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# PRODUCT SPECIFICATION

MONOCHROME LCD MODULE

PART NUMBER : FDA2002A

DESCRIPTION : 2x20 character

REVISION : Rev A

Approval for Specification only		Approval for Sample Only
Approval for Pre-production	<b>x</b>	Approval for Mass Production



# FDA2002A ( 20 CHARACTERS x 2 LINES )

## FEATURES

- ◆ 5 x 7 DOTS WITH CURSOR
- ◆ BUILT-IN CONTROLLER (KS0066 OR EQUIVALENT)
- ◆ 5 V POWER SUPPLY
- ◆ 1/16 DUTY CYCLE
- ◆ 4.2 V LED FORWARD VOLTAGE

## MECHANICAL DATA

ITEM	DIMENSIONS	UNIT
Module Size ( W x H x T )	116.0x 37.0 x 8.8 ( 12.7 LED )	mm
Viewing Area ( W x H )	85.0 x 18.8	mm
Character Size ( W x H )	3.20 x 5.55	mm
Character Pitch ( W x H )	3.70 x 5.95	mm
Dot Size ( W x H )	0.60 x 0.65	mm
Dot Pitch ( W x H )	0.65 x 0.70	mm

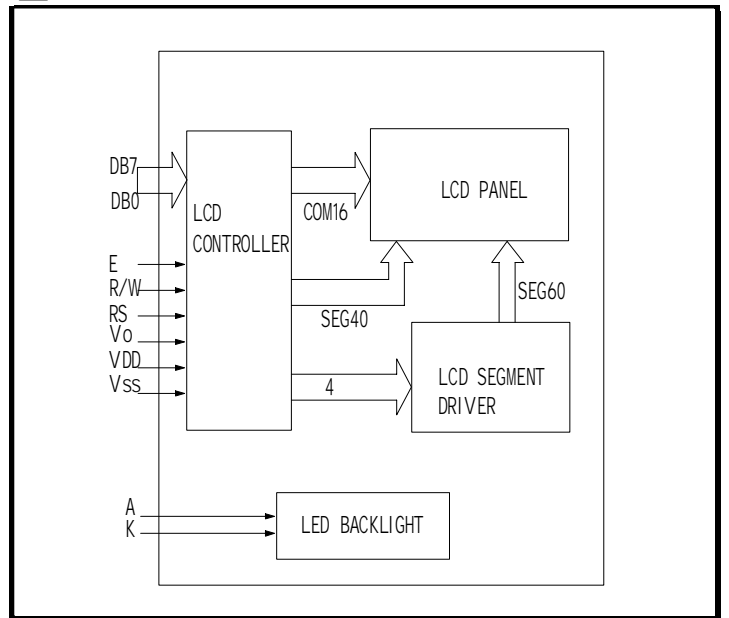
## INTERFACE PIN CONNECTIONS

NO.	SYMBOL	FUNCTION	NO.	SYMBOL	FUNCTION
1	VSS	Supply Ground	9	DB2	Data Bit 2
2	VDD	Supply Voltage	10	DB3	Data Bit 3
3	Vo	Contrast Adj.	11	DB4	Data Bit 4
4	RS	Register Select	12	DB5	Data Bit 5
5	R/W	Read/Write	13	DB6	Data Bit 6
6	E	Enable Signal	14	DB7	Data Bit 7
7	DB0	Data Bit 0	15	A	LED Power
8	DB1	Data Bit 1	16	K	LED Power

## ELECTRICAL CHARACTERISTICS

ITEM	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
LCD Operating Voltage	V <sub>DD-Vo</sub>	T=0°C	-	4.8	-	V
		T=25°C	-	4.5	-	V
		T=50°C	-	4.2	-	V
Supply Voltage	V <sub>DD-VSS</sub>	-	4.7	5	5.3	V
Supply Current	I <sub>DD</sub>	-	-	3.2	6	mA
Input Voltage	"HIGH" Level	V <sub>IH</sub>	-	2.2	-	V <sub>DD</sub> V
	"LOW" Level	V <sub>IL</sub>	-	0	-	0.6 V
Output Voltage	"HIGH" Level	V <sub>OH</sub>	-	2.4	-	V
	"LOW" Level	V <sub>OL</sub>	-	-	-	0.4 V

## BLOCK DIAGRAM



## EXTERNAL DIMENSIONS

