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 Http://www.lcdfriends.com

PRODUCT SPECIFICATION

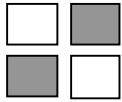
MONOCHROME LCD MODULE

PART NUMBER : FDG128064F

DESCRIPTION : 64x128Graphic

REVISION : Rev A

	Approval for Specification only		Approval for Sample Only
	Approval for Pre-production	x	Approval for Mass Production



FDG128064F (128 DOTS X 64 DOTS)

FEATURES

- ◆ BUILT-IN CONTROLLER (T6963C OR EQUIVALENT)
- ◆ +5 V POWER SUPPLY
- ◆ 1/64 DUTY CYCLE
- ◆ 8-BIT PARALLEL INTERFACE
- ◆ 4.2 V LED FORWARD VOLTAGE

MECHANICAL DATA

ITEM	DIMENSIONS	UNIT
Module Size (W x H x T)	87.0 x 70.0 x 8.8 (12.7 LED)	mm
Viewing Area (W x H)	72.0 x 40.0	mm
Active Area (W x H)	66.52 x 33.24	mm
Dot Size (W x H)	0.48 x 0.48	mm
Dot Pitch (W x H)	0.52 x 0.52	mm

INTERFACE PIN CONNECTIONS

NO.	SYMBOL	LEVEL	FUNCTION
1	Vss	0V	Power Supply Ground
2	VDD	5V	Power Supply Voltage
3	Vo	-	Contrast Adjustment Voltage
4	C/D	H/L	H : Data, L : Instruction Code
5	/RD	L	Write Signal
6	/WR	L	Read Signal
7-14	DB0-DB7	H/L	Data Bus Line
15	/CE	L	Enable Signal
16	/RST	L	Reset Signal
17	Vout	-	Power Supply Voltage For LCD
18	MD	H/L	H : 32/ L : 40 Select Of Columns
19	FS	H/L	H : 6*8 , L : 8*8 Select Of Columns
20	/HLT	L	Stop The Oscillation Of Clock

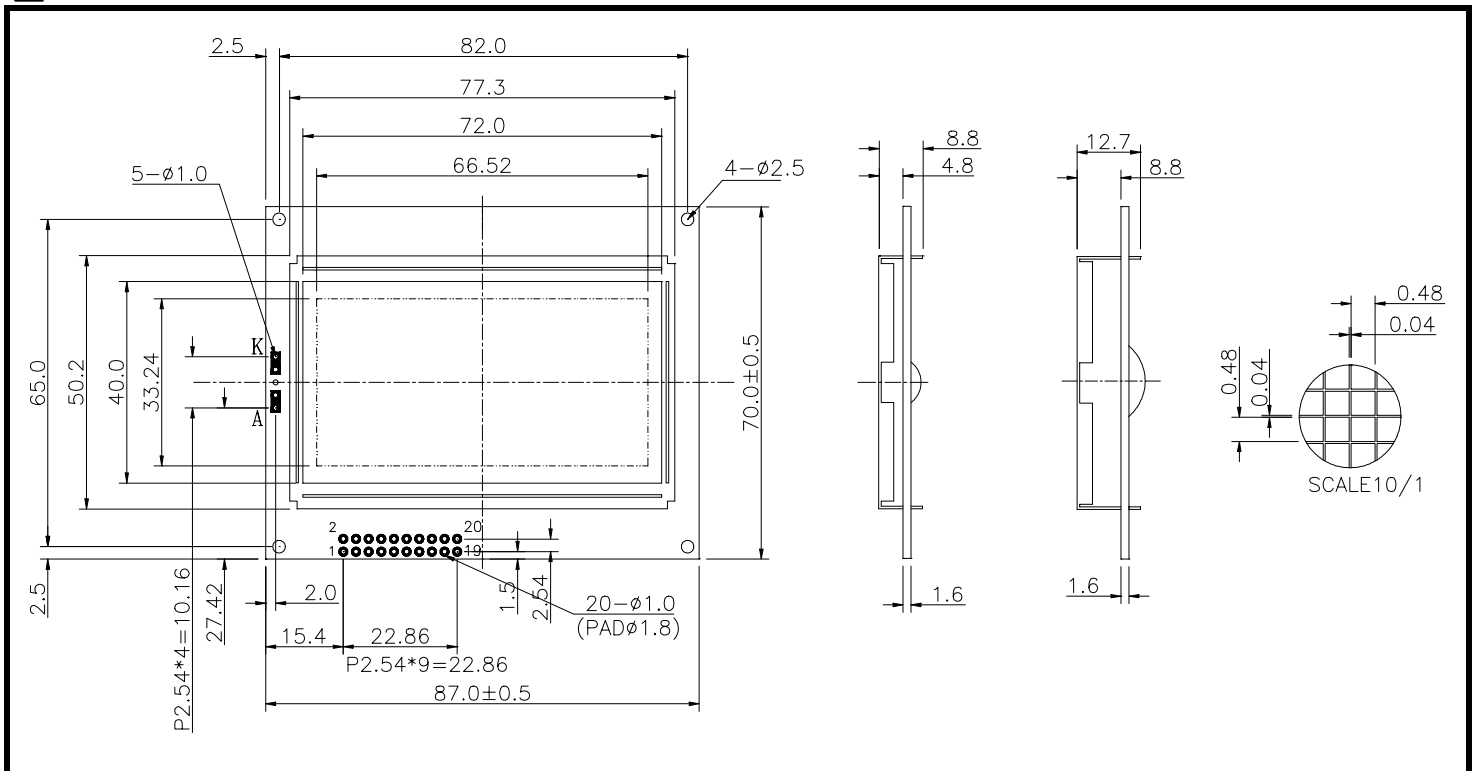
ABSOLUTE MAXIMUM RATINGS

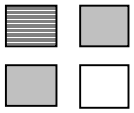
ITEM	SYMBOL	MIN.	TYP.	MAX.	UNIT
Supply Voltage For Logic	VDD-Vss	0	-	7	V
Supply Voltage For LCD Drive	VDD-Vo	0	-	14	V
Input Voltage	Vi	Vss	-	VDD	V

ELECTRICAL CHARACTERISTICS

ITEM	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT	
Supply Voltage For Logic	VDD-Vss	-	4.5	5	5.5	V	
Supply Voltage For LCD	VDD-Vo	VDD=5V Ta=25°C	7.6	8.3	9.2	V	
Supply Current	IDD	VDD=5V	-	4.5	10	mA	
Input Voltage	"HIGH" Level	V _{IH}	-	2.2	-	V _{DD}	V
	"LOW" Level	V _{IL}	-	-	-	0.6	V
Output Voltage	"HIGH" Level	V _{OH}	-	2.4	-	-	V
	"LOW" Level	V _{OL}	-	-	-	0.4	V

EXTERNAL DIMENSIONS



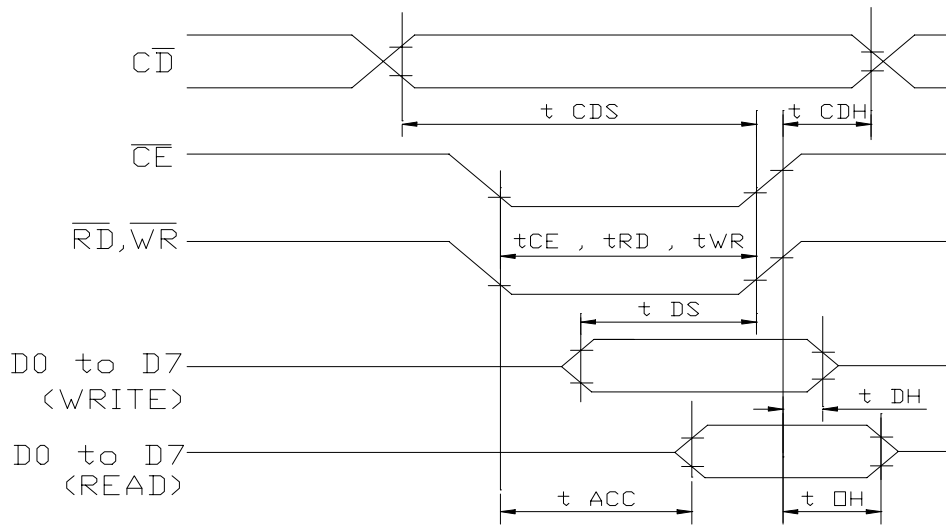


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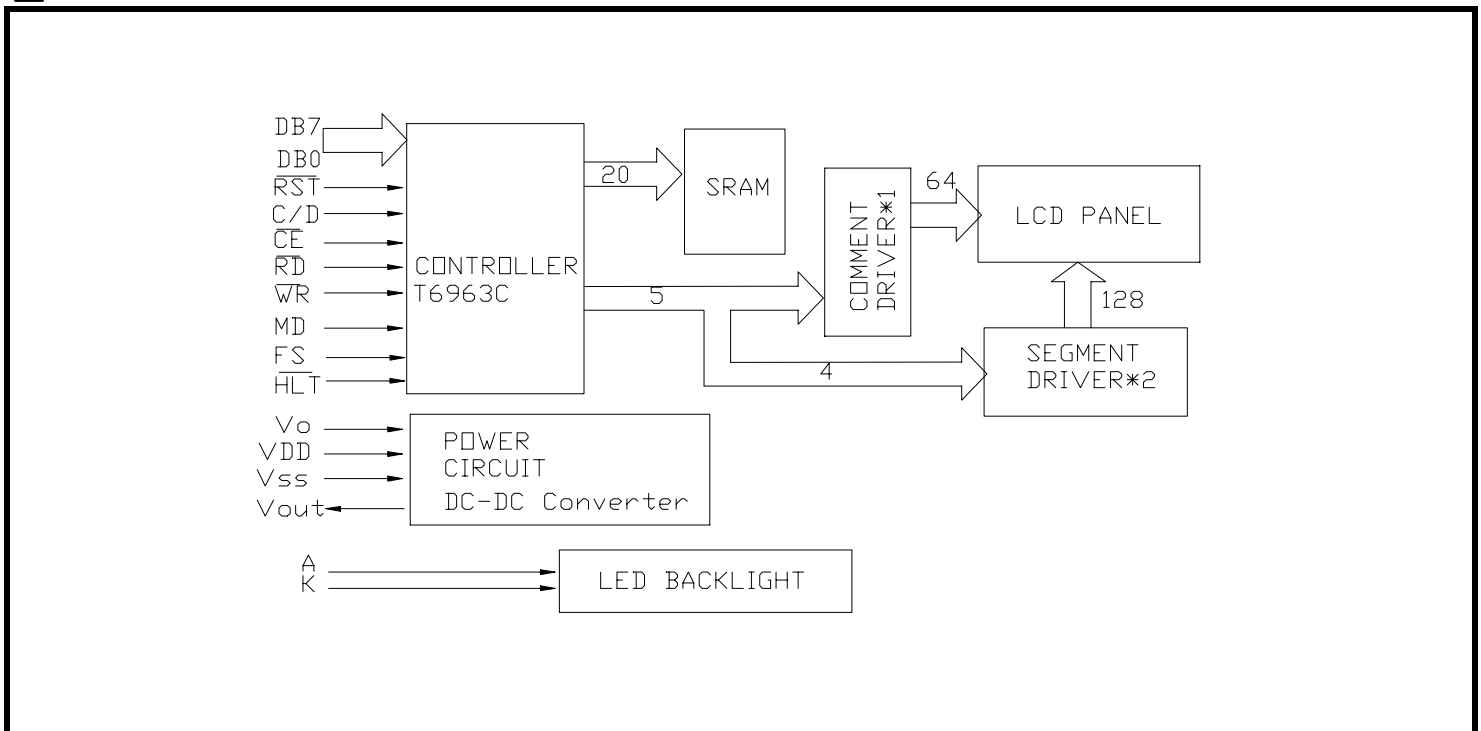
■ TIMING CHARACTERISTICS

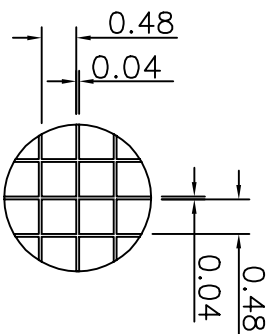
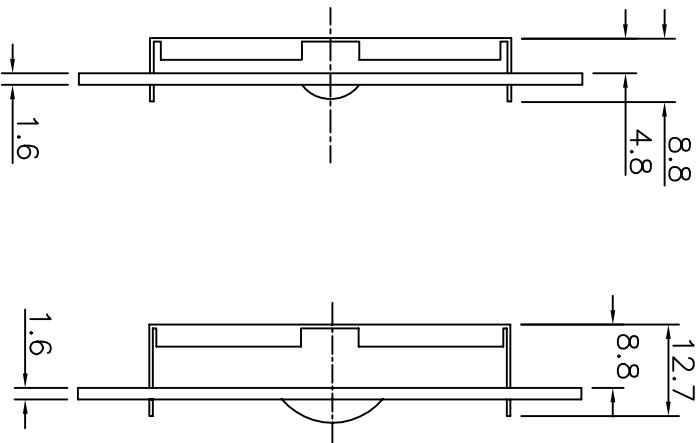
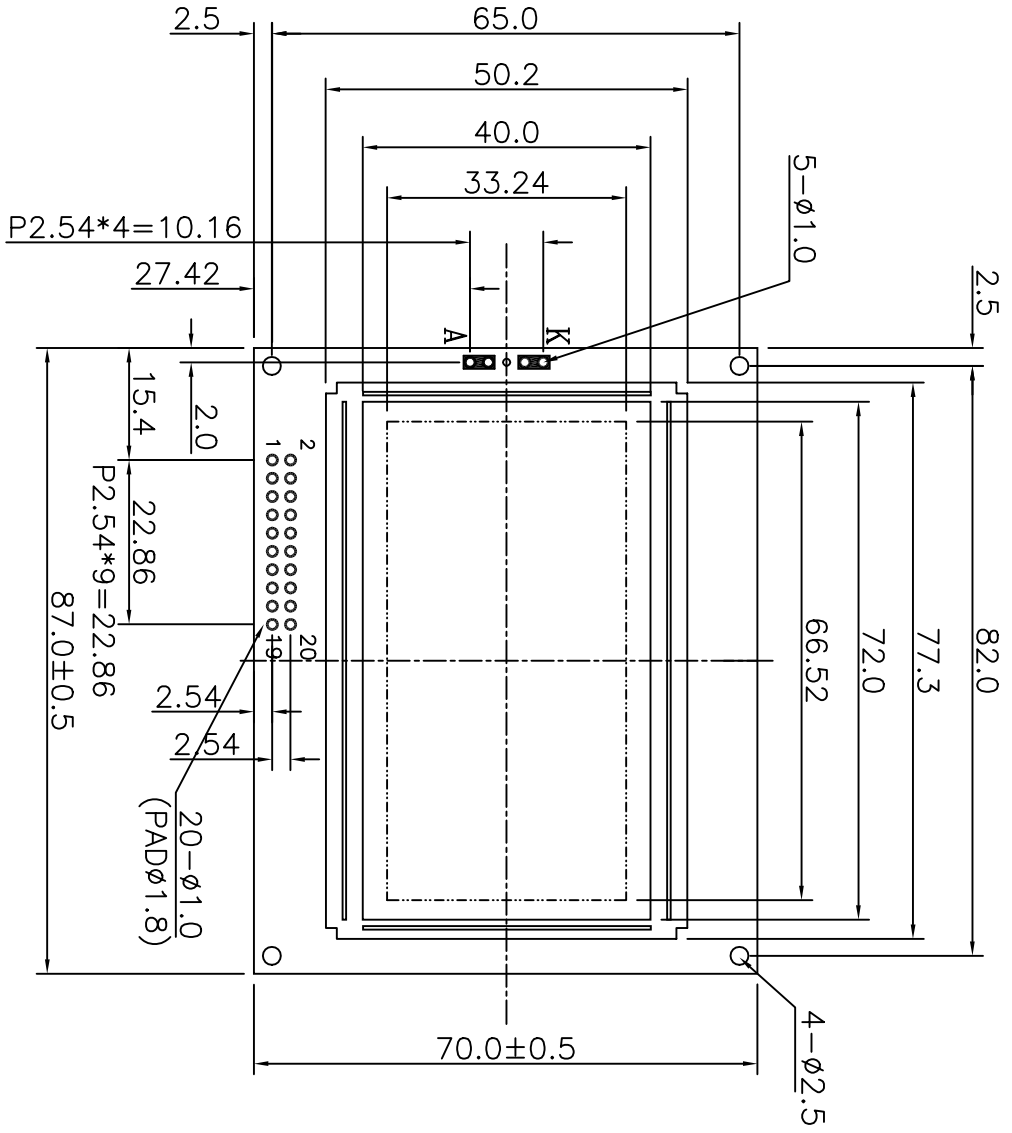
ITEM	SYMBOL	MIN.	MAX.	UNIT.
C/D Setup Time	t_{CDS}	100	-	ns
C/D Hold Time	t_{CDH}	10	-	ns
CE, RD, WR Pulse Width	t_{CE}, t_{RD}, t_{WR}	80	-	ns
Data Setup Time	t_{DS}	80	-	ns
Data Hold Time	t_{DH}	40	-	ns
Access Time	t_{ACC}	-	150	ns
Output Hold Time	t_{OH}	10	50	ns

Bus Timing



■ BLOCK DIAGRAM





PIN NO	SIGNAL
1	VSS
2	VDD
3	VO
4	C/D
5	RD
6	WR
7	DB0
8	DB1
9	DB2
10	DB3
11	DB4
12	DB5
13	DB6
14	DB7
15	CE
16	RST
17	VEE
18	MD
19	FS
20	HLT

NOTE	ITEM	CONTENT	DATA	REV	TOLERANCE	SCALE	UNT	DWN	CUSTOMER	APVL	TITLE	MODEL	DWG NO	PAGE
		CHANGE NUMBER	2004.03.01	0	X. ±0.30 X ±0.20 .XX±0.05	1/1	Hsu	Gili	2004.03.01		MODULE	SG12864F	A-A2-0009	1/1
SUNLIKE DISPLAY														