

LCD MODULE SPECIFICATION

MODEL NO.

BO8032A series

FOR MESSRS:

ON DATE OF:

APPROVED BY:

C O N T E N T S

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1. Numbering System

<u>B</u>	<u>O</u>	<u>8032</u>	<u>A</u>	<u>F</u>	<u>P</u>	<u>E</u>		<u>H</u>	<u>xxx</u>
0	1	2	3	4	5	6	7	8	9

0	Brand	Bolymin	
1	Module Type	C= character type G= graphic type P= TAB/TCP type	O= COG type F= COF type
2	Format	2002=20 characters, 4 lines 12232= 122 x 32 dots	
3	Version No.	A type	
4	LCD Color	G=STN/gray Y=STN/yellow-green C=color STN	B=STN/blue F=FSTN T=TN
5	LCD Type	R=positive/reflective P=positive/transflective	M=positive/transmissive N=negative/transmissive
6	Backlight type/color	L=LED array/ yellow-green H=LED edge/white R=LED array/red G=LED edge/yellow-green	D=LED edge/blue E=EL/white B=EL/blue C=CCFL/white
7	CGRAM Font (applied only on character type)	J=English/Japanese Font E=English/European Font	C=English/Cyrillic Font H=English/Hebrew Font
8	View Angle/ Operating Temperature	B=Bottom/Normal Temperature H=Bottom/Wide Temperature U=Bottom/Ultra wide Temperature	T=Top/Normal Temperature W=Top/Wide Temperature C=9H/Normal Temperature
9	Special Code	3=3 volt logic power supply n=negative voltage for LCD c=cable/connector xxx=to be assigned on data sheet	t=temperature compensation for LCD p=touch panel

2. General Specification

(1) Mechanical Dimension

Item	Standard Value	Unit
Number of dots	80×32	dots
Module dimension (L*W*H)	44.0*45.25*3.3(Max)-EL B/L	mm
View area	40.0(W)×17.4(H)	mm
Active area	38.37(W)×15.33(H)	mm
Dot size	0.45(W)×0.45(H)	mm
Dot pitch	0.48(W)×0.48(H)	mm

(2) Controller IC: S6B1713 Controller

(3) Temperature Range

	Normal	Wide
Operating	0 ~+50	-20 ~ +70
Storage	-10 ~ +60	-30 ~ +80

3. Absolute Maximum Ratings

Item	Symbol	Min	Typ	Max	Unit
Operating Temperature	TOP	-20	-	+70	
Storage Temperature	TST	-30	-	+80	
Input Voltage	VI	0	-	V _{CC}	V
Supply Voltage For Logic	VDD-VSS	2.4	-	3.6	V
Supply Voltage For LCD	VO-VSS	4.0	-	15	V

4. Electrical Characteristics

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Supply Voltage For Logic	$V_{DD}-V_{SS}$	-	2.4	3.0	3.6	V
Supply Voltage For LCD	V_{LCD}	Ta=-20	-	6.2	-	V
		Ta=25	-	5.6	-	V
		Ta=+70	-	5.0	-	V
Input High Vol	V_{IH}	-	$0.8V_{DD}$	-	V_{DD}	V
Input Low Vol	V_{IL}	-	0	-	$0.2V_{DD}$	V
Output High Vol	V_{OH}	-	$V_{DD}-0.4$	-	-	V
Output Low Vol.	V_{OL}	-	-	-	0.4	V
Supply Current	I_{DD}	$V_{DD}=3V$	-	-	500	uA

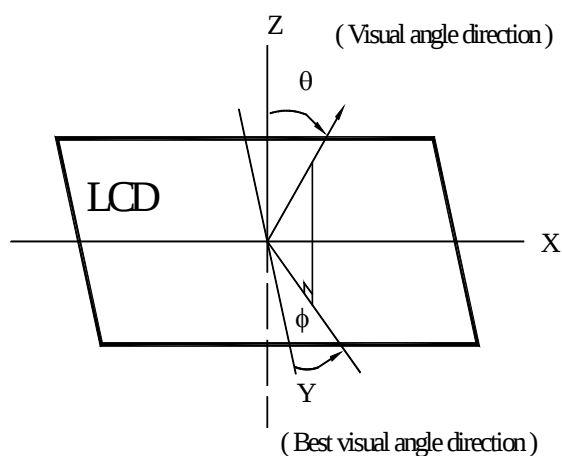
5. Optical Characteristics

b FSTN

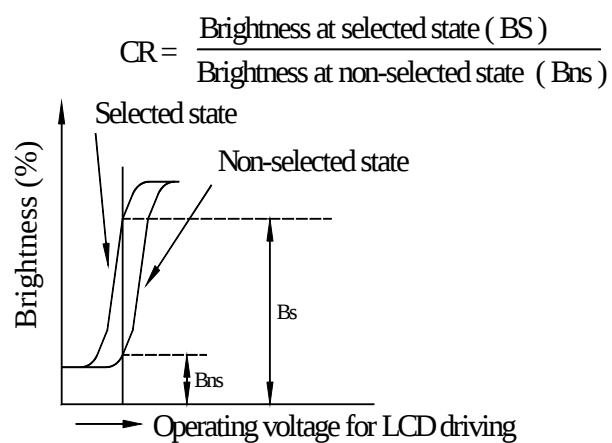
Item	Symbol	Condition	Min.	Typ.	Max.	Unit
View Angle	(V) θ	CR 3	10		60	deg
	(H) ϕ	CR 3	-45		45	deg
Contrast Ratio	CR	-		5		-
Response Time 25	T rise	-		100	150	ms
	T fall	-		150	200	ms

5.1 Definitions

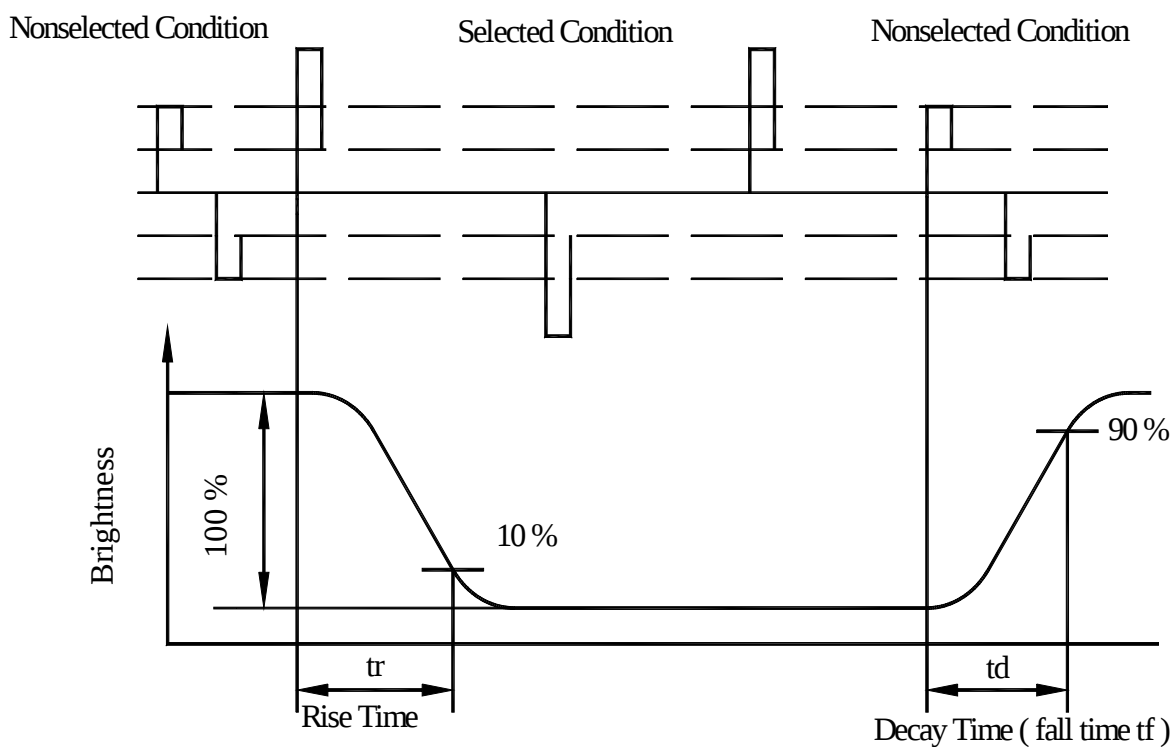
■ View Angles



■ Contrast Ratio



■ Response time



6. Interface Pin Function

Pin No.	Symbol	Level	Description
1	VSS	0V	Ground
2	VDD	3V	Power Supply V+
3	/RST	H/L	L:Reset signal
4	RS	H/L	H:data L:Instruction
5	NC		
6	NC		
7	SID	H/L	Sireal data input
8	SCLK	H/L	Seriel clock input
9	/CS	H/L	Chip enable
10	NC		

7. Backlight Information

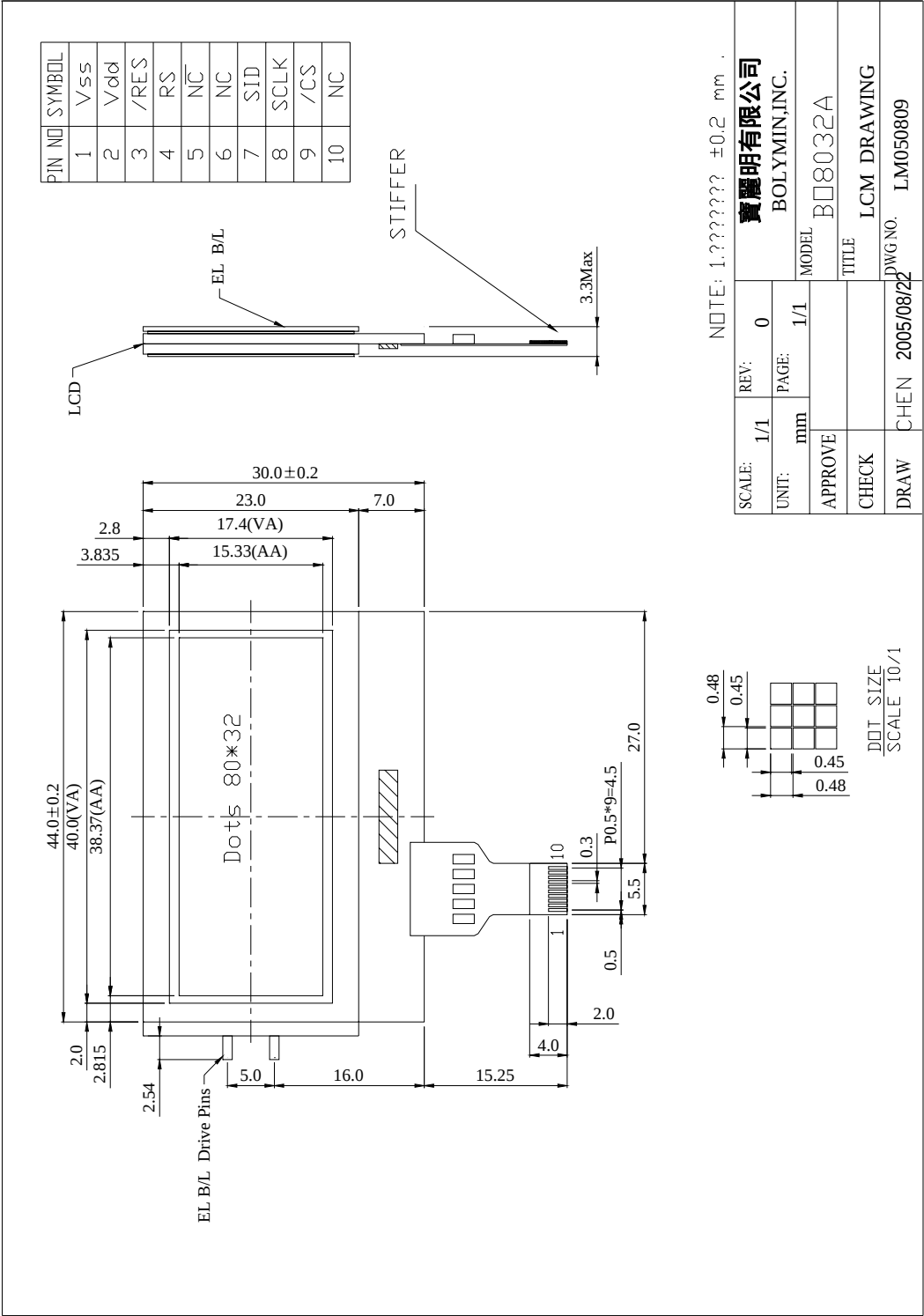
7.1 Specification

EL / White

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Drive Voltage	V _{max}	78	—	85	V _{rms}	25°C
Drive Wave	F _{max}	400	—	1000	Hz	25°C
Brightness		65	-	-	cd/m ²	78~85V _{rms} /400~1000Hz
Power Consumption		-	43.55	-	mW	78~85V _{rms} /400~1000Hz
Chromatism	X	-	0.330	-	-	78~85V _{rms} /400~1000Hz
	Y	-	0.365	-	-	78~85V _{rms} /400~1000Hz
Life time		10000			hour	78~85V _{rms} /400~1000Hz
Color		White			-	-

8. Appendix (Drawing , S6B1713 Controller)

8-1 Drawing



Bolymin, Inc.

8-2 S6B1713 Controller dtat sheet