

***ME* DISPLAYS**

SPECIFICATIONS

FOR

LCD MODULE

SG12864H

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• FEATURES

Number of Dots	128 x 64
Built-in Controller IC	KS0107 or equivalent
Duty Cycle	1/64 Duty
Power Supply	5V
LED Forward Voltage	4.2V
Options	LED/EL Backlight, STN

• MECHANICAL PARAMETERS

Module Size	75.0W x 57.7H x 7.9 mm
Viewing Area Size	60.0W x 32.5H mm
Active Area Size	55.01W x 32.5H mm
Dot Size	0.40 x 0.40 mm
Dot Pitch	0.43 x 0.43 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	$V_{DD} - V_O$	$V_{DD}=5V$ $T_a=25C$	7.6	8.3	9.2	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}	$V_{DD} = 5.0V$	--	6.2	10	mA

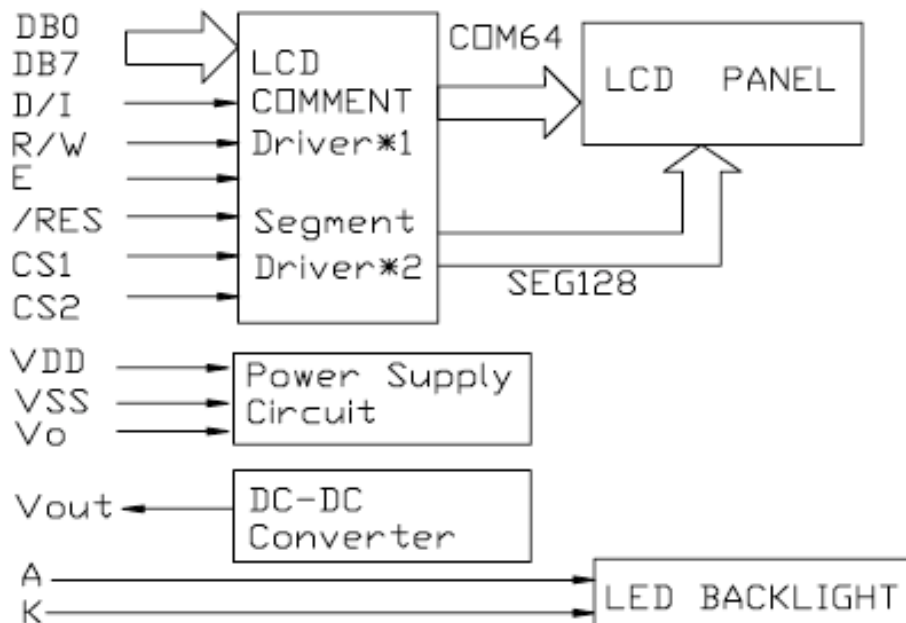
(1) Applied to terminals CS1, CS2, DB0~DB7, R/W, D/I, E RST

• PIN ASSIGNMENT

No.	Symbol
1	V _{DD}
2	V _{SS}
3	V _O
4	DB0
5	DB1
6	DB2
7	DB3
8	DB4
9	DB5
10	DB6

No.	Symbol
11	DB7
12	CS1
13	CS2
14	/RES
15	R/W
16	D/I
17	E
18	V _{OUT}
19	A
20	K

• BLOCK DIAGRAM



• TIMING CHARACTERISTICS

Item	Symbol	Min	Max	Unit
Enable Cycle Time	t_{CYC}	1000	--	ns
Enable High Level Pulse Width	P_{WEH}	450	--	ns
Enable Low Level Pulse Width	P_{WEL}	450	--	ns
Enable Rise Time	t_{Er}	--	25	ns
Enable Fall Time	t_{Ef}	--	25	ns
Address Set-up Time	t_{AS}	140	--	ns
Address Hold Time	t_{AH}	10	--	ns
Data Set-up Time	t_{DSW}	200	--	ns
Data Delay Time	t_{DDR}	--	320	ns
Data Hold Time (Write)	t_{DHW}	10	--	ns
Data Hold Time (Read)	t_{DHR}	20	--	ns

• TIMING DIAGRAMS

