_{DD}-0.2$	--	$V_{DD}$	V
Output Low Voltage	$V_{OL}$	$I_{OL} = 0.1mA$	0	--	0.2	V
Supply Current	$I_{DD}$	$V_{DD} = 5.0V$	--	1.1	1.6	mA
LCD Driving Voltage	$V_{LCD}-V_{SS}$	$T_a=25^\circ C$	--	13.5	--	V

## PIN CONNECTIONS (CN1/CN2)

Pin	Symbol	Level	Function
1	$V_{SS}$	0V	GND
2	$V_{DD}$	3.3V to 5.5V	Power supply for logic
3	LEDA	5V	Power supply for LED backlight LEDK is connected to $V_{SS}$ on PCB
4	CD	H/L	CD="H": Display data CD="L": Instruction code
5	/CS	L	Chip selection signal. Active "L".
6	/RST	L	Reset signal. Active "L".
7	D0(SCK)	H/L	For parallel mode: D0 to D7 are 8-bit bidirectional data bus. For serial mode: D0 is serial clock input (SCK). D3 is serial data input (SDAI).
8	D1	H/L	
9	D2	H/L	
10	D3(SDAI)	H/L	
11	D4	H/L	
12	D5	H/L	
13	D6	H/L	
14	D7	H/L	
15	/WR	L	Write signal. Active "L"
16	/RD	L	Read signal. Active "L"
17-20	NC	--	No connection

## BLOCK DIAGRAM



## LED BACKLIGHT SPECIFICATIONS ( $T_a=25^\circ C$ )

Item	Symbol	Typ.	Max.	Unit
Forward Voltage	$V_f$	3.0	3.2	V
Forward Current	$I_f$	40	--	mA
LED Color		White		