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LIQUID CRYSTAL DISPLAY MODULE

(L C M) COUNTER DRAWING

MESSRS: URT-STD

MODEL NO: UMSH-7946JD-F

APPROVED		SIGNATURE	
VERSION NO : REV 0			

UNITED RADIANT TECHNOLOGY CORP

APPROVAL	CHECK	DESIGNED BY:
T.Y. Hsu	L.S.Lin	Nick Liu Shuenn Horng

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Module number	Rev mark	Revision description	Rev by	Rev date
UMSH-7946JD-F	0	**1. Modify the product form UMSH-7656-JD-4F to UMSH-7946JD-F.** **2. Change the IC form S6B1713 to ST7565R.**	Nick Liu Shuenn Horng	Dec/12/06’

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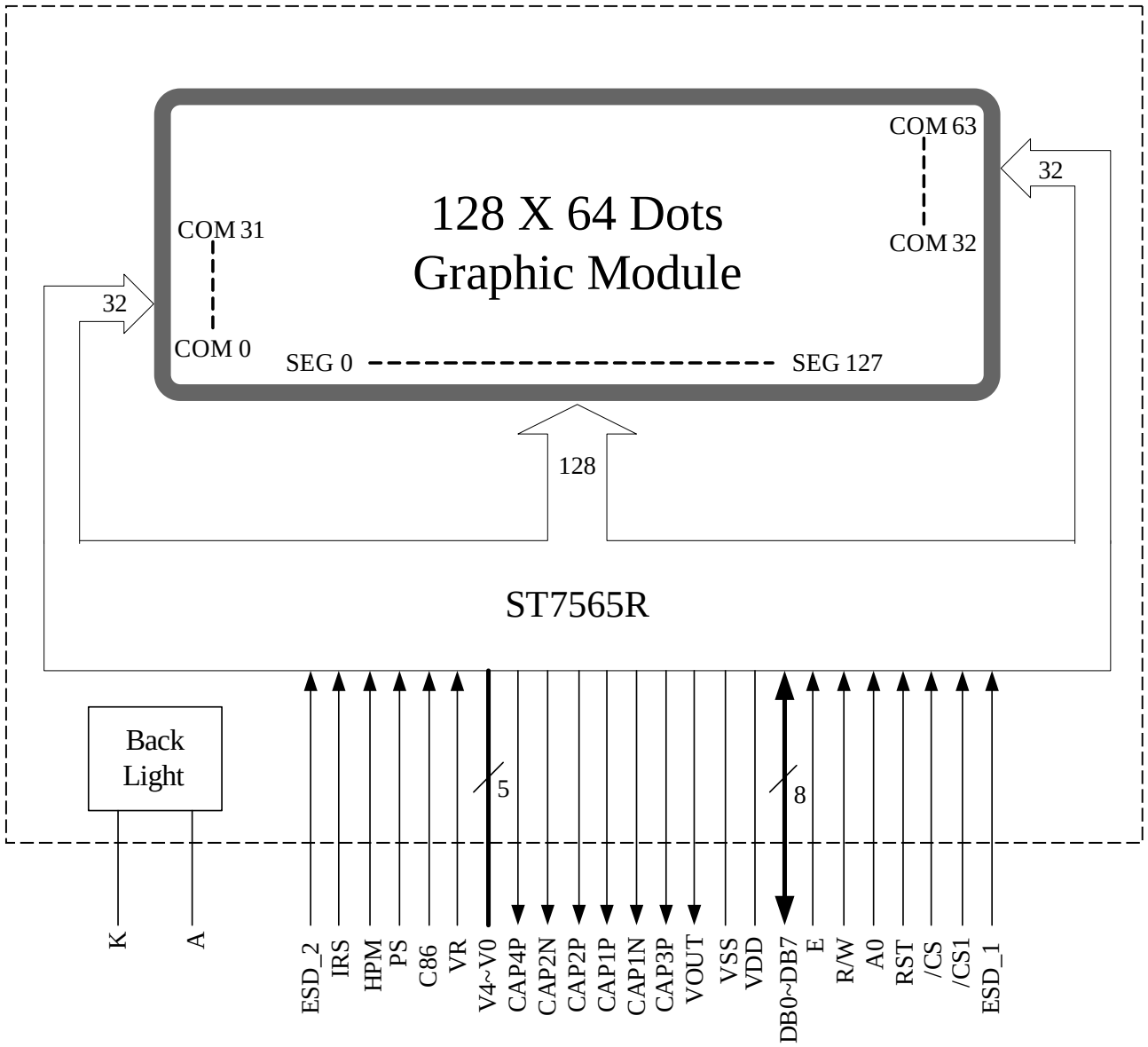
BLOCK DIAGRAM :



REV.	DATE	MODEL: UMSH-7946JD-F		
0	Dec/12/06'	TITLE BLOCK DIAGRAM		
1		APPROVE	CHECK	DESIGN
2			Hunter	
3		Neo Hor	Cheng	Shuenn Horng
4			Nick Liu	
5				

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INTERFACE PIN:

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Pin No.	Pin Symbol	I/O	Description
1	ESD_1	-	Electrostatic Discharge.
2	/CS1	I	Chip select input pins Data / instruction I/O is enabled only when /CS1 is “L” and CS2 is “H”.
3	CS2	I	
4	RST	I	When RESETB is “L”, initialization is executed.
5	A0	I	A0 = "H": DB0 to DB7 are display data A0 = "L": DB0 to DB7 are control data
6	R/W	I	A0 = H, MPU type = 6800-series: Read / Write control input pin R/W = “H”: read ; R/W = “L”: write A0 = L, MPU type = 8080-series: The data ON DB0 to DB7 are latched at the rising edge of the W/R signal.
7	E	I	A0 = H, MPU type = 6800-series: When connected to a 6800 Series MPU, this is active HIGH. This is the 6800 Series MPU enable clock input terminal. A0 = L, MPU type = 8080-series: Read enable clock input pin When /RD is “L”, DB0 to DB7 are in an output status.
8~15	DB0~DB7	I/O	8-bit bi-directional bus. Connected to MPU data bus.
16	VDD	P	Power supply.
17	VSS	P	Ground.
18	VOUT	O	DC/DC voltage converter. Connect a capacitor between this terminal andVSS or VDD
19	CAP3P	O	DC/DC voltage converter. Connect a capacitor between this terminal and the CAP1N terminal.
20	CAP1N	O	DC/DC voltage converter. Connect a capacitor between this terminal and the CAP1P terminal.
21	CAP1P	O	DC/DC voltage converter. Connect a capacitor between this terminal and the CAP1N terminal.
22	CAP2P	O	DC/DC voltage converter. Connect a capacitor between this terminal and the CAP2N terminal.

REV.	DATE	MODEL: UMSH-7946JD-F		
0	Dec/12/06’	TITLE: INTERFACE PIN		
1		APPROVE	CHECK	DESIGN
2			Hunter Cheng	
3		Neo Hor		Shuenn Horng
4			Nick Liu	
5				

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INTERFACE PIN(CON.):

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Pin No.	Pin Symbol	I/O	Description
23	CAP2N	O	DC/DC voltage converter. Connect a capacitor between this terminal and the CAP2P terminal.
24	CAP4P	O	DC/DC voltage converter. Connect a capacitor between this terminal and the CAP2N terminal.
25~29	V4~V0	P	LCD driver supplies voltages. Voltages should be according to the following relationship: V0≧V1≧V2≧V3≧V4≧VSS.
30	VR	I	Output voltage regulator terminal. Provides the voltage between VSS andV0 through a resistive voltage divider. IRS = "L" : the V0 voltage regulator internal resistors are not used. IRS = "H" : the V0 voltage regulator internal resistors are used.
31	C86	I	C86 = "H": 6800-series MPU interface. C86 = "L": 8080-series MPU interface.
32	PS	I	PS = H: Parallel — Chip select: /CS1 CS2 — Data / instruction: A0 — Data: DB0 to DB7 — Read/ Write: E_RD RW_WR — Serial clock: - PS = L: Serial — Chip select: /CS1 CS2 — Data / instruction: A0 — Data: SID(DB7) — Read/ Write: Write only — Serial clock: SCLK(DB6)
33	HPM	I	This is the power control terminal for the power supply circuit for liquid crystal drive. /HPM = "H" : Normal mode /HPM = "L" : High power mode (suggested)
34	IRS	I	This terminal selects the resistors for the V0 voltage level adjustment. IRS = "H" : Use the internal resistors IRS = "L" : Do not use the internal resistors. The V0 voltage level is regulated by an external resistive voltage divider attached to the VR terminal
35	ESD_2	-	Electrostatic Discharge.

1	A	P	LED backlight power supply (+).
2	K	P	LED backlight power supply (-).

REV.	DATE	MODEL: UMSH-7946JD-F		
0	Dec/12/06'	TITLE: INTERFACE PIN		
1		APPROVE	CHECK	DESIGN
2			Hunter Cheng	
3		Neo Hor		Shuenn Horng
4			Nick Liu	
5				

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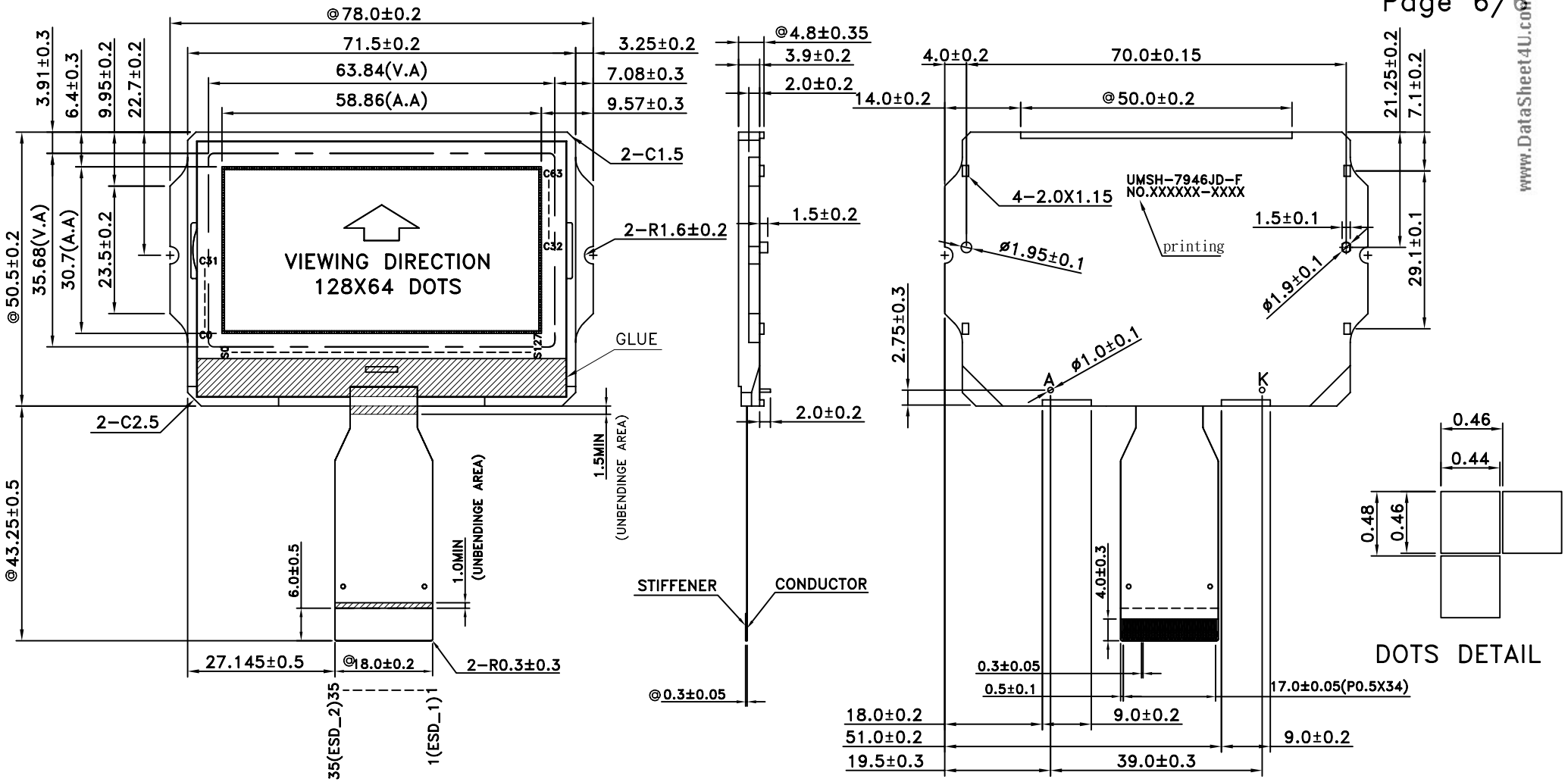

NOTE:

1. LCD : FSTN TYPE,TRANSFLECTIVE MODE,POSITIVE
2. VIEWING DIRECTION : 6 O'CLOCK
3. Top : −20°C~70°C, Tst : −30°C~80°C
4. CONTROLLER IC : ST7565R
5. LED BACKLIGHT : WHITE, 4PCS, If=80±20mA,VLED=5.0V(CONSTANT VOLTAGE)
6. DIMENSIONS "@" ARE IMPORTANT DIMENSIONS.
7. THE MINIMUM BENDABLE RADIUS(INNER) OF THE FPC IS 0.5 mm.
8. RoHS−COMPLIANT

REV	DATE	MODEL: UMSH−7946JD−F
0	Dec.12.06'	TITLE: OUTLINE DRAWING
1		DESIGN: Nick Liu
2		CHECK: Bryan Huang/Shuenn Horng
3		APPROVAL: G.S.Lee

URT−BF103−01A