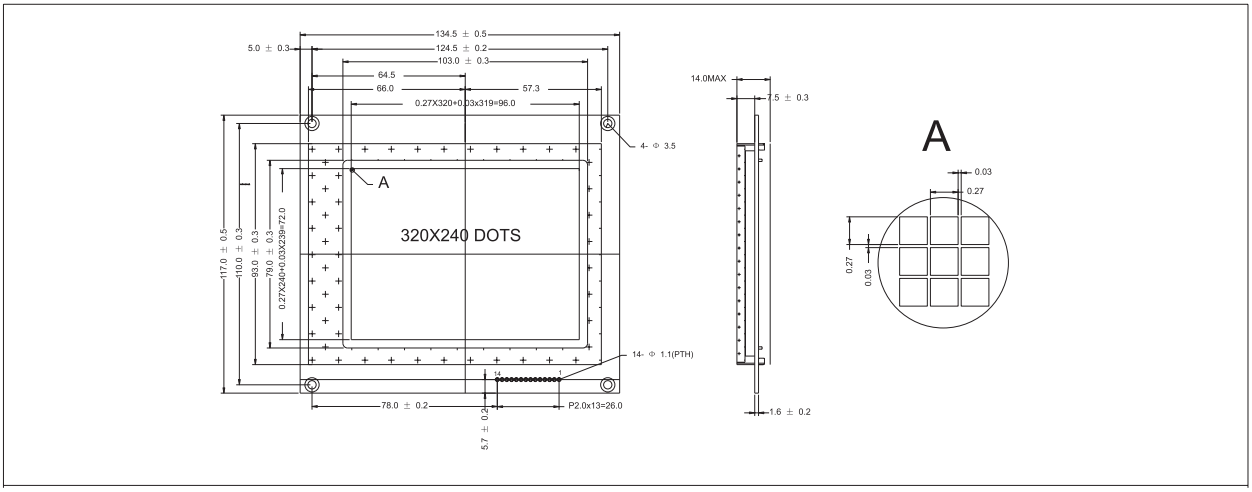
YMS320240-02

320 x 240DOTS
1/240DUTY, 1/13BIAS

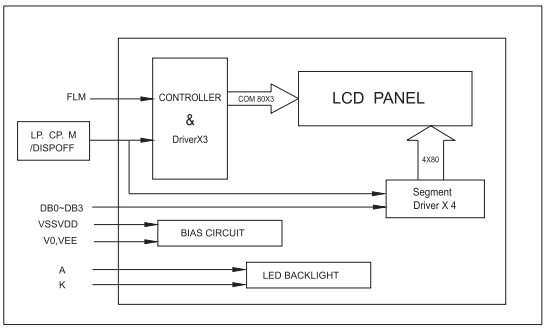
1 EXTERNAL DIMENSION AND DISPLAY PATTERN



2 MECHANICAL DATA

ITEM	SPECIFICATION	UNIT
Module Size(WXHXT)	134.5 x 117.0 x 14.0	mm
Viewing Area(WXH)	103.0 x 79.0	mm
Number of Dots	320 x 240	dots
Dot Pitch (WXH)	0.3 x 0.3	mm
Dot Size(WXH)	0.27 x 0.27	mm

3 BLOCK DIAGRAM



4 PIN CONFIGURATION

PIN	SYMBOL	LEVEL	SIGNAL DESCRIPTION
1	VL	-	Operating Voltage for LCD (Variable)
2	VEE	-	Supply Voltage for Logic and LCD
3	DB3	H/L	Data Bit 3
4	DB2	H/L	Data Bit 2
5	DB1	H/L	Data Bit 1
6	DB0	H/L	Data Bit 0
7	VSS	0V	Ground
8	VDD	+5V	Power Supply
9	CL2	H,H→L	Display Data Shift Clock
10	CL1	H,H→L	Display Data Latch Clock
11	FLM	H	First Line Marker
12	K	Cathode of LED Unit	
13	A	Anode of LED Unit	
14	NC		

5 ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	MIN.	MAX.	UNIT
Supply Voltage Logic	V_{DD} (V_{DD}-V_{SS})	-0.3	7.0	V
Supply Voltage Driver	V_{DD}-V_{EE}	-0.3	30.0	V
Input Voltage	V_{IN}	-0.3	V_{DD}+0.3	V

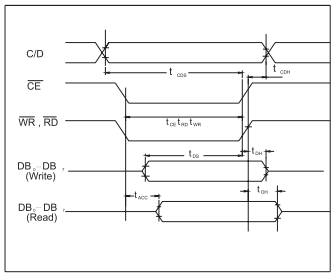
Operating Temp.	See page 9
Storage Temp.	

6 ELECTRICAL CHARACTERISTICS(Ta=25 ℃)

ITEM		SYMBOL	CONDITION	SPEC.VALUE			UNIT
				MIN.	TYP.	MAX.	
Supply Voltage (Logic)		V_{DD}-V_{SS}		4.5	5.0	5.5	V
Supply Current (Logic)		I_{DD}	V_{DD}=5V	–	8.7	13.0	mA
Input Voltage	"HIGH"	V_{IH}	–	V_{DD}-2.2	–	V_{DD}	V
	"LOW"	V_{IL}	–	0	–	0.8	V
Output Voltage	"HIGH"	V_{OH}	I_{OH}=3.0mA	V_{DD}-0.3	–	V_{DD}	V
	"LOW"	V_{OL}	I_{OL}=3.0mA	0	–	0.3	V
LCD Operating Voltage		V_{DD}-V_O	V_{DD}=5V Ta=25 ℃	–	22.9	–	V
Supply Voltage LCD Drive		I_O		–	4.5	–	mA

Note(1):( )Value is high Reliability type
Note(2):Electro-Optical Characteristics:See page 6.

7 SWITCHING TIMEING CHARACTERISTICS

PARAMETER	SYMBOL	MIN.	MAX.	UNIT
C/D SET Up Time	t_{CDS}	100	–	ns
C/D Hold Time	t_{CDH}	10	–	ns
/CE,/RD,/WR Puls Width	t_{CE} t_{RD} t_{WR}	80	–	ns
Data Set Up 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

Condition:V_{DD}=5.0V ± 10%,V_{SS}=0V,Ta=25 ℃