

图形点阵液晶显示模块使用手册

CM12232-5SLYA

深圳市彩晶科技有限公司

地址：深圳市南山区沙河西路茶光建兴3栋东四楼

TEL：0755-26137169 26622598 FAX：0755-26736698

<http://www.szcm-lcd.com> E-MAIL: szcm@szcm-lcd.com

一. 基本特征

主要技术参数和性能：

- (1) 电源：+5V
- (2) STN 正视反射模式；
- (3) 显示模式：黄绿膜、灰膜、蓝膜、黑白膜
- (4) 显示角度：6 点钟直视；
- (5) 驱动方式：1/32 Duty, 1/6 Bias
- (6) 工作温度：-10 +55 ，存储温度：-20 +70
- (7) 背光特性：LED 背光（黄绿色、蓝色、白色、红色）
- (8) 模块封装方式：COB
- (9) 功耗：

2. 机械特性

- (1) 外观尺寸：见外观图；
- (2) 点阵：122 × 32 点；
- (3) 点尺寸：0.36(W) × 0.41(H) (MM)；
- (4) 点间距：0.04(W) × 0.04(H) (MM)

3. 引脚特性：

管脚号	管脚名称	LEVER	管脚功能描述
1	VDD	5V	电源电压
2	VSS	0V	电源地
3	VLCD	0 +5V OR 0 -5V	LCD 驱动电压 (当 VDD=+3V 时, VLCD 接 0 -5V 负电压)
4	RES	H/L	复位信号(低电平有效)
5	E1	H/L	读写使能信号
6	E2	H/L	读写使能信号)
7	R/W	H/L	读写选择信号
8	A0	H/L	D/I = "H", 表示 DB7 ~ DB0 为显示数据 D/I = "L", 表示 DB7 ~ DB0 为显示指令数据
9	DB0	H/L	数据线
10	DB1	H/L	数据线
11	DB2	H/L	数据线
12	DB3	H/L	数据线
13	DB4	H/L	数据线
14	DB5	H/L	数据线
15	DB6	H/L	数据线
16	DB7	H/L	数据线
17	LED-	--	LED(0V)或 EL 背光源
18	LED+	--	LED(+5V)或 EL 背光源

二. 限定参数:

Item	Symbol	Standard Value	Unit	Condition
Power supply voltage	VDD	0~+7.0	V	
LCD driving voltage	VDD~VLCD	0~+12.0		
Input voltage	VIN	VND VIN VDD		
Operating temperature range	Top	-10~+55		No condition
Storage temperature range	Tst	-70~+70		

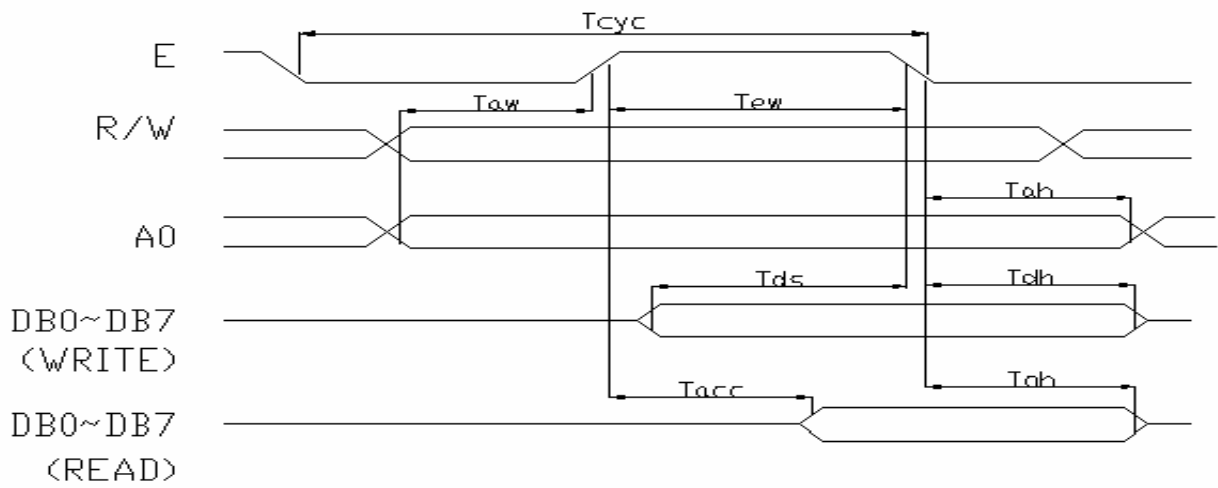
三. 直流特性 :

(Ta=0~40 , VDD=2.7~4.5V)

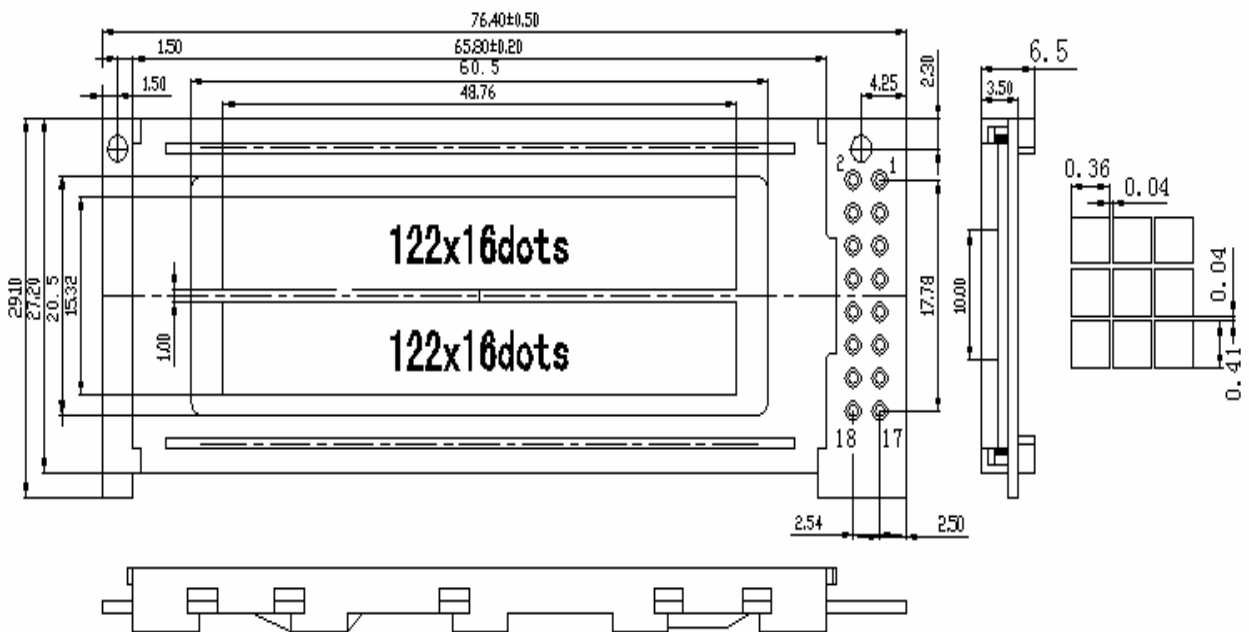
Item	Symbol	Standard Value			Unit
		MIN	TYP	MAX	
Power Supply	VDD	2.4	5.0	6.0	V
LCD Driving Voltage	VLCD	--	0	--	V
Input High Voltage	VIH	0.8VDD		VDD	V
Output High Voltage	VOH	0.5VDD			V
Input Low Voltage	VIL	GND		0.2VDD	V
Output Low Voltage	VOL			0.1VDD	V
Power Supply Current	IDD		--	240	uA
I/O Leak Current	IL	-3.0		3.0	uA
Stand-by Current	IDDQ		0.05	10.	uA

四. 交流特性:

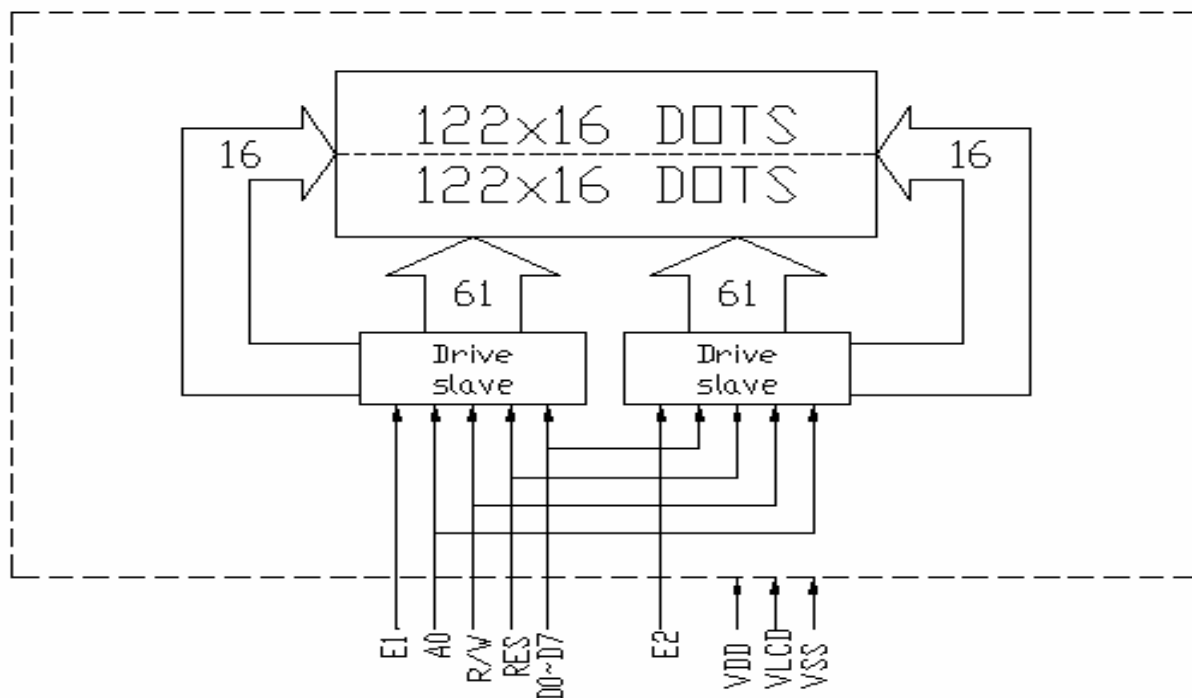
Signal	Parameter	Symbol	MIN	MAX	Unit	Condition
A0 /RW	System cycle time	Tcyc	2000	--	ns	CL=100p F
	Address setup time	Taw	40	--	ns	
	Address hold time	Tah	20	--	ns	
D0~D7	Data setup time	Tds	160	--	ns	
	Data hold time	Tdh	20	--	ns	
	Output disable time	Tch	20	120	ns	
	Access time	Tacc	--	180	ns	
E	Enable pulse width(Read)	Tew	200	--		
	Enable pulse width(Write)		160	--	ns	
Input wave width rise time		Tr	--	15	ns	



五. 机械尺寸图:



六. 原理图:



七. DDRAM 地址表

Page	Data			Com No	Drive
2	D0	:		0	Slave
	:	:			
3	D7	122 X 16 PLXELS		15	
	D0	:			
0	:	:		16	Master
	D7	122 X 16 PLXELS			
1	D0	:		31	
	:	:			
Column Addr	ADC=0	00H 3C	00H 3C		
	Seg No	0 60	0 60		
	Drive	Slave	Master		

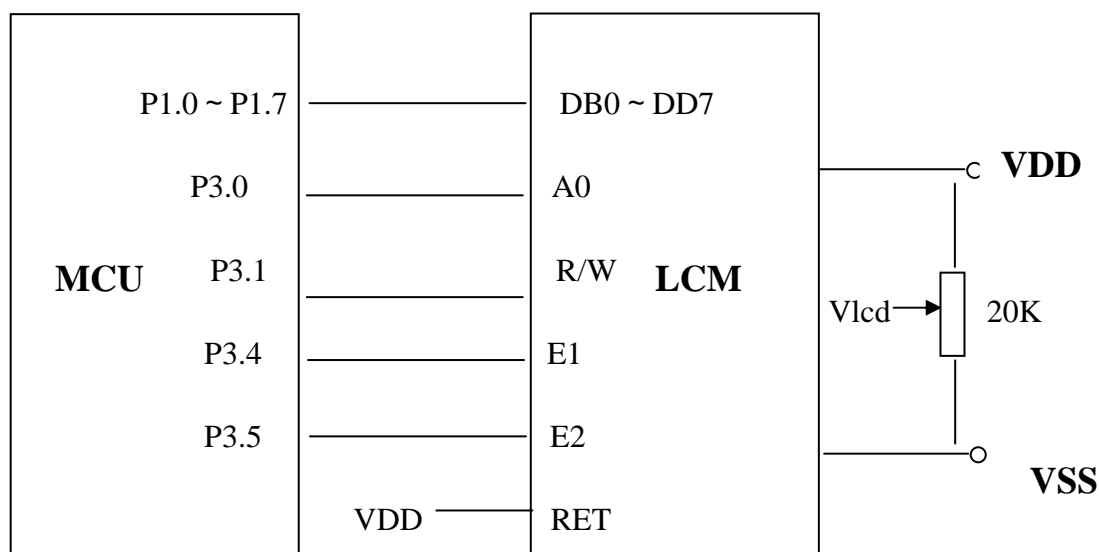
八. 指令表:

INSTRCTI ON	CODE										FUNCTION
	R/W	D/I	D7	D6	D5	D4	D3	D2	D1	D0	
DISPLAY ON/OFF	0	0	1	0	1	0	1	1	1	1/0	Switch the entire display ON or OFF , regardless of the display RAM's Data or the internal status. 1: ON 0: OFF
Display Start Line	0	0	1	1	0	Display start Line (0 31)				Determines the line of RAM data to be displayed at the display's top line (COM0)	
Page Address set	0	0	1	0	1	1	1	0	PAGE: (0~3)		Sets the page of the Display in the Address register(X address)
Column (seg) Address set	0	0	0	Column address(0~79)							Sets the column of the Display in the column address register(Y address)
Status Read	1	0	B u s y	A D C	ON / OFF	R S T	0	0	0	0	Read status Busy 1:insternal operation 0:Ready ADC 1:Rightward output 0:Leftward RST 1:Reseting 0:Normal ON/OFF 1:Display off 0:Display on
Write Display Data	0	1	Write data								Writes the data on the Data bus to RAM
Read Display Data	1	1	Read data								Reads data from the Display RAM onto the Data BUS
ADC Select	0	0	1	0	1	0	0	0	0	0/1	Determine the clockwise or Counterclockwise reading of the display Data RAM 0: Clockwise 1: Counterclockwise
Static Drive ON/OFF	0	0	1	0	1	0	0	1	0	0/1	Select the dynamic or static Driving. 1:Static driving 0: Dynamic driving
Duty Ratio Select	0	0	1	0	1	0	1	0	0	0/1	Select the duty ratio 1:1/32 duty 0:1/16 duty
Read Modify Write	0	0	1	1	1	0	0	0	0	0	Increment the column Address register when writing. But no-change when reading.
End	0	0	1	1	1	0	1	1	1	0	Release from the Read Modify Write Mode.

Reset	0	0	1	1	1	0	0	0	1	0	Set the Display Start Line Register to 1 st line, column Address count to 0 and Page Add. Resister to 0.
Power Save(dual command)	0 0	0 0	0 0	1 1	0 0	1 1	0 0	1 1	1 0	0 1	Set the power save mode by selecting display off and static driving on

九 . 应用举例

CM12232-5 与单片机 8031 的一种接口如图 5 所示 : (VDD=+5V)



```

ORG      0000H
LJMP    MAIN
ORG      0003H
LJMP    INT
ORG      0100H
A0      EQU      P3.0
RW      EQU      P3.1
E1      EQU      P3.4
E2      EQU      P3.5
COMMAND EQU      20H
DATA1   EQU      21H
;*****
INT:
    PUSH  07H
    PUSH  06H
    PUSH  05H
    
```

```

S JMP  $
P OP  05H
P OP  06H
P OP  07H
R ETI

```

```
,*****
```

```
,*****读 BF 和 AC 值*****
```

```
PR:
```

```

PUSH  ACC
MOV   P1,#0FFH
CLR   A0
SETB  RW
SETB  E1
MOV   COMMAND,P1
CLR   E1
POP   ACC
RET

```

```
,*****写指令代码 E1*****
```

```
PR0:
```

```

CLR   A0
SETB  RW

```

```
PR01:
```

```

MOV   P1,#0FFH
SETB  E1
MOV   A,P1
CLR   E1
JB    ACC.7,PR01
CLR   RW
MOV   P1,COMMAND
SETB  E1
CLR   E1
RET

```

```
,*****写显示数据 E1*****
```

```
PR1:
```

```

CLR   A0
SETB  RW

```

```
PR11:
```

```

MOV   P1,#0FFH
SETB  E1
MOV   A,P1
CLR   E1
JB    ACC.7,PR11

```

```
    SETB    A0
    CLR     RW
    MOV     P1,DATA1
    SETB    E1
    CLR     E1
    RET
;*****读显示数据 E1*****
PR2:
    CLR     A0
    SETB    RW
PR21:
    MOV     P1,#0FFH
    SETB    E1
    MOV     A,P1
    CLR     E1
    JB     ACC.7,PR21
    SETB    A0
    MOV     P1,#0FFH
    SETB    E1
    MOV     DATA1,P1
    CLR     E1
    RET
;*****写指令代码 E2*****
PR3:
    CLR     A0
    SETB    RW
PR31:
    MOV     P1,#0FFH
    SETB    E2
    MOV     A,P1
    CLR     E2
    JB     ACC.7,PR31
    CLR     RW
    MOV     P1,COMMAND
    SETB    E2
    CLR     E2
    RET
;*****写显示数据 E2*****
PR4:
    CLR     A0
    SETB    RW
PR41:
    MOV     P1,#0FFH
    SETB    E2
```

```
MOV    A,P1
CLR    E2
JB     ACC.7,PR41
SETB   A0
CLR    RW
MOV    P1,DATA1
SETB   E2
CLR    E2
RET

;*****读显示数据 E2*****
PR5:
CLR    A0
SETB   RW
PR51:
MOV    P1,#0FFH
SETB   E2
MOV    A,P1
CLR    E2
JB     ACC.7,PR51
SETB   A0
MOV    P1,#0FFH
SETB   E2
MOV    DATA1,P1
CLR    E2
RET

;*****清显示 RAM 区子程序(清屏)*****
L:
MOV    R4,#00H
L1:MOV    A,R4
ORL    A,#0B8H
MOV    COMMAND,A
LCALL PR0
LCALL PR3
MOV    COMMAND,#00H
LCALL PR0
LCALL PR3
MOV    R3,#50H
L2:MOV    DATA1,R5
LCALL PR1
LCALL PR4
DJNZ   R3,L2
INC    R4
```

```

CJNE  R4,#04H,L1
RET

```

```

;*****延时程序*****

```

```

DELAY:
    MOV    R6,#00H
    MOV    R7,#00H
DELAY1:
    NOP
    DJNZ   R7,DELAY1
    DJNZ   R6,DELAY1
    RET

```

```

;*****

```

```

MAIN:
    MOV    SP,#70H
    MOV    P2,#00H
    SETB   EA
    SETB   EX0
    SETB   IT0

CHUSHI:
    MOV    COMMAND,#0E2H    ;设置复位
    LCALL  PR0
    LCALL  PR3
    MOV    COMMAND,#0A4H    ;设置退出休闲状态
    LCALL  PR0
    LCALL  PR3
    MOV    COMMAND,#0A9H    ;设置占空比 1/32
    LCALL  PR0
    LCALL  PR3
    MOV    COMMAND,#0A0H    ;设置 ADC 选择指令
    LCALL  PR0
    LCALL  PR3
    MOV    COMMAND,#0C0H    ;设置起始行
    LCALL  PR0
    LCALL  PR3
    MOV    COMMAND,#0AFH    ;设置开显示
    LCALL  PR0
    LCALL  PR3

    LCALL  PHIC

    MOV    COMMAND,#0E2H    ;设置复位

```

```
LCALL PR0
MOV COMMAND,#0C0H ;设置起始行
LCALL PR0
LCALL PR3
MOV COMMAND,#0AFH ;设置开显示
LCALL PR0
LCALL PR3

MOV R5,#0FFH
LCALL L
LCALL DELAY
LCALL DELAY
LCALL DELAY
LCALL DELAY

MOV R5,#0AAH
LCALL L
LCALL DELAY
LCALL DELAY
LCALL DELAY
LCALL DELAY

MOV R5,#55H
LCALL L
LCALL DELAY
LCALL DELAY
LCALL DELAY
LCALL DELAY

LL:
MOV R4,#00H
LL1:MOV A,R4
ORL A,#0B8H
MOV COMMAND,A
LCALL PR0
LCALL PR3
MOV COMMAND,#00H
LCALL PR0
;LCALL PR3
MOV R3,#28H
LL2:MOV DATA1,#0FFH
LCALL PR1
;LCALL PR4
MOV DATA1,#00H
```

```
LCALL PR1
;LCALL PR4
DJNZ R3,LL2
MOV COMMAND,#00H
LCALL PR3
MOV R3,#28H
R_1:MOV DATA1,#00H
LCALL PR4
MOV DATA1,#0FFH
LCALL PR4
DJNZ R3,R_1
INC R4
CJNE R4,#04H,LL1
LCALL DELAY
LCALL DELAY
LCALL DELAY
LCALL DELAY

LLL:
MOV R4,#00H
LLL1:MOV A,R4
ORL A,#0B8H
MOV COMMAND,A
LCALL PR0
LCALL PR3
MOV COMMAND,#00H
LCALL PR0
;LCALL PR3
MOV R3,#28H
LLL2:MOV DATA1,#00H
LCALL PR1
;LCALL PR4
MOV DATA1,#0FFH
LCALL PR1
;LCALL PR4
DJNZ R3,LLL2
MOV R3,#28H
MOV COMMAND,#00H
LCALL PR3
R_2:MOV DATA1,#0FFH
LCALL PR4
MOV DATA1,#00H
LCALL PR4
DJNZ R3,R_2
```

```
    INC    R4
    CJNE   R4,#04H,LLLL1
    LCALL  DELAY
    LCALL  DELAY
    LCALL  DELAY
    LCALL  DELAY

LLLL:
    MOV    R4,#00H
LLLL11:MOV    A,R4
    ORL   A,#0B8H
    MOV   COMMAND,A
    LCALL PR0
    LCALL PR3
    MOV   COMMAND,#00H
    LCALL PR0
; LCALL PR3
    MOV   R3,#28H
LLLLN11:MOV   DATA1,#0AAH
    LCALL PR1
; LCALL PR4
    MOV   DATA1,#55H
    LCALL PR1
; LCALL PR4
    DJNZ  R3,LLLLN11
    MOV   COMMAND,#00H
    LCALL PR3
    MOV   R3,#28H
R_3:MOV   DATA1,#55H
    LCALL PR4
    MOV   DATA1,#0AAH
    LCALL PR4
    DJNZ  R3,R_3
    INC   R4
    CJNE  R4,#04H,LLLLL11
    LCALL DELAY
    LCALL DELAY
    LCALL DELAY
    LCALL DELAY

LLLLL:
    MOV   R4,#00H
LLLLL22:MOV   A,R4
    ORL   A,#0B8H
```

```

MOV    COMMAND,A
LCALL  PR0
LCALL  PR3
MOV    COMMAND,#00H
LCALL  PR0
;LCALL PR3
MOV    R3,#28H
LLL22:MOV  DATA1,#55H
        LCALL  PR1
;LCALL PR4
MOV    DATA1,#0AAH
LCALL  PR1
;LCALL PR4
DJNZ   R3,LLL22
MOV    COMMAND,#00H
LCALL  PR3
MOV    R3,#28H
R_4:MOV  DATA1,#0AAH
        LCALL  PR4
MOV    DATA1,#55H
LCALL  PR4
DJNZ   R3,R_4
INC    R4
CJNE   R4,#04H,LLLL22
LCALL  DELAY
LCALL  DELAY
LCALL  DELAY
LCALL  DELAY

```

*****中文汉字*****

```

TU_L:
MOV    R4,#00H
MOV    DPTR,#ZHONG
TU1:MOV  A,R4
        ORL   A,#0B8H
MOV    COMMAND,A
LCALL  PR0
; LCALL PR3
MOV    COMMAND,#00H
LCALL  PR0
;LCALL PR3
MOV    R3,#50H
TU2:CLR  A
        MOVC  A,@A+DPTR

```

```

MOV DATA1,A
LCALL PR1
;LCALL PR4
INC DPTR
DJNZ R3,TU2
INC R4
CJNE R4,#04H,TU1

TU_R:
MOV R4,#00H
MOV DPTR,#WEI
TU3:MOV A,R4
ORL A,#0B8H
MOV COMMAND,A
LCALL PR3
MOV COMMAND,#00H
LCALL PR3
MOV R3,#50H
TU4:CLR A
MOVC A,@A+DPTR
MOV DATA1,A
LCALL PR4
INC DPTR
DJNZ R3,TU4
INC R4
CJNE R4,#04H,TU3
LCALL DELAY
LCALL DELAY
LCALL DELAY
LCALL DELAY
LJMP MAIN
;*****
PHIC:
MOV R5,#00H
LCALL L
MOV R4,#00H
MOV DPTR,#TABL
PHIC0:
MOV A,R4
ORL A,#0B8H
MOV COMMAND,A
LCALL PR0
MOV COMMAND,#00H

```

```

    LCALL PR0
    MOV    R3,#61
PHIC1:
    CLR   A
    MOVC  A,@A+DPTR
    MOV   DATA1,A
    LCALL PR1
    INC   DPTR
    DJNZ  R3,PHIC1
    INC   R4
    CJNE  R4,#04H,PHIC0
PHIC2:
    MOV   R4,#00H
    MOV   DPTR,#TABR
PHIC20:
    MOV   A,R4
    ORL   A,#0B8H
    MOV   COMMAND,A
    LCALL PR3
    MOV   COMMAND,#00H
    LCALL PR3
    MOV   R3,#61
PHIC21:
    CLR   A
    MOVC  A,@A+DPTR
    MOV   DATA1,A
    LCALL PR4
    INC   DPTR
    DJNZ  R3,PHIC21
    INC   R4
    CJNE  R4,#04H,PHIC20
    LCALL DELAY
    LCALL DELAY
    LCALL DELAY
    LCALL DELAY
    RET
;*****
ZHONG:
DB  082H,08AH,0B2H,086H,0DBH,0A1H,091H,08DH,088H,020H,010H,008H,086H,064H,040H,000H
DB  000H,000H,000H,000H,07EH,02AH,02AH,02AH,02AH,02AH,02AH,07EH,000H,000H,000H,000H
DB  010H,012H,092H,072H,0FEH,051H,091H,000H,022H,0CCH,000H,000H,0FFH,000H,000H,000H
DB  008H,008H,088H,0FFH,048H,028H,000H,0C8H,048H,048H,07FH,048H,0C8H,000H,000H,000H
DB  000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H,000H
DB  020H,010H,008H,006H,0FFH,002H,004H,058H,048H,020H,022H,011H,008H,007H,002H,000H

```

DB 000H, 07FH, 025H, 025H, 025H, 025H, 07FH, 000H, 000H, 07FH, 025H, 025H, 025H, 025H, 07FH, 000H
 DB 004H, 002H, 001H, 000H, 0FFH, 000H, 004H, 004H, 004H, 002H, 002H, 002H, 0FFH, 001H, 001H, 000H
 DB 001H, 041H, 080H, 07FH, 000H, 040H, 040H, 020H, 013H, 00CH, 00CH, 012H, 021H, 000H, 000H, 000H
 DB 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H
 DB 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 082H, 08AH, 0B2H, 086H, 0DBH
 DB 0A1H, 091H, 08DH, 088H, 020H, 010H, 008H, 086H, 064H, 040H, 000H, 000H, 000H, 000H, 000H, 07EH
 DB 02AH, 02AH, 02AH, 02AH, 02AH, 02AH, 07EH, 000H, 000H, 000H, 000H, 014H, 024H, 044H, 084H, 064H
 DB 01CH, 020H, 018H, 00FH, 0E8H, 008H, 008H, 028H, 018H, 008H, 000H, 040H, 041H, 000H, 000H, 000H
 DB 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H
 DB 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 020H, 010H, 008H, 006H, 0FFH
 DB 002H, 004H, 058H, 048H, 020H, 022H, 011H, 008H, 007H, 002H, 000H, 000H, 07FH, 025H, 025H, 025H
 DB 025H, 07FH, 000H, 000H, 07FH, 025H, 025H, 025H, 025H, 07FH, 000H, 020H, 010H, 04CH, 043H, 043H
 DB 02CH, 020H, 010H, 00CH, 003H, 006H, 018H, 030H, 060H, 020H, 000H, 040H, 020H, 000H, 000H, 000H
 DB 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H

WEI :

DB 048H, 008H, 000H, 000H, 004H, 084H, 044H, 0E4H, 034H, 02CH, 027H, 024H, 024H, 024H, 0E4H, 004H
 DB 004H, 004H, 000H, 0FEH, 002H, 032H, 04EH, 082H, 000H, 0FEH, 04AH, 0CAH, 04AH, 04AH, 04AH, 07EH
 DB 000H, 000H, 000H, 080H, 040H, 030H, 00EH, 084H, 000H, 000H, 00EH, 010H, 060H, 0C0H, 080H, 080H
 DB 020H, 024H, 024H, 024H, 024H, 024H, 024H, 024H, 024H, 004H, 004H, 0FCH, 000H, 000H, 000H
 DB 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H
 DB 060H, 020H, 000H, 002H, 001H, 000H, 000H, 0FFH, 009H, 009H, 009H, 029H, 049H, 0C9H, 07FH, 000H
 DB 000H, 000H, 000H, 0FFH, 000H, 002H, 004H, 003H, 000H, 0FFH, 040H, 020H, 003H, 00CH, 012H, 021H
 DB 060H, 020H, 001H, 020H, 070H, 028H, 024H, 023H, 031H, 010H, 010H, 014H, 078H, 030H, 001H, 000H
 DB 000H, 03FH, 009H, 009H, 009H, 009H, 009H, 01FH, 000H, 040H, 080H, 07FH, 000H, 000H, 000H
 DB 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H
 DB 0CEH, 004H, 000H, 0FCH, 004H, 002H, 002H, 0FCH, 004H, 004H, 004H, 0FCH, 000H, 000H, 080H, 040H
 DB 030H, 0FCH, 003H, 090H, 068H, 006H, 004H, 0F4H, 004H, 024H, 044H, 08CH, 004H, 000H, 000H, 000H
 DB 000H, 0F8H, 0F8H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H
 DB 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H
 DB 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H
 DB 01FH, 020H, 040H, 047H, 042H, 041H, 040H, 05FH, 040H, 042H, 044H, 043H, 040H, 000H, 000H, 020H
 DB 038H, 003H, 038H, 040H, 040H, 049H, 052H, 041H, 040H, 070H, 000H, 009H, 030H, 000H, 000H, 000H
 DB 000H, 033H, 033H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H
 DB 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H
 DB 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H

TABL:

- ; 宽 × 高 (像素) : 61 × 32
- ; 字模格式/大小 : 单色点阵液晶字模, 纵向取模, 字节倒序/244 字节
- ; 数据转换日期 : 2006-7-3 15: 11: 15

 ;DB 03DH, 020H, 008H, ;宽的像素数, 高的像素数, 宽的字节数, 参数设置可选

DB 0FFH, 001H, 001H, 001H, 001H, 001H, 001H, 001H, 001H, 001H, 031H, 051H, 011H, 0E9H, 009H, 069H, 001H
 DB 041H, 021H, 091H, 081H, 001H, 001H, 001H, 001H, 079H, 0A9H, 0A9H, 0A9H, 0A9H, 0A9H, 079H, 001H
 DB 001H, 001H, 001H, 091H, 091H, 0F9H, 089H, 091H, 091H, 031H, 021H, 0F9H, 001H, 001H, 001H, 001H
 DB 001H, 041H, 0F9H, 041H, 081H, 0A1H, 0A1H, 0F9H, 0A1H, 0A1H, 001H, 001H, 001H, 0FFH, 000H, 000H
 DB 000H, 000H, 000H, 000H, 000H, 000H, 000H, 011H, 009H, 007H, 03FH, 005H, 009H, 02CH, 032H, 013H, 009H
 DB 004H, 000H, 000H, 03FH, 025H, 025H, 025H, 03FH, 000H, 03FH, 025H, 025H, 025H, 03FH, 000H, 000H
 DB 00CH, 003H, 03FH, 006H, 00AH, 008H, 005H, 004H, 03FH, 004H, 004H, 000H, 000H, 002H, 022H, 01FH
 DB 021H, 020H, 033H, 01CH, 018H, 016H, 021H, 020H, 000H, 000H, 0FFH, 000H, 000H, 000H, 000H, 000H
 DB 000H, 000H, 010H, 010H, 0F0H, 010H, 010H, 000H, 0F0H, 090H, 090H, 090H, 010H, 000H, 0F0H, 000H
 DB 000H, 000H, 000H, 000H, 000H, 000H, 080H, 000H, 000H, 000H, 0E0H, 010H, 010H, 010H, 0E0H, 000H
 DB 010H, 010H, 010H, 090H, 070H, 000H, 0F0H, 050H, 050H, 050H, 090H, 000H, 0F0H, 050H, 050H, 050H
 DB 090H, 000H, 080H, 080H, 080H, 080H, 080H, 080H, 0FFH, 080H, 080H, 080H, 080H, 080H, 080H, 080H
 DB 080H, 08FH, 080H, 080H, 080H, 08FH, 088H, 088H, 088H, 088H, 080H, 08FH, 088H, 088H, 088H, 088H
 DB 080H, 080H, 080H, 088H, 080H, 080H, 080H, 087H, 088H, 088H, 088H, 087H, 080H, 080H, 080H, 08CH
 DB 083H, 080H, 080H, 084H, 088H, 088H, 088H, 087H, 080H, 084H, 088H, 088H, 088H, 087H, 080H, 080H
 DB 080H, 080H, 080H, 080H

TABR:

- ; 宽 × 高 (像素) : 61 × 32
- ; 字模格式/大小 : 单色点阵液晶字模, 纵向取模, 字节倒序/244 字节
- ; 数据转换日期 : 2006-7-3 16: 46: 42

 ; DB 03DH, 020H, 008H, ; 宽的像素数, 高的像素数, 宽的字节数, 参数设置可选

DB 011H, 091H, 0F1H, 079H, 051H, 051H, 051H, 0D1H, 051H, 011H, 001H, 001H, 0F9H, 009H, 0E9H, 019H
 DB 001H, 0F9H, 0A9H, 0A9H, 0A9H, 0F9H, 001H, 001H, 001H, 001H, 081H, 061H, 039H, 001H, 081H, 009H
 DB 039H, 061H, 081H, 001H, 001H, 001H, 041H, 049H, 049H, 049H, 049H, 049H, 049H, 009H, 0F9H
 DB 001H, 001H, 001H, 001H, 001H, 001H, 001H, 001H, 001H, 001H, 001H, 001H, 0FFH, 003H, 001H, 03FH
 DB 00AH, 00AH, 00AH, 02AH, 03FH, 000H, 000H, 000H, 000H, 03FH, 000H, 008H, 007H, 000H, 03FH, 010H
 DB 013H, 00CH, 013H, 030H, 000H, 000H, 001H, 010H, 018H, 01CH, 013H, 011H, 010H, 014H, 018H, 000H
 DB 001H, 000H, 000H, 000H, 01FH, 009H, 009H, 009H, 009H, 00FH, 000H, 020H, 03FH, 000H, 000H, 000H
 DB 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 000H, 0FFH, 000H, 060H, 010H, 010H, 010H, 0E0H
 DB 000H, 0C0H, 0A0H, 090H, 090H, 020H, 000H, 000H, 020H, 0F0H, 000H, 000H, 000H, 020H, 010H, 090H
 DB 090H, 060H, 000H, 010H, 010H, 010H, 090H, 070H, 000H, 000H, 020H, 0F0H, 000H, 000H, 000H, 0C0H
 DB 0A0H, 090H, 090H, 020H, 000H, 0E0H, 010H, 010H, 010H, 0E0H, 000H, 000H, 000H, 000H, 000H, 000H
 DB 000H, 000H, 000H, 000H, 000H, 000H, 0FFH, 080H, 08CH, 08AH, 089H, 089H, 088H, 080H, 087H, 088H
 DB 088H, 088H, 087H, 080H, 080H, 080H, 08FH, 080H, 080H, 080H, 086H, 088H, 088H, 088H, 087H, 080H
 DB 080H, 080H, 08CH, 083H, 080H, 080H, 080H, 080H, 08FH, 080H, 080H, 080H, 087H, 088H, 088H, 088H
 DB 087H, 080H, 084H, 089H, 089H, 085H, 083H, 080H, 080H, 080H, 080H, 080H, 080H, 080H, 080H, 080H
 DB 080H, 080H, 080H, 0FFH

END