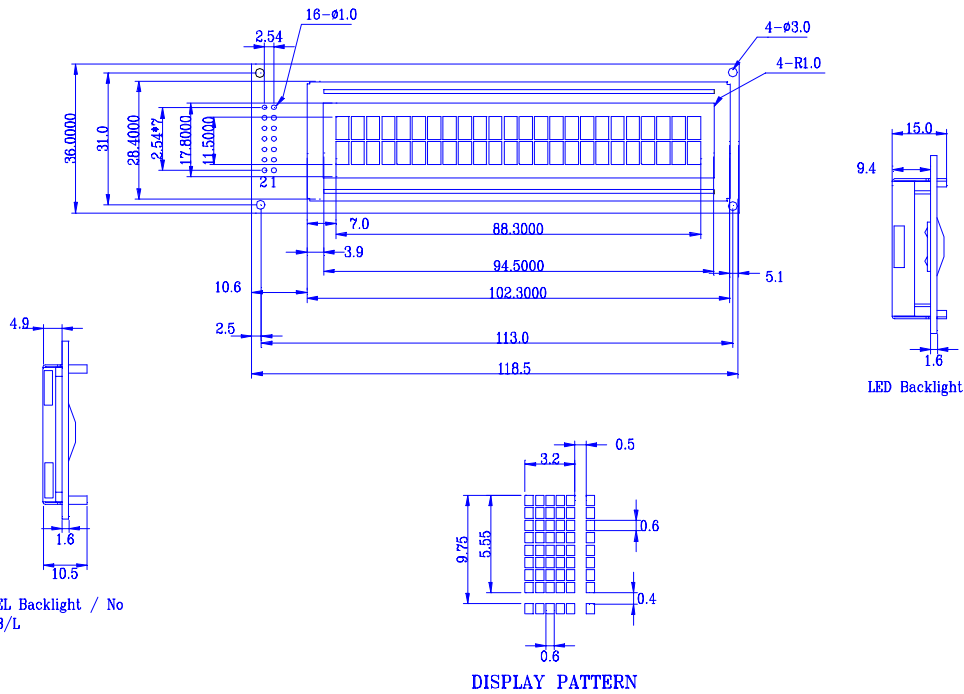


# FOCUS DISPLAY SOLUTIONS

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FDS24x2(113x31)SBC



## FEATURE:

LCD TYPE	TN/STN
BACKLIGHT TYPE	EL/LED BACKLIGHT
CHARACTER FONTS	5x8 DOTS (WITH CURSOR)
CONTROLLER	NT3881 OR EQUIVALENT
POWER SUPPLY FOR LCM	DC +5V
LED BACKLIGHT INPUT	DC +5V
EL BACKLIGHT INPUT	AC90~100V(400~700Hz)
EL INVERTER	I002A

**Interface Pin Connections**

NO	SYM	LEVEL	FUNCTION	NO	SYM	LEVEL	FUNCTION
1	V <sub>SS</sub>	-	0V	9	DB <sub>2</sub>	H/L	DATA BIT 2
2	V <sub>DD</sub>	-	5V	10	DB <sub>3</sub>	H/L	DATA BIT 3
3	V <sub>O</sub>	-	CONTRAST ADJUSTMENT	11	DB <sub>4</sub>	H/L	DATA BIT 4
4	RS	H/L	REGISTER SELECT	12	DB <sub>5</sub>	H/L	DATA BIT 5
5	R/W	H/L	READ/WRITE	13	DB <sub>6</sub>	H/L	DATA BIT 6
6	E	H.H.→L	ENABLE SIGNAL	14	DB <sub>7</sub>	H/L	DATA BIT 7
7	DB <sub>0</sub>	H/L	DATA BIT0	15	A(+)	+5V	BACKLIGHT
8	DB <sub>1</sub>	H/L	DATA BIT1	16	K(-)	0V	BACKLIGHT

**Absolute Maximum Rating**

ITEM	SYMBOL	MIN	TYP	MAX	UNIT
OPERATING TEMP.	T <sub>OP</sub>	0	—	50	°C
STORAGE TEMP.	T <sub>ST</sub>	-10	—	60	°C
INPUT VOLTAGE	V <sub>I</sub>	V <sub>SS</sub>	—	V <sub>DD</sub>	
SUPPLY VOL-LOGIC	V <sub>DD</sub> -V <sub>SS</sub>	—	5.0	6.5	V
SUPPLY VOL-LCD	V <sub>DD</sub> -V <sub>O</sub>	—	—	6.5	V

**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> =0°C	—	4.6	—	V
		T <sub>a</sub> =25°C	—	4.4	—	V
		T <sub>a</sub> =50°C	—	4.2	—	V
INPUT VOLTAGE	V <sub>I</sub>	—	4.5	5.0	5.5	V
INPUT HIGH VOL	V <sub>IH</sub>	—	2.2	—	V <sub>DD</sub>	V
INPUT LOW VOL	V <sub>IL</sub>	—	0	—	0.6	V
OUTPUT HIGH VOL	V <sub>OH</sub>	—	2.4	—	—	V
OUTPUT LOW VOL	V <sub>OL</sub>	—	—	—	0.4	V
SUPPLY CURRENT	I <sub>DD</sub>	V <sub>DD</sub> =5v	—	2.0	3.6	mA
LED CURRENT	I <sub>F</sub>	T <sub>a</sub> =25°C	—	160	—	mA
LED DISSIPATION	P <sub>D</sub>	T <sub>a</sub> =25°C	—	800	—	mW

**DISPLAY CHARACTER ADDRESS CODE:**

Display position	1	2	3	4	5	6	7	8	9	10	11	12
L1	80	81	82	83	84	85	86	87	88	89	8A	8B
L2	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9	CA	CB

Display position	13	14	15	16	17	18	19	20	21	22	23	24
L1	8C	8D	8E	8F	90	91	92	93	94	95	96	97
L2	CC	CD	CE	CF	D0	D1	D2	D3	D4	D5	D6	D7