

1) TYPE NUMBER

Crystalfontz Model : KDI62-626LPSG-LG

2) MECHANICAL SPECIFICATIONS

Module Dimensions : 84.0 (W) X 44.0 (H) X 11.5 max (T)
 Display Format : 16 Characters X 2 Lines
 Display Font : 5 X 8 Dots
 Display Technology : Super Twisted Nematic
 Display Color Mode : Yellow-Green
 Display Transmission Mode : Positive, Transflective
 Active (Image) Area : 11.5 (H) X 56.2 (W)
 Viewing Area : 15.8 (H) X 61.0 (W)
 Dot Size : 0.65 (H) X 0.55 (W)
 Dot Pitch : 0.70 (H) X 0.60 (W)
 Viewing Direction : 6 o'clock
 Driving Scheme : 1/16 duty, 1/5 bias
 Backlight Type : Low Profile, Lightpipe with LED Lamps
 Backlight Color : Yellow-Green
 Ref Outline Drawing : 9P626M02
 Weight : approx. 35g

3) ABSOLUTE MAXIMUM RATINGS

3.1 Electrical Maximum Ratings (Ta = 25 deg C)

ITEM	SYMBOL	CONDITION	MIN	MAX	UNIT
Supply Voltage (Logic)	Vcc-Vss	-	0	7.0	V
Supply Voltage (LCD Drive)	Vcc-Vee	-	0	11.5	V
Input Voltage	Vi	-	-0.3	Vcc + 0.3	V
Supply Current (LED backlight)	I-bl	-		44.0	mA

3.2 Environmental Conditions

ITEM	SYMBOL	CONDITION	MIN	MAX	UNIT
Operating Temp	Topr	-	0	50	deg C
Storage Temp	Ttsg	-	-10	60	deg C
Humidity Endurance	RH	no condensation Ta <= 40 deg C		95	%
Vibration	-	3 directions	see note (a) , page3		
Shock	-	3 directions	see note (b) , page 3		

3.2 Environmental Conditions (continued from page 2)

note (a) : frequency : varying from 10 Hz to 55 Hz in a 1-minute cycle
 amplitude : 1.5 mm
 duration : 120 cycles, each lasting 1 minute,
 for each of the 3 directions, x,y,z

note (b) : 3 shocks in 3 mutually perpendicular directions
direction normal to surface of LCD glass :
 80G, half-sine pulse of duration 11ms
other 2 directions
 100G, half-sine pulse of duration 11ms

4) ELECTRICAL SPECIFICATIONS

4.1 Interface Definition

Pin No.	Symbol	Description
1	GND	Ground
2	Vcc	Voltage Supply for logic (+5V)
3	Vee	Voltage Supply for LCD bias
4	RS	Register Select input : "H" for Data Register (for read and write) "L" for Instruction Register (for write) Busy flag, address counter (for read)
5	R/W	Read / Write signal : "H" for Read mode "L" for Write mode
6	E	Enable signal: to read and write data
7	DB0	Data input / output (LSB)
8	DB1	Data input / output
9	DB2	Data input / output
10	DB3	Data input / output
11	DB4	Data input / output
12	DB5	Data input / output
13	DB6	Data input / output
14	DB7	Data input / output (MSB)
15	LED+	+ve Supply for LED backlight
16	LED-	-ve Supply for LED backlight

4.2 Electrical Characteristics at Ta = 25 deg C, Vcc = 5V +/- 5%

ITEM	SYMBOL	CONDITION	MIN	TYP	MAX	UNIT
Supply Voltage (logic)	Vcc-Vss		4.5	5	5.5	V
Supply Voltage (LCD)	Vcc-Vee	Vcc = 5V	4.12	4.7	5.12	V
Input signal voltage (for E,DB0-7, R/W,RS)	V-ih	"H" level	2.2	-	Vcc	V
	V-il	"L" level	0	-	0.6	V
Supply Current (logic)	Icc	-	0.9	1	1.2	mA
Supply Current (LCD)	Io	-	0.15	0.22	0.27	mA
Supply Voltage (LED)	V-bl	see note (1)	4.1	4.2	4.3	V
Supply Current (LED)	I-bl	see note (1)	27.0	30.0	33.0	mA

note (1) : LED backlight chips are arranged in two branches of 2 in series

4.3 Timing Specifications at Ta = 25 deg C, Vcc = 5V +/- 10% , Vss = 0V

4.3.1 (Write mode)

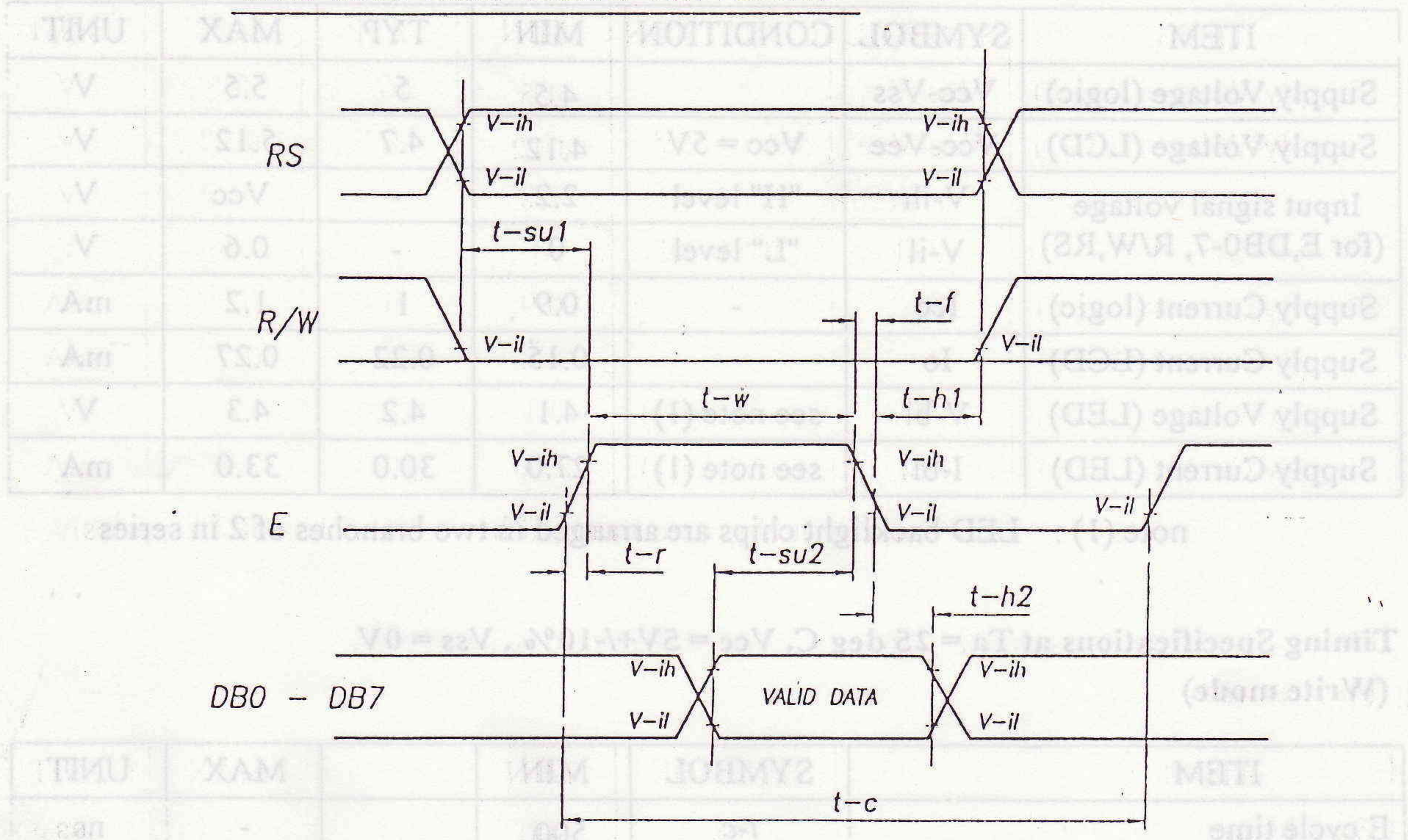
ITEM	SYMBOL	MIN	MAX	UNIT
E cycle time	t-c	500	-	ns
E rise time	t-r	-	25	ns
E fall time	t-f	-	25	ns
E-pulse width (H, L)	t-w	220	-	ns
R/W and RS set-up time	t-su1	40	-	ns
R/W and RS hold time	t-h1	10	-	ns
Data set-up time	t-su2	60	-	ns
Data hold time	t-h2	10	-	ns

4.3 Timing Specifications at Ta = 25 deg C, Vcc = 5V +/- 10% , Vss = 0V

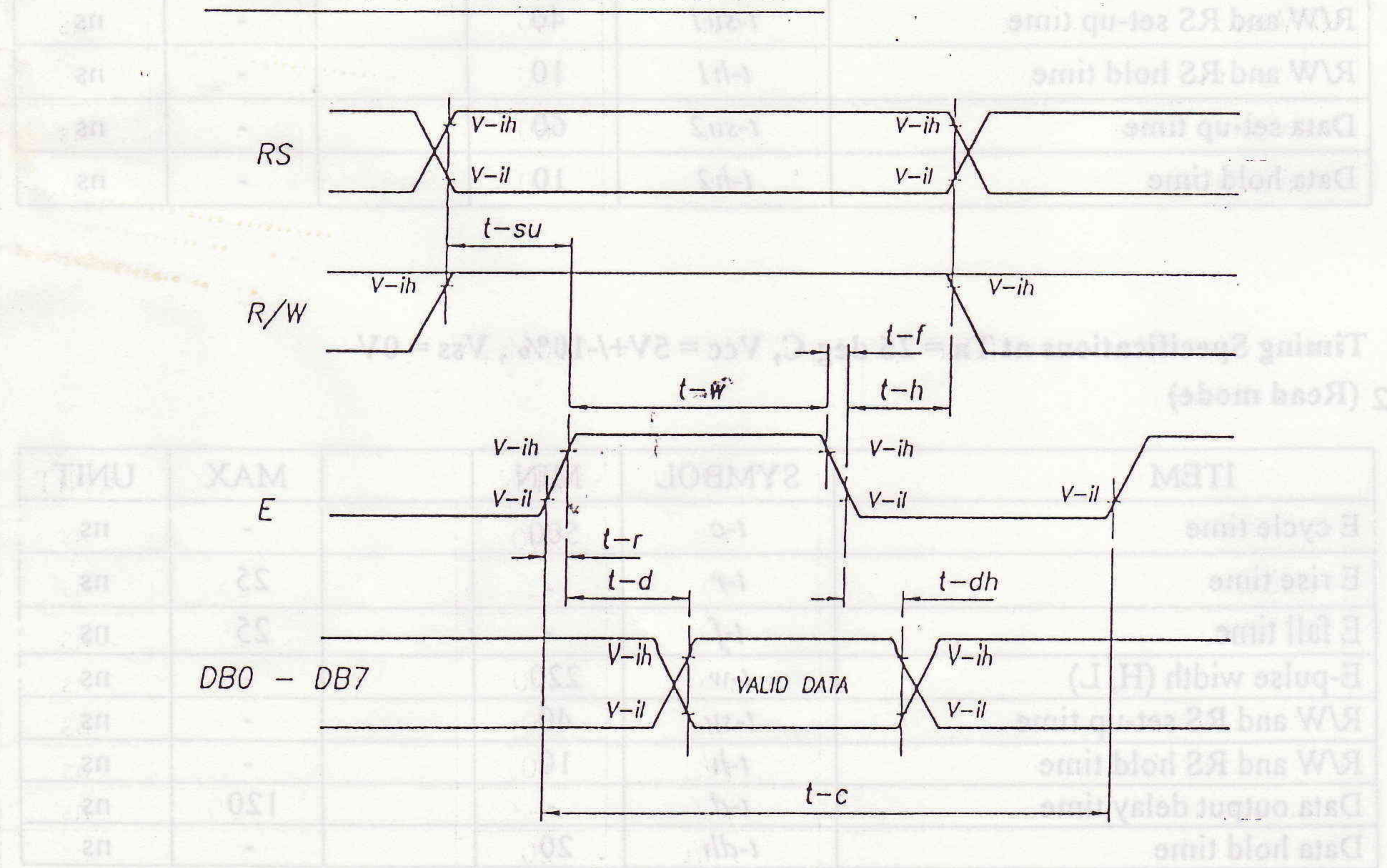
4.3.2 (Read mode)

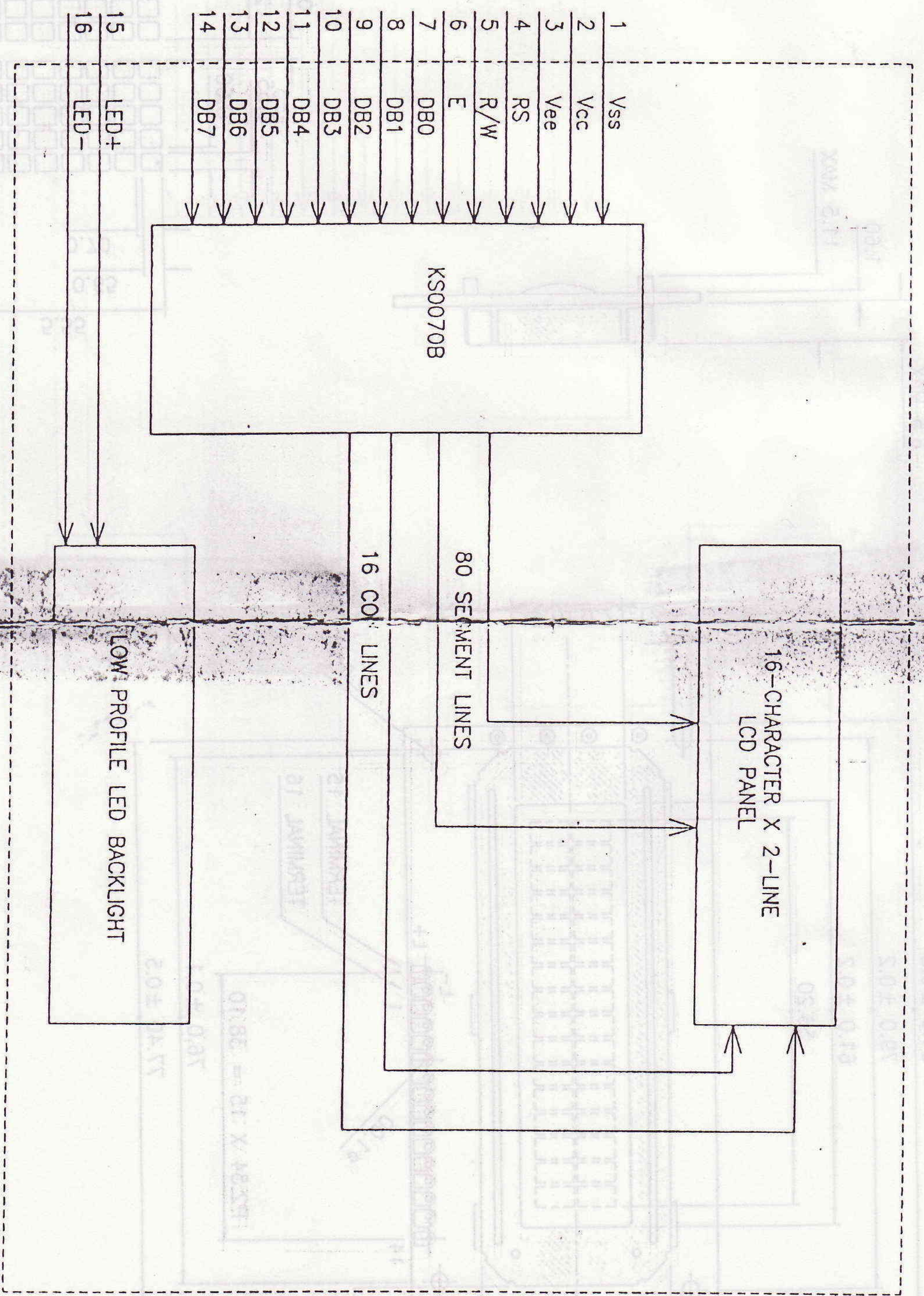
ITEM	SYMBOL	MIN	MAX	UNIT
E cycle time	t-c	500	-	ns
E rise time	t-r	-	25	ns
E fall time	t-f	-	25	ns
E-pulse width (H, L)	t-w	220	-	ns
R/W and RS set-up time	t-su	40	-	ns
R/W and RS hold time	t-h	10	-	ns
Data output delay time	t-d	-	120	ns
Data hold time	t-dh	20	-	ns

WRITE MODE TIMING DIAGRAM FOR KS0070B



READ MODE TIMING DIAGRAM FOR KS0070B





THIS DRAWING IS APPLICABLE TO THE FOLLOWING SUB-VARIANTS :-
KD162-626LPSC-LG

Crystalfontz
TECHNOLOGY PTE LTD

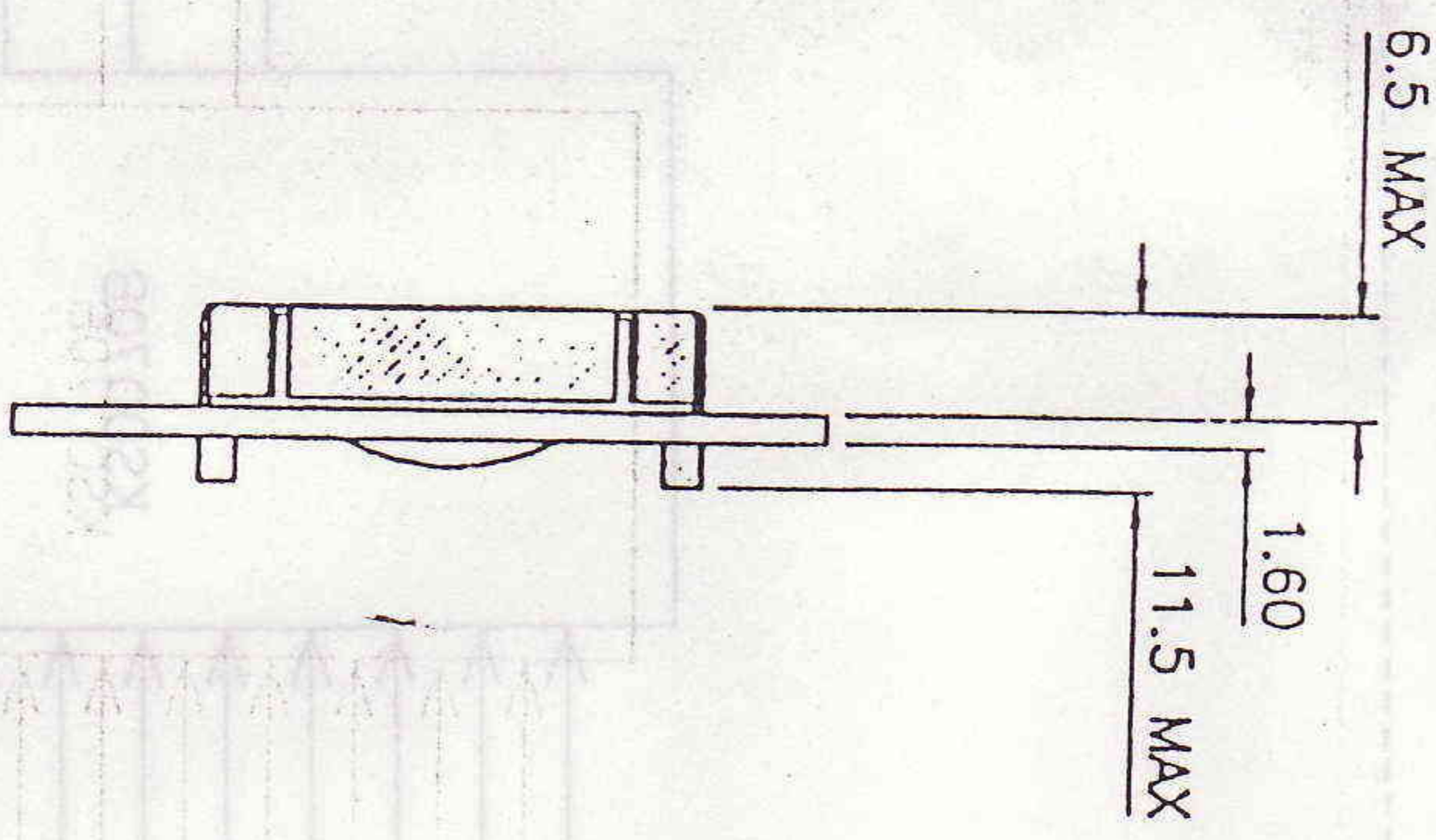
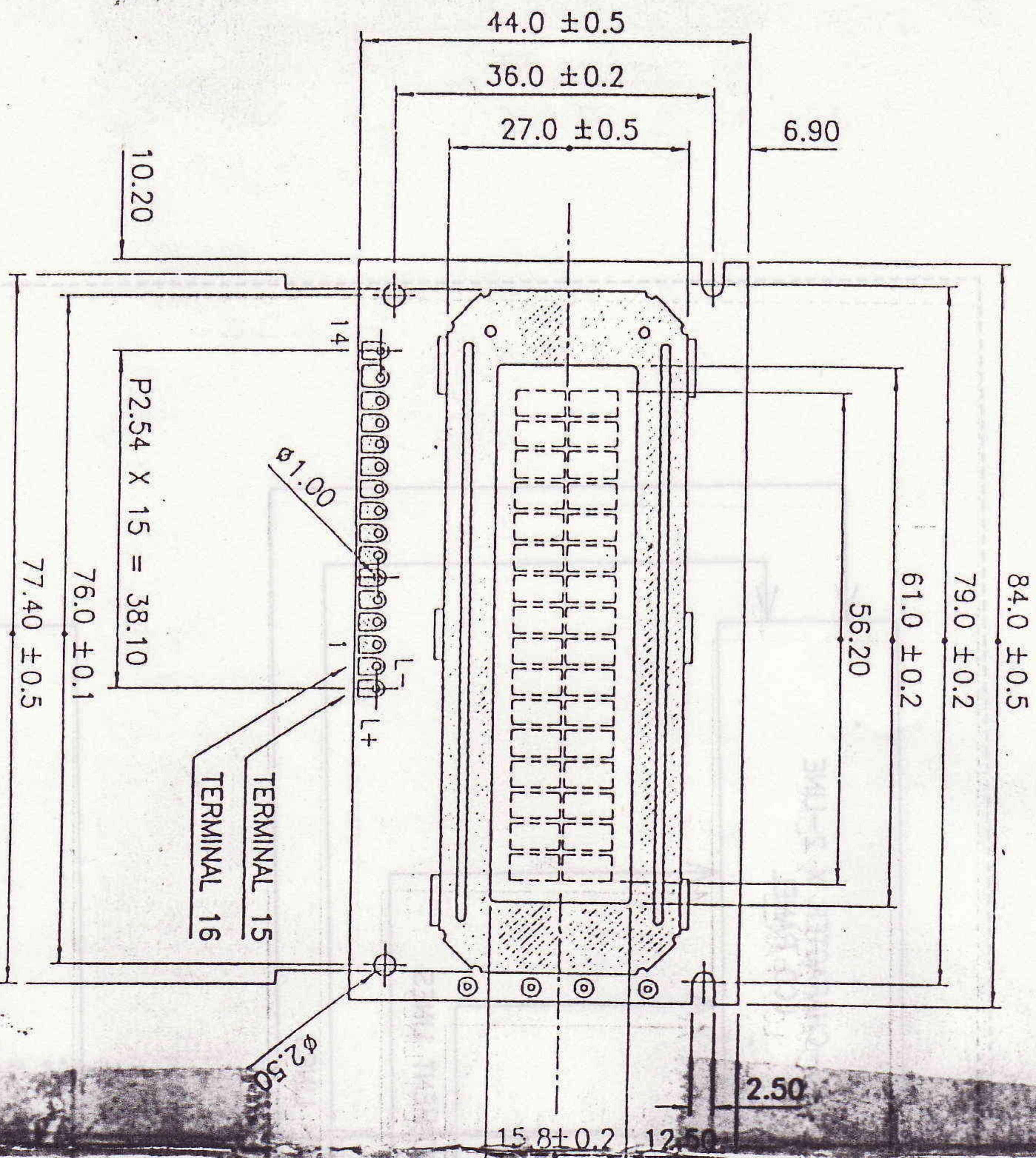
TITLE
BLOCK DIAGRAM
LCD MODULE, 16 CH X 2 LINES

SCALE 1 = 1
PROJECT 626

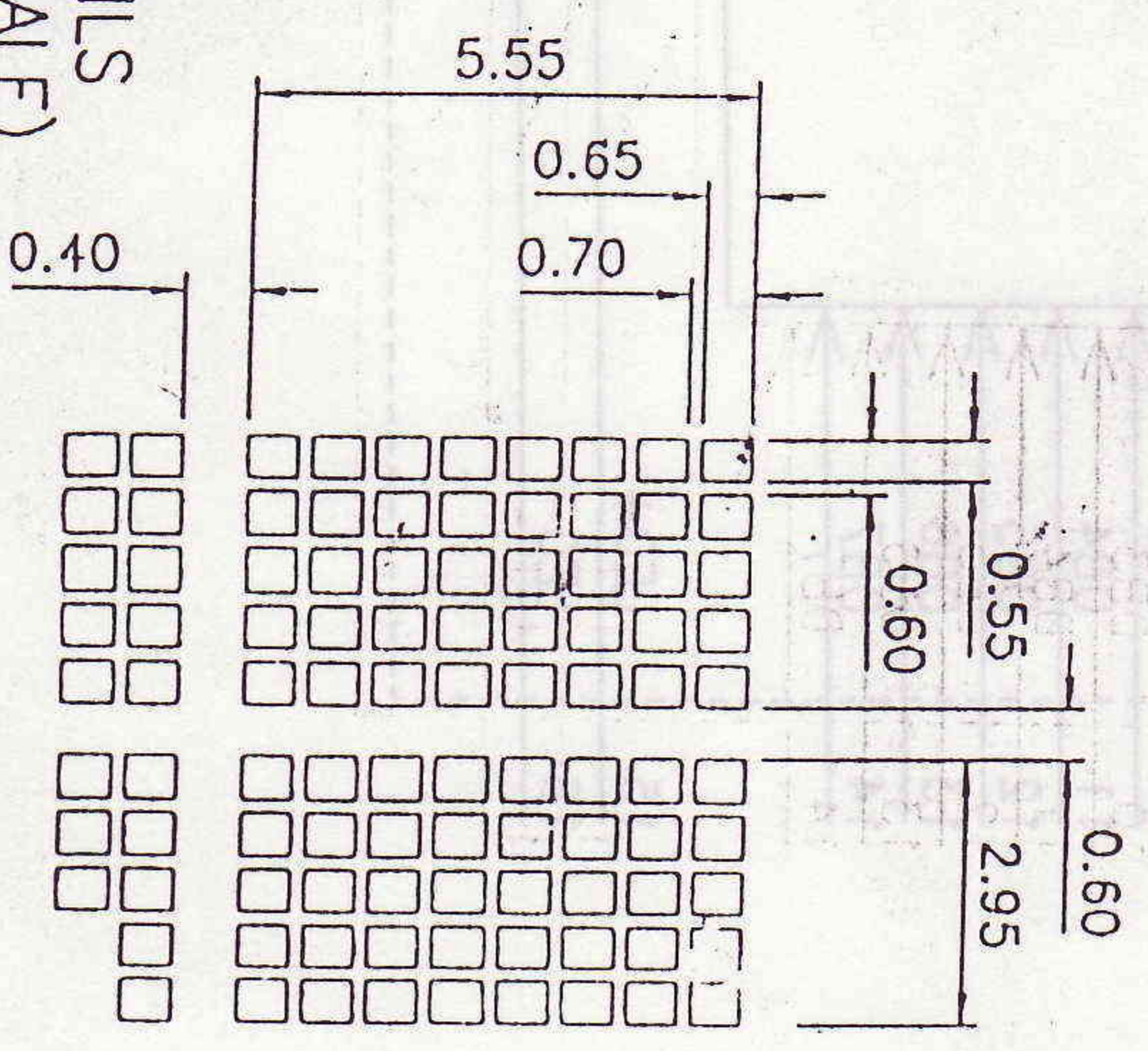
GEN. TOLERANCE
X.X = ±0.2
X.XX = ±0.10
ANG = ±0.5°

DWG NBR 9K626B02
DATE

REV 0
SHEET 1 OF 1



MATRIX DETAILS
(NOT-TO-SCALE)



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KD162-626LPSG-LG

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TECHNOLOGY PTE LTD

TITLE
MECHANICAL SPECIFICATIONS,
LCD MODULE, 16 CH X 2 LINES

SCALE 1 = 1	GEN. TOLERANCE	DWG NBR	REV
PROJECT 626	X.X = ±0.2 X.XX = ±0.10 ANG = ±0.5°	9P626M02	0
		DATE	SHEET 1 OF 1