

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

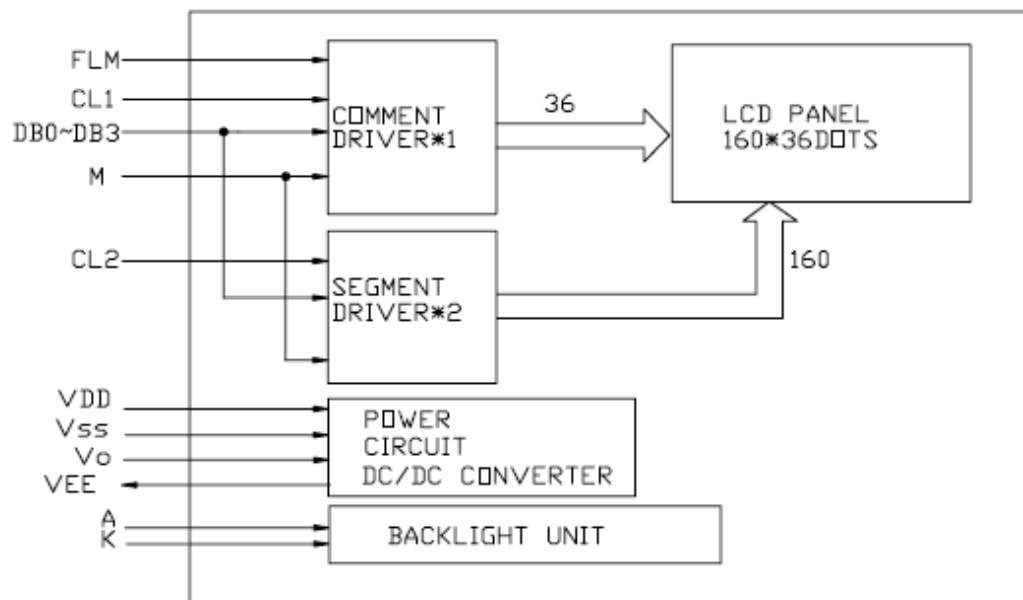
Item	Symbol	Condition	Min	Typ	Max	U
Power Supply Voltage for Logic	$V_{DD} - V_{SS}$	--	4.5	5.0	5.5	V
Power Supply Voltage for LCD	$V_{DD} - V_O$	$V_{DD}=5V$ $T_a=25C$	7.7	8.4	9	V
Input "High" Voltage(1)	V_{ih}	--	2.2	--	V_{DD}	V
Input "Low" Voltage(1)	V_{il}	--	--	--	0.6	V
Output "High" Voltage(1)	V_{oh}	--	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**



Technical drawing of a rectangular plate with dimensions and a circular detail view. The main drawing shows a rectangular plate with overall dimensions of 160.0 (width) by 180.0 (height). The inner rectangular area has dimensions of 127.96 (width) by 176.0 (height). The plate has a thickness of 3.5. The top edge features a series of 12 holes, with a center-to-center distance of 27.94 and a hole diameter of $\varnothing 5.4$. The bottom edge features a series of 4 holes, with a center-to-center distance of 33.88 and a hole diameter of $\varnothing 5.4$. The circular detail view shows a grid pattern with dimensions of 10.6 (width) by 10.2 (height). The grid has a total width of 10.6 and a total height of 10.2. The grid is composed of 8 horizontal lines and 8 vertical lines, creating a 7x7 grid of squares. The dimensions 0.80 and 0.76 are indicated for the grid lines.

• 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 \rightarrow 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

