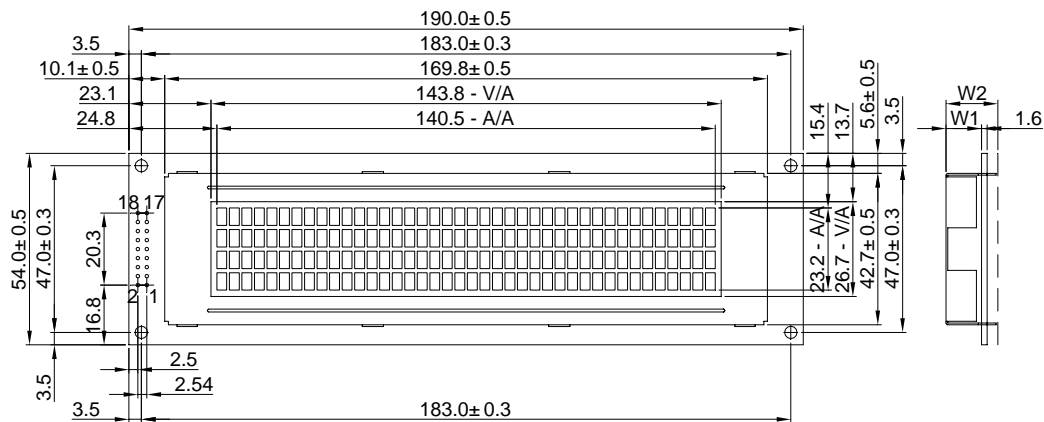


Standard LCD module

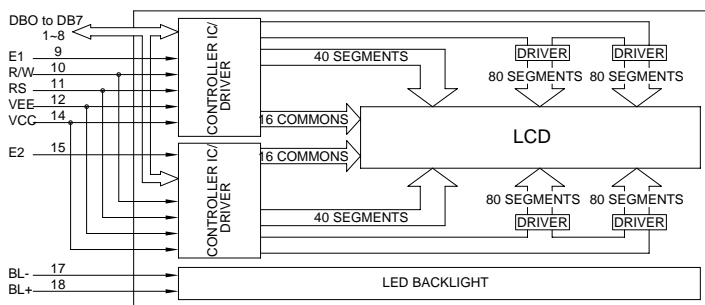
MC4004-04

OUTLINE DIMENSION

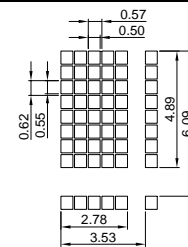


VERSION	W1	W2
NO/EL BACKLIGHT	5.00±0.5	10.0 MAX
LED BACKLIGHT	10.0±0.5	15.0 MAX

BLOCK DIAGRAM



DISPLAY PATTERN



MECHANICAL SPECIFICATION

Item	Dimensions(W)X(H)	Unit
Overall Size	190.0x54.0	MM
View Area	143.8x26.7	MM
Character	2.78x4.89	MM
Dot Size	0.50x0.55	MM
Dot Pitch	0.57x0.62	MM

PIN ASSIGNMENT

Pin no	Symbol	Function
1-8	DB0-DB7	Data bus line
9	E1	Enable signal
10	R/W	Data read / write
11	RS	Command data input
12	V0	Contrast Adjust
13	VSS	Power Supply(GND)
14	VDD	Power Supply(+)
15	E2	Enable signal
16	NC	
17	BL-	Back light cathode
18	BL+	Back light anode
OPTION		
15	BL+	Back light anode
16	BL-	Back light cathode

ABSOLUTE MAXIMUM RATING

Item	Symbol	Condition	Min	Max	Unit
Supply for logic voltage	VDD	25°C	-0.3	7.0	V
LCD driving supply voltage	VDD-Vo	25°C	-0.3	VDD+0.3	V
Input voltage	VI	25°C	-0.3	VDD+0.3	V

ELECTRICAL CHARACTERISTICS

Item	Symbol	Condition	Min	Typical	Max	Unit
Supply voltage for logic	VDD	---	4.5	5.0	5.5	V
Supply current for logic	IDD	---	---	2.00	3.30	mA
Operation voltage for LCD	VDD-Vo	0°C	---	---	---	V
		25°C	4.3	4.5	4.7	V
		50°C	---	---	---	V
Input voltage "H" level	VIH	---	0.7VDD	---	VDD	V
Input voltage "L" level	VIL	---	-0.3	---	0.6	V
Supply voltage for back light	VBL	---	According to back light type			V
Supply current for back lihgt	IBL	---	According to back light type			mA

REMARKS:

- LCD options: STN, TN, FSTN.
- Back light type: LED/EL Back light feature.