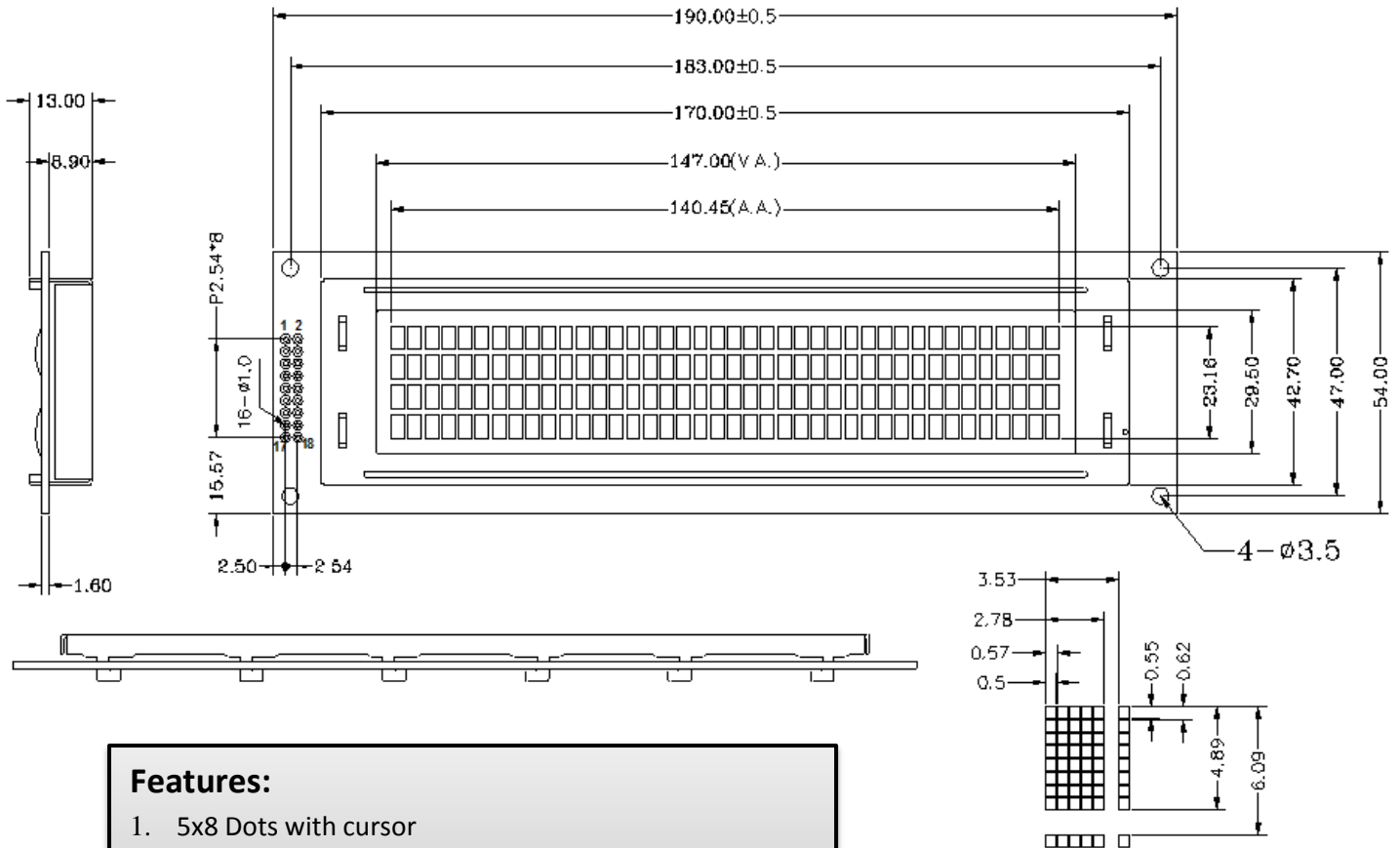




## Basic Character LCD Drawing

Part Number: FDS40x4(183x47)LBC



### Features:

1. 5x8 Dots with cursor
2. Built-in controller (SPLC780D or Equivalent)
3. +5V power supply
4. 1/16 duty cycle; 1/5 bias
5. BKL to be driven by pin17, pin18
6. ROHS compliant

### Mechanical Data

ITEM	STANDARD	UNIT
MODULE DIMENSION	190.0 X 54.0	mm
VIEWING AREA	147.0 X 29.5	mm
DOT SIZE	0.5 X 0.55	mm
CHARACTER SIZE	2.78 X 4.89	mm



### Interface Pin Connections

NO	SYMBOL	LEVEL	FUNCTION
1~4	DB7~DB4	MPU	Four High Order bi-directional three-state data bus lines. Used for data transfer between the MPU.
5~8	DB3~DB0	MPU	Four Low Order bi-directional three-state data bus lines. Used for data transfer between the MPU and the LCM. These four are not used during 4-bit operation.
9	E1	MPU	Operation (data read/write) enable signal
10	R/W	MPU	Read/Write Select signal
11	RS	MPU	Register Select signal
12	V <sub>o</sub>	Power Supply	Contrast Adjust
13	V <sub>SS</sub>		Signal Ground for LCM (GND)
14	V <sub>DD</sub>		Power supply for logic (+5V) for LCM
15	E2	MPU	Enable signal (no pull-up resistor)
16	NC		
17	LED+	Power Supply	Power supply for LED backlight (+5V)
18	LED-		Power supply for LED backlight (0V)

### Absolute Maximum Rating

ITEM	SYMBOL	MIN	TYP	MAX	UNIT
Power Voltage	V <sub>DD</sub> -V <sub>SS</sub>	0	--	7.0	V
Input Voltage	V <sub>IN</sub>	V <sub>SS</sub>	--	V <sub>DD</sub>	
Operating Temperature Range	V <sub>OP</sub>	-20	--	+70	°C
Storage Temperature Range	V <sub>ST</sub>	-30	--	+80	

### Electrical Characteristics

ITEM	SYM	CONDITION	MIN	TYP	MAX	UNIT
Supply Voltage for LCD	V <sub>DD</sub> -V <sub>O</sub>	T <sub>a</sub> =25°C	--	4.6	--	V
Input Voltage	V <sub>DD</sub>		4.7	5.0	5.5	V
Supply Current	I <sub>DD</sub>	T <sub>a</sub> =25°C, V <sub>DD</sub> =5.0V	--	1.5	2.5	mA
Input Leakage Current	I <sub>LKG</sub>		--	--	1.0	uA
"H" Level Input Voltage	V <sub>IH</sub>		2.2	--	V <sub>DD</sub>	V
"L" Level Input Voltage	V <sub>IL</sub>	Twice Initial Value or Less	0	--	0.6	
"H" Level Output Voltage	V <sub>OH</sub>	LOH= -0.25mA	2.4	--	--	
"L" Level Output Voltage	V <sub>OL</sub>	LOH= 1.6mA	--	--	0.4	
Backlight supply voltage	V <sub>F</sub>		--	4.2	--	
Backlight supply current	I <sub>LED</sub>	V <sub>F</sub> =4.2V	--	480	--	mA