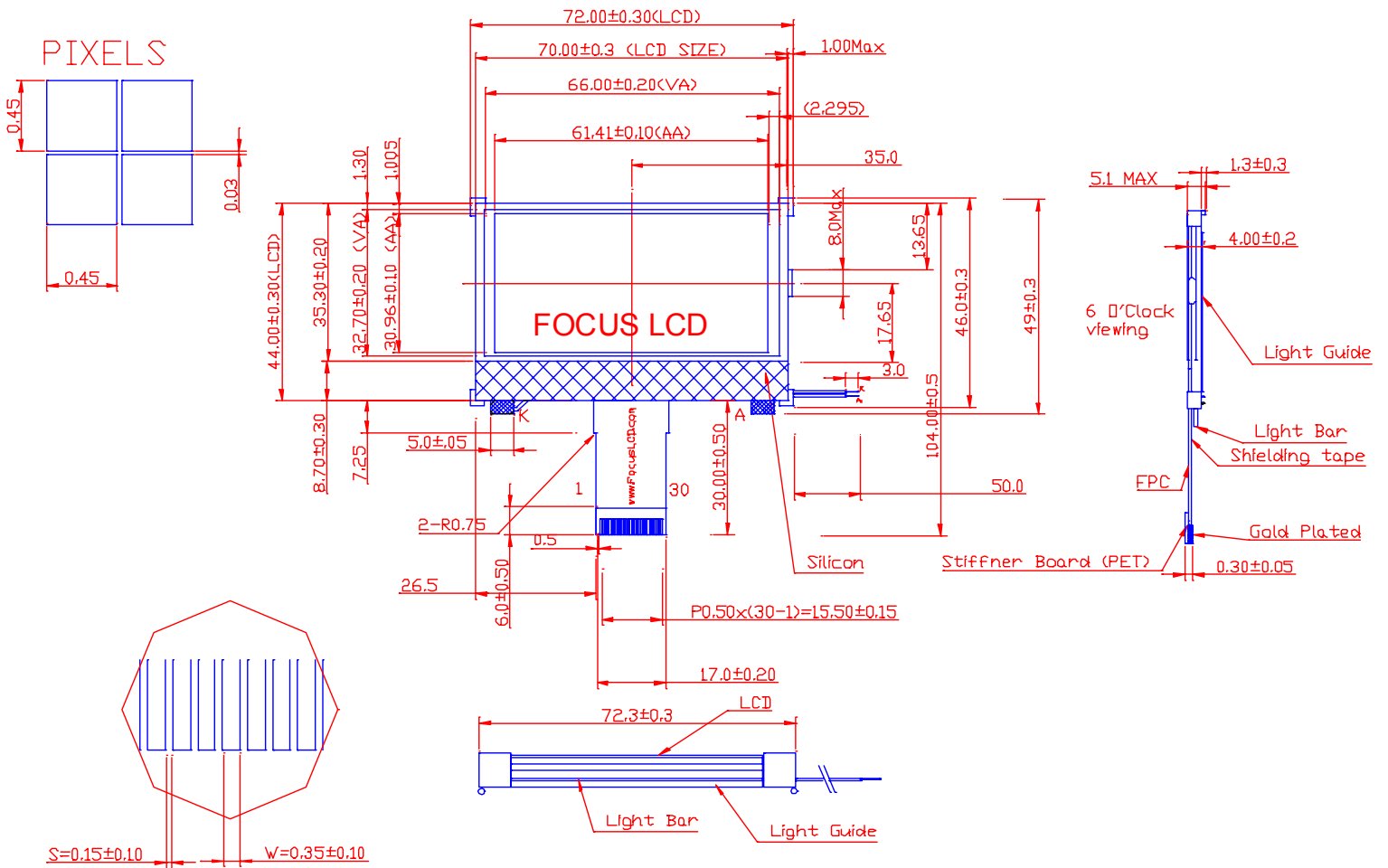


FOCUS DISPLAY SOLUTIONS

WWW.FOCUSLCD.COM FDS128x64(70x44)YGG (LED)



Absolute Maximum Rating

ITEM	SYMBOL	CONDITION	MIN	TYP	MAX	UNIT
Power supply for logic	V _{DD-VSS}	T _a = 25°C	-0.3	---	+7.0	V
Power supply for LCD Driving	V _{LCD}	T _a = 25°C	-0.3	---	+17.0	V
Input Voltage	V _{IN}	T _a = 25°C	-0.3	---	V _{DD} +0.3	V
Operation Temperature	T _{OPR}	---	-20	---	+70	°C
Storage Temperature	T _{STG}	---	-30	---	+80	°C

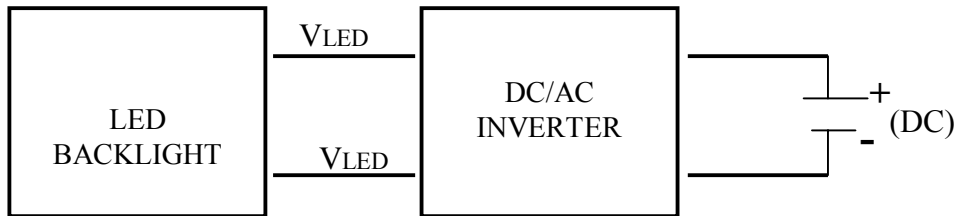
Interface Pin Connections

NO	SYM	LEV	FUNCTION
1	V _{SS}	-	Ground
2	V ₄	-	LCD driver supply voltage
3	V ₃	-	LCD driver supply voltage
4	V ₂	-	LCD driver supply voltage
5	V ₁	-	LCD driver supply voltage
6	V ₀	-	LCD driver supply voltage
7	C2-	-	Connect2- for internal voltage converter
8	C2+	-	Connect2+ for internal voltage converter
9	C1-	-	Connect1- for internal voltage converter
10	C1+	-	Connect1+ for internal voltage converter
11	C3-	-	Connect3- for internal voltage converter
12	C3+	-	Connect3+ for internal voltage converter
13	V _{out}	-	Voltage converter output
14	V _{DD}	-	Power Supply Logic
15	V _{SS}	-	Ground
16	PS	H/L	Parallel/Serial data input select input, H: Parallel Type L: Serial Type
17	C68	H/L	Microprocessor interface selects input pin, H: 6800 Type L: 8080 Type
18	DB7(SID)	-	Data Bus or Serial Input Data
19	DB6(SCLK)	-	Data Bus or Serial Input Clock
20	DB5	-	DATA BUS
21	DB4	-	DATA BUS
22	DB3	-	DATA BUS
23	DB2	-	DATA BUS
24	DB1	-	DATA BUS
25	DB0	-	DATA BUS
26	$\overline{E(RD)}$	-	8080 Type: Read Signal 6800 Type: Enable Signal
27	$\overline{R\overline{W}}(\overline{WR})$	-	8080 Type: Write Signal 6800 Type: Read/Write execution control pin
28	RS	H/L	Register Select input, H:display data L: control data
29	/RESET	-	Hardware Reset Input
30	/CS1	-	Chip selects input

Electrical Characteristics

ITEM	SYM	CONDITION	STANDARD VALUE			UNIT
			MIN	TYP	MAX	
Power supply voltage	V_{DD-VSS}	3x booster circuit	4.5	5.0	5.5	V
		4x booster circuit	2.7	3.0	4.2	
Power supply for LCD driving	$V_{LCD} *1$	$T_a = 25^{\circ}C$	9.5	9.8	10.1V	V
Input voltage H level	V_{IH}	---	$0.8V_{DD}$	---	V_{DD}	V
Input voltage L level	V_{IL}	---	0	---	$0.2V_{DD}$	V
Output voltage H level	V_{OH}	$I_{OH} = -0.5mA$	$0.8V_{DD}$	---	V_{DD}	V
Output voltage L level	V_{OL}	$I_{OL} = -0.5mA$	0	---	$0.2V_{DD}$	V
Power supply current	$I_{DD} *1$	$V_{DD-VSS} = 3.0V,$ $V_{LCD} = 9.8V$	---	0.5	1.5	mA
	I_{EE}	---	---	---	---	mA

****LED BACKLIGHT**



Absolute Maximum Rating

PARAMETER	SYMBOL	SPECIFICATION	Unit
Voltage	V_{EL}	140	Vms
Spectrum	f_{EL}	800	Hz
Operation Temp Scope	T_{OPR}	-20 ~ +70	$^{\circ}C$
Storage Temp Scope	T_{STG}	-30 ~ +80	$^{\circ}C$

Electrical Characteristics

PARAMETER	MIN	TYP	MAX	UNIT
Supply V. for LED(V_{LED})	---	120	---	mA
Supply Spectrum (f_{EL})	---	400	---	Hz
Begin Intensity	50	---	---	cd/m^2
Blue-White	(X+/-0.03)	---	0.17	---
	(Y+/-0.04)	---	0.38	---
Current Consumption	---	0.17	0.24	mA/cm^2
Power Consumption	1.8	---	---	mW/cm^2