ME DISPLAYS

SPECIFICATIONS

FOR

LCD MODULE

SG16036A

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- **FEATURES**

Number of Dots	*160 x 36*
Duty Cycle	*1/36 Duty*
Power Supply	*5V*
LED Forward Voltage	*4.2V*
Options	*LED/EL Backlight, STN*
Recommended Controller	*KD64646, MSM6225, SED1335*

- **MECHANICAL PARAMETERS**

Module Size	*180.0W x 65.0H x 9.7 mm*
Viewing Area Size	*130.0W x 40.4H mm*
Active Area Size	*127.96W x 33.88H mm*
Dot Size	*0.76 x 1.02 mm*
Dot Pitch	*0.80 x 1.06 mm*

- **ABSOLUTE MAXIMUM**

Item	Symbol	Min.	Max	Unit
Supply Voltage for Logic	V_{DD} - V_{SS}	0	+7.0	V
Supply Voltage for LCD Drive	V_{DD} – V_O	0	+18.0	V
Input Voltage	V_i	V_{SS}	V_{DD}	V
Operating Temperature	T_a	0	+50	C
Storage Temperature	T_{stg}	-10	+60	C

- **ELECTRICAL CHARACTERISTICS**

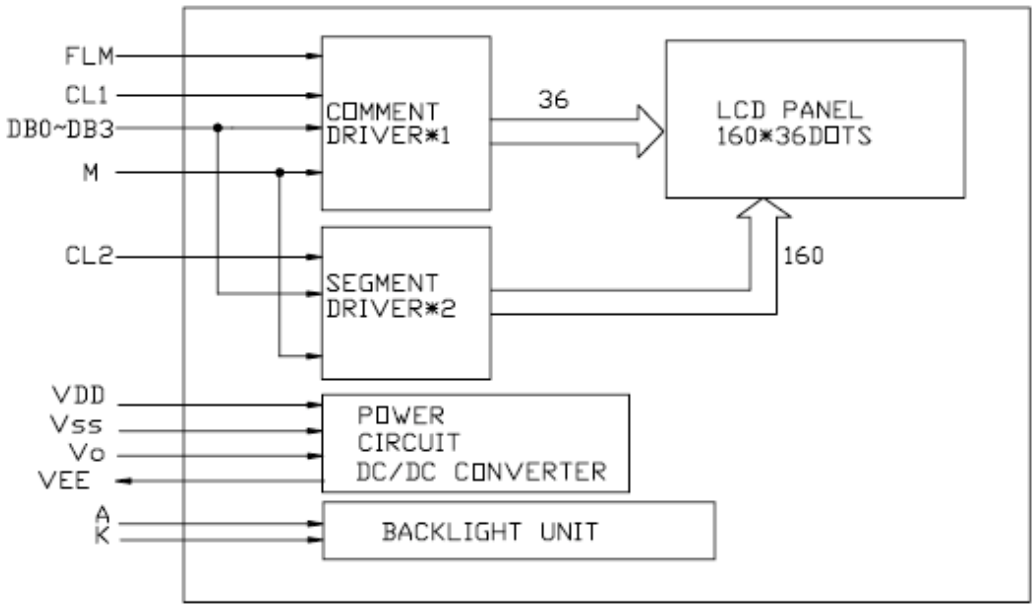
Item	Symbol	Condition	Min	Typ	Max	U
Power Supply Voltage for Logic	V_{DD} - V_{SS}	--	4.5	5.0	5.5	V
Power Supply Voltage for LCD	V_{DD} - V_O	V_{DD}=5V T_a=25C	7.7	8.4	9	V
Input “High” Voltage(1)	V_{ih}	--	2.2	--	V_{DD}	V
Input “Low” Voltage(1)	V_{il}	--	--	--	0.6	V
Output “High” Voltage(1)	V_{oh}	--	2.4	--	--	V
Output “Low” Voltage(1)	V_{ol}	--	--	--	0.4	V
Power Supply Current	I_{DD}	V_{DD} = 5.0V	--	10	16	mA

(1) Applied to terminals CS1, CS2, DB0~DB7, R/W, D/I, E RST

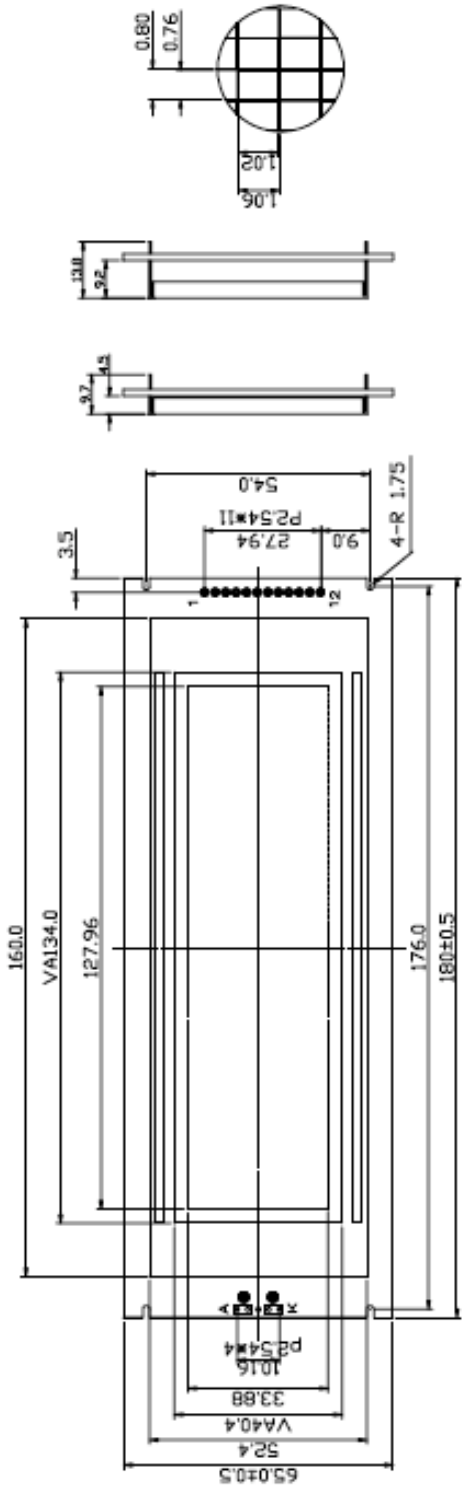
- **PIN ASSIGNMENT**

No.	Symbol
1	V_{SS}
2	V_{DD}
3	V_O
4	FLM
5	CL1
6	CL2
7	M
8	DB0
9	DB1
10	DB2
11	DB3
12	V_{EE}

- **BLOCK DIAGRAM**



- **DIAGRAM SG16036A**



- **TIMING CHARACTERISTICS**

Item	Symbol	Min	Max	Unit
Frequency of Maximum Clock	f_{CP}	--	8	MHZ
CL1, CL2, Pulse Width	t_W	45	--	ns
Rise, Fall Time	t_R , t_F	--	15	ns
Data Setup Time	t_{DSU}	20	--	ns
Data Hold Time	t_{DHD}	20	--	ns
CL1 Setup Time	t_{LSU}	80	--	ns
CL1 → CL2 Time	t_{LC}	80	--	ns
FLM Setup Time	t_{SETUP}	100	--	ns
FLM Hold Time	T_{HOLD}	100	--	ns
M Delay Time	t_{DF}	--	300	ns

- **TIMING DIAGRAMS**