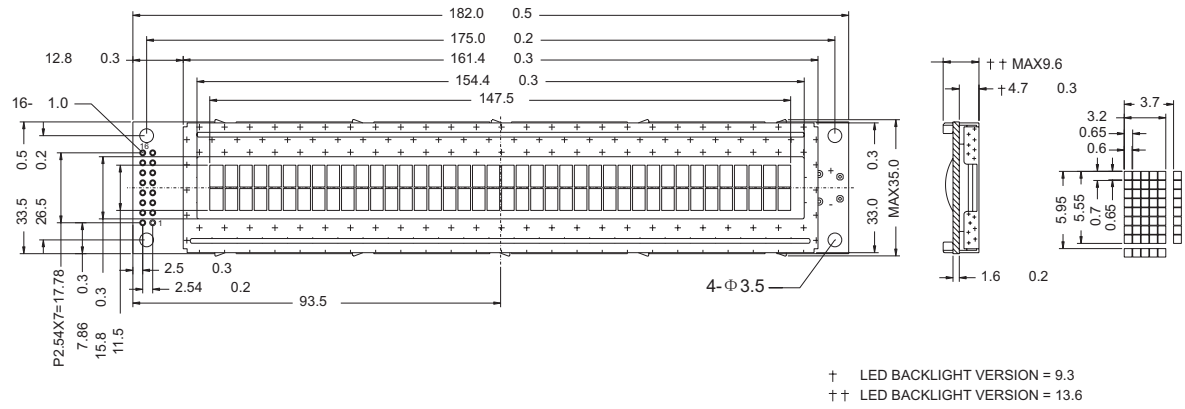
YMS402-01

40CHAR x 2LINE
1/16DUTY, 1/5BIAS

1 EXTERNAL DIMENSION AND DISPLAY PATTERN



† LED BACKLIGHT VERSION = 9.3
†† LED BACKLIGHT VERSION = 13.6

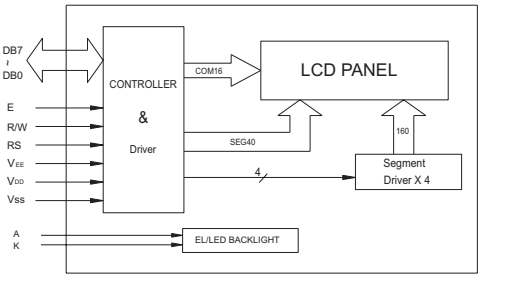
2 MECHANICAL DATA

ITEM	SPECIFICATION	UNIT
Module Size(WXHXT)	182.0 x 35.0 x 9.6 (LED:13.6)	mm
Viewing Area(WXH)	154.4 x 15.8	mm
Character Font(WXH)	5 x 7 with Cursor	dots
Character Size(WXH)	3.2 x 5.55	mm
Character Pitch(WXH)	3.7 x 5.95	mm
Dot Size(WXH)	0.6 x 0.65	mm

3 PIN CONFIGURATION

PIN	SYMBOL	SIGNAL DESCRIPTION
1	V_{SS}	GND(0V)
2	V_{DD}	Power Supply(5V)
3	V_{EE}	Supply Voltage LCD Driver
4	RS	Register Select-LOW=Instruction,HIGH=Data
5	R/W	Read/Write LOW=MPU to LCM,HIGH=LCM to MPU
6	E	Eable R/W=LOW:Data are talking over at falling edge R/W=HIGH:Data can be read at E=1
7 to 14	DB_0 to DB_7	Data Bus-Software Selectable 4 or 8bit Mode
15	A	Anode of LED Unit
16	K	Cathode of LED Unit

4 BLOCK DIAGRAM



5 ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	MIN.	MAX.	UNIT
Supply Voltage Logic	V_{DD}-V_{SS}	-0.3	7.0	V
Supply Voltage Driver	V_{DD}-V_{EE}	-0.3	13.5	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 MIN.	TYP.	MAX.	UNIT
Supply Voltage (Logic)		V_{DD}-V_{SS}		4.5	5.0	5.5	V
Supply Current (Logic)		I_{DD}	V_{DD}=5V	–	0.8	2.0	mA
Input Voltage	"HIGH"	V_{IH}	–	2.2	–	V_{DD}	V
	"LOW"	V_{IL}	–	-0.3	–	0.6	V
Output Voltage	"HIGH"	V_{OH}	I_{OH}=0.2mA	2.4	–	–	V
	"LOW"	V_{OL}	I_{OL}=1.2mA	–	–	0.4	V
LCD Operating Voltage		V_{DD}-V_{EE}	V_{DD}=5V Ta=25 ℃	4.5	4.7	5.0	V
Supply Voltage LCD Drive		I_{EE}		–	1.0	2.2	mA

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

7 BACKLIGHTING CHARACTERISTICS(Ta=25 ℃)

LED

ITEM	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Voltage	V_{LED}	–	3.85	4.05	4.25	V
Power Consumption	P_{LED}	I_F=260 mA	–	1053	–	mW
Luminous	I_V	I_F=260 mA	80	100	–	cd/m²