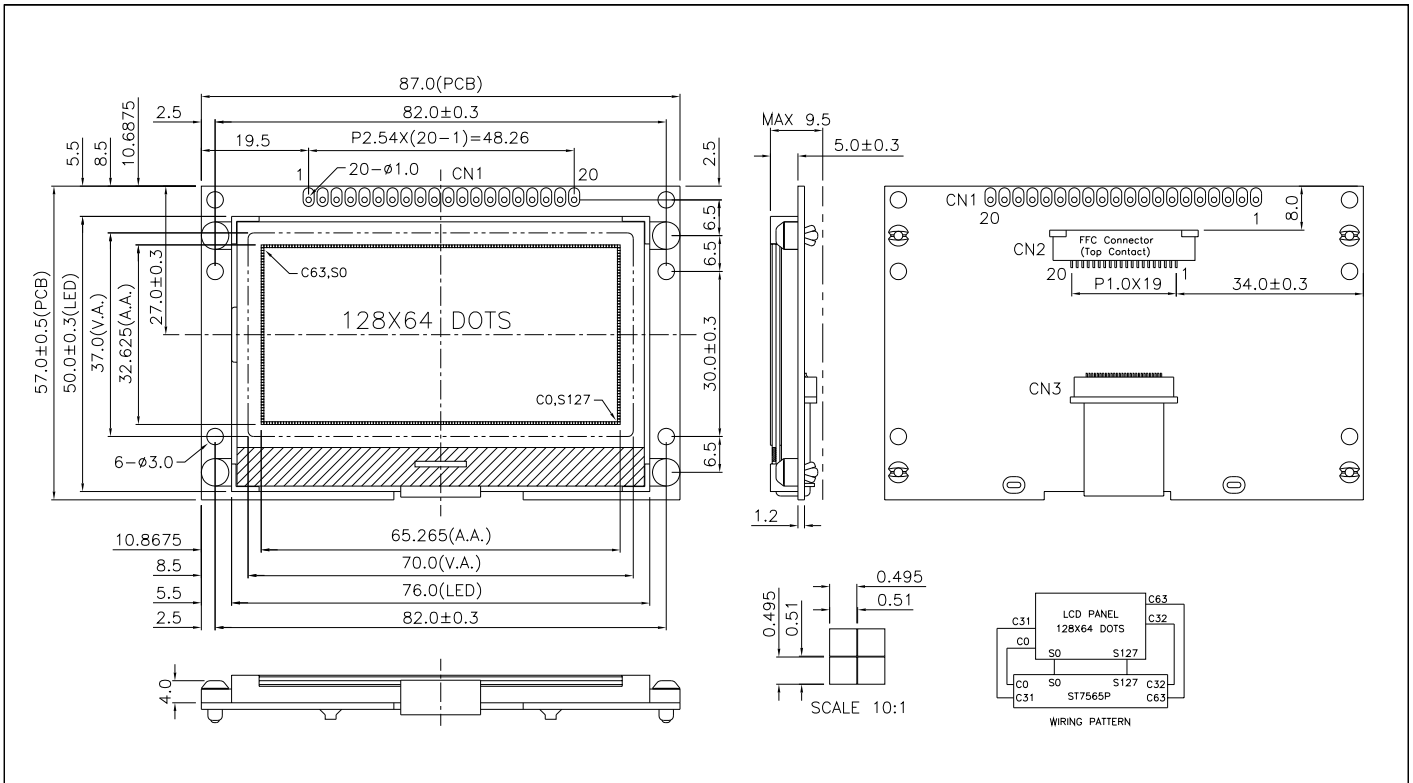


VS12864U-DW 128 x 64 dots + white led backlight, 8-bit parallel or SPI, 3.3V to 5.5V



ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Min.	Max.	Unit
Supply Voltage(Logic)	$V_{DD} - V_{SS}$	-0.3	6.0	V
Supply Voltage(LCD)	$V_{OUT} - V_{SS}$	-0.3	14.5	V
Input Voltage	V_I	-0.3	$V_{DD} + 0.3$	V
Operating Temp.	T_{opr}	-20	70	$^{\circ}C$
Storage Temp.	T_{stg}	-30	80	$^{\circ}C$

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)	0.51 x 0.51	mm
Dot Size (W x H)	0.495 x 0.495	mm
Weight	Approx. 42	g

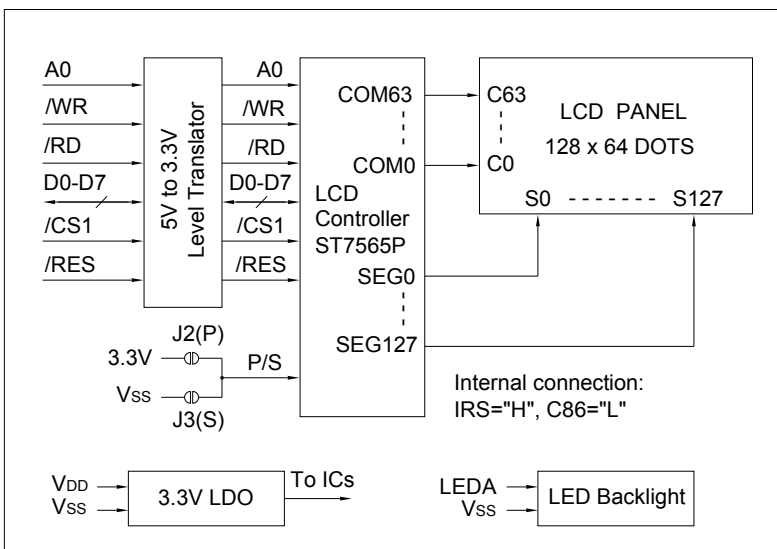
ELECTRICAL CHARACTERISTICS ($V_{DD}=3.3V$ to 5.5V)

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}	$V_{DD} = 5.0V$	--	0.8	1.6	mA
LCD Driving Voltage	$V_0 - V_{SS}$	$T_a=25^{\circ}C$	--	10.3	--	V

PIN CONNECTIONS (CN1/CN2)

Pin	Symbol	Level	Function	
1	V_{SS}	0V	GND	
2	V_{DD}	3.3 to 5.5V	Power supply for logic	
3	LEDA	5V	Power supply for LED backlight LEDK is connected to V_{SS} on PCB	
4	A0	H/L	A0="H": Display data A0="L": Instruction code	
5	/CS1	L	Chip selection signal. Active "L".	
6	/RES	L	Reset signal. Active "L".	
7	D7	H/L	When P/S="H" (Parallel mode): D0 to D7 are 8-bit bidirectional data bus.	
8	D6	H/L		
9	D5	H/L		
10	D4	H/L		
11	D3	H/L		When P/S="L" (Serial mode): D7 is serial data input (SI). D6 is serial colck input (SCL).
12	D2	H/L		
13	D1	H/L		
14	D0	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		