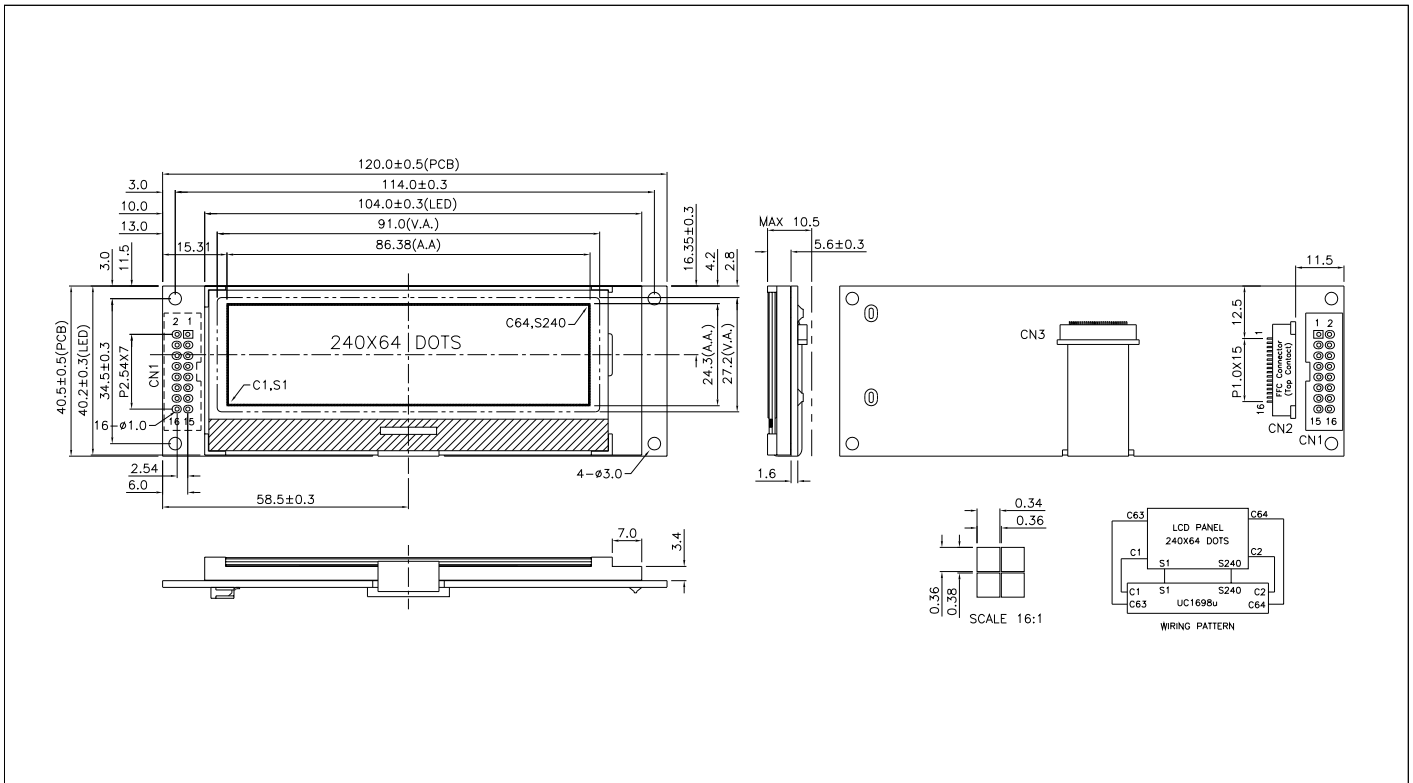


# VS240645-DW

240 x 64 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 <sub>DD</sub> - V <sub>SS</sub>	-0.3	6.0	V
Supply Voltage(LCD)	V <sub>LCD</sub> - V <sub>SS</sub>	-0.3	19.8	V
Input Voltage	V <sub>I</sub>	-0.3	V <sub>DD</sub> + 0.5	V
Operating Temp.	T <sub>opr</sub>	-20	70	°C
Storage Temp.	T <sub>stg</sub>	-30	80	°C

## MECHANICAL DATA

Item	Nominal Dimensions	Unit
Module Size ( W x H x T )	120.0 x 40.5 x 10.5	mm
Viewing Area ( W x H )	91.0 x 27.2	mm
Dot Pitch ( W x H )	0.36 x 0.38	mm
Dot Size ( W x H )	0.34 x 0.36	mm
Weight	Approx. 48	g

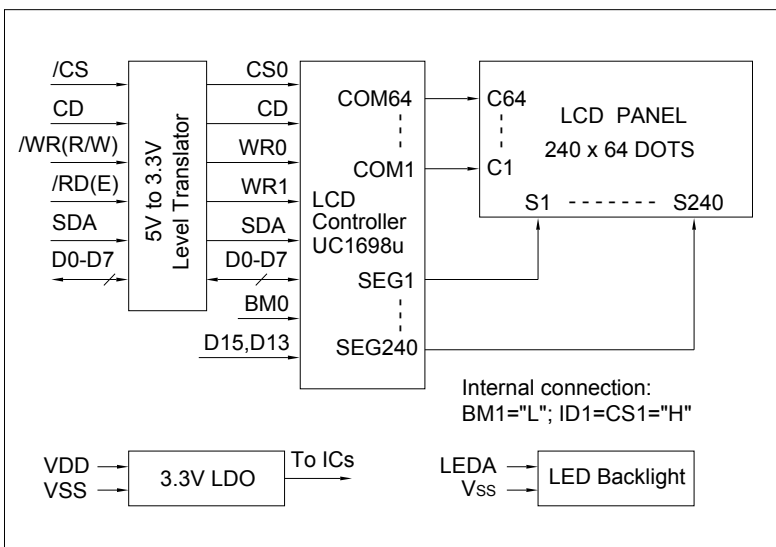
## ELECTRICAL CHARACTERISTICS ( V<sub>DD</sub>=3.3V to 5.5V)

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Input High Voltage	V <sub>IH</sub>	--	2.0	--	V <sub>DD</sub>	V
Input Low Voltage	V <sub>IL</sub>	--	0	--	0.8	V
Output High Voltage	V <sub>OH</sub>	I <sub>OH</sub> = -0.1mA	V <sub>DD</sub> -0.2	--	V <sub>DD</sub>	V
Output Low Voltage	V <sub>OL</sub>	I <sub>OL</sub> = 0.1mA	0	--	0.2	V
Supply Current	I <sub>DD</sub>	V <sub>DD</sub> = 5.0V	--	2.2	3.0	mA
LCD Driving Voltage	V <sub>LCD</sub> -V <sub>SS</sub>	T <sub>a</sub> =25°C	--	13.2	--	V

## PIN CONNECTIONS

Pin	Symbol	Level	Function
1	V <sub>SS</sub>	0V	GND
2	V <sub>DD</sub>	3.3 to 5.5V	Power supply for logic
3	LEDA	5V	Power supply for LED backlight LEDK is connected to V <sub>SS</sub> on PCB
4	CD	H/L	CD="H": Display data CD="L": Instruction code
5	/CS	L	Chip selection signal. Active "L".
6	SDA/D8	--	Serial data input
7	SCK/D0	H/L	In parallel mode: D0 to D7 are 8-bit bidirectional data bus. In serial mode: D0 is serial clock input (SCK). Keep D1 to D7 open in serial mode.
8	D1	H/L	
9	D2	H/L	
10	D3	H/L	
11	D4	H/L	
12	D5	H/L	
13	D6	H/L	
14	D7	H/L	
15	/WR(R/W)	H/L	/WR for 80 MPU, R/W for 68 MPU
16	/RD(E)	H/L	/RD for 80 MPU, E for 68 MPU

## BLOCK DIAGRAM



## LED BACKLIGHT SPECIFICATIONS (T<sub>a</sub>=25°C)

Item	Symbol	Typ.	Max.	Unit
Forward Voltage	V <sub>f</sub>	3.1	3.3	V
Forward Current	I <sub>f</sub>	45	--	mA
LED Color		White		