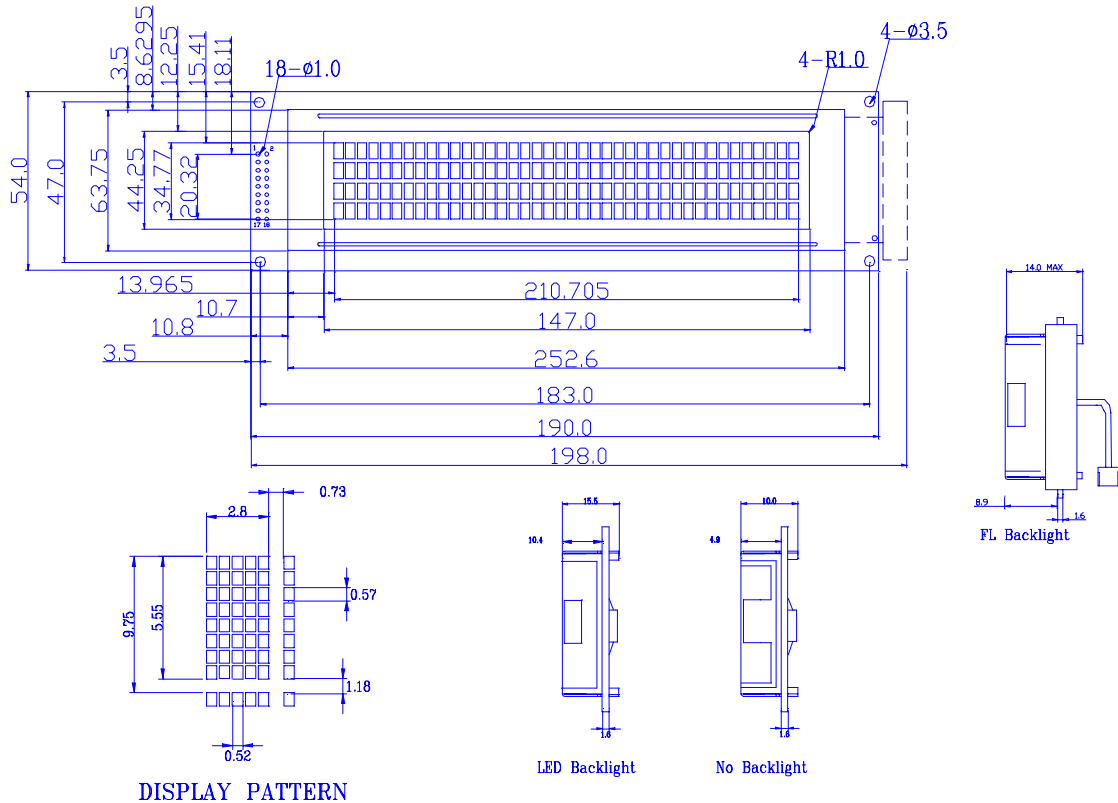


FOCUS DISPLAY SOLUTIONS

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FDS40x4(183x47)SBC



FEATURE:

LCD TYPE	TN/STN
BACKLIGHT TYPE	EL/LED BACKLIGHT
CHARACTER FONTS	5x8 DOTS (WITH CURSOR)
CONTROLLER	HD44780 OR EQUIVALENT
POWER SUPPLY FOR LCM	DC +5V
LED BACKLIGHT INPUT	DC +5V
EL BACKLIGHT INPUT	AC 1KV(30KHz)
EL INVERTER	FL001(5A)

Interface Pin Connections

NO	SYM	LEVEL	FUNCTION	NO	SYM	LEVEL	FUNCTION
1	DB7	H/L	DATA BIT 7	10	R/W	H/L	READ/WRITE
2	DB6	H/L	DATA BIT 6	11	RS	H/L	REGISTER SELECT
3	DB5	H/L	DATA BIT 5	12	V ₀	—	CONTRAST ADJUST
4	DB4	H/L	DATA BIT4	13	V _{SS}	—	0V
5	DB3	H/L	DATA BIT3	14	V _{DD}	—	5V
6	DB2	H/L	DATA BIT2	15	E2	H.H.→L	ENABLE SIGNAL
7	DB1	H/L	DATA BIT1	16	NC	—	NO CONNECTION
8	DB0	H/L	DATA BIT0	17	A(+)	+5V	BACKLIGHT
9	E1	H.H.→L	ENABLE SIGNAL	18	K(-)	0V	BACKLIGHT

Absolute Maximum Rating

ITEM	SYMBOL	MIN	TYP	MAX	UNIT
OPERATING TEMP.	T _{OP}	0	—	50	°C
STORAGE TEMP.	T _{ST}	-10	—	60	°C
INPUT VOLTAGE	V _I	V _{SS}	—	V _{DD}	V
SUPPLY VOL-LOGIC	V _{DD} -V _{SS}	—	5.0	6.5	V
SUPPLY VOL-LCD	V _{DD} -V ₀	—	—	6.5	V

Electrical Characteristics

ITEM	SYM	CONDITION	MIN	TYP	MAX	UNIT
SUPPLY VOLTAGE FOR LCD	V _{DD} -V ₀	T _a =0°C	—	4.6	—	V
		T _a =25°C	—	4.4	—	V
		T _a =50°C	—	4.2	—	V
INPUT VOLTAGE	V _I	—	4.5	5.0	5.5	V
INPUT HIGH VOL	V _{IH}	—	2.2	—	V _{DD}	V
INPUT LOW VOL	V _{IL}	—	0	—	0.6	V
OUTPUT HIGH VOL	V _{OH}	—	2.4	—	—	V
OUTPUT LOW VOL	V _{OL}	—	—	—	0.4	V
SUPPLY CURRENT	I _{DD}	V _{DD} =5v	—	2.0	3.6	mA
LED CURRENT	I _F	T _a =25°C	—	600	—	mA
LED DISSIPATION	P _D	T _a =25°C	—	3000	—	mW

DISPLAY CHARACTER ADDRESS CODE:

Display position	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	80	81	82	83	84	85	86	87	88	89	8A	8B	8C	8D	8E	8F	90	91	92	93
L2	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9	CA	CB	CC	CD	CE	CF	D0	D1	D2	D3
L3	80	81	82	83	84	85	86	87	88	89	8A	8B	8C	8D	8E	8F	90	91	92	93
L4	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9	CA	CB	CC	CD	CE	CF	D0	D1	D2	D3

Display position	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
L1	94	95	96	97	98	99	9A	9B	9C	9D	9E	9F	A0	A1	A2	A3	A4	A5	A6	A7
L2	D4	D5	D6	D7	D8	D9	DA	DB	DC	DD	DE	DF	E0	E1	E2	E3	E4	E5	E6	E7
L3	94	95	96	97	98	99	9A	9B	9C	9D	9E	9F	A0	A1	A2	A3	A4	A5	A6	A7
L4	D4	D5	D6	D7	D8	D9	DA	DB	DC	DD	DE	DF	E0	E1	E2	E3	E4	E5	E6	E7