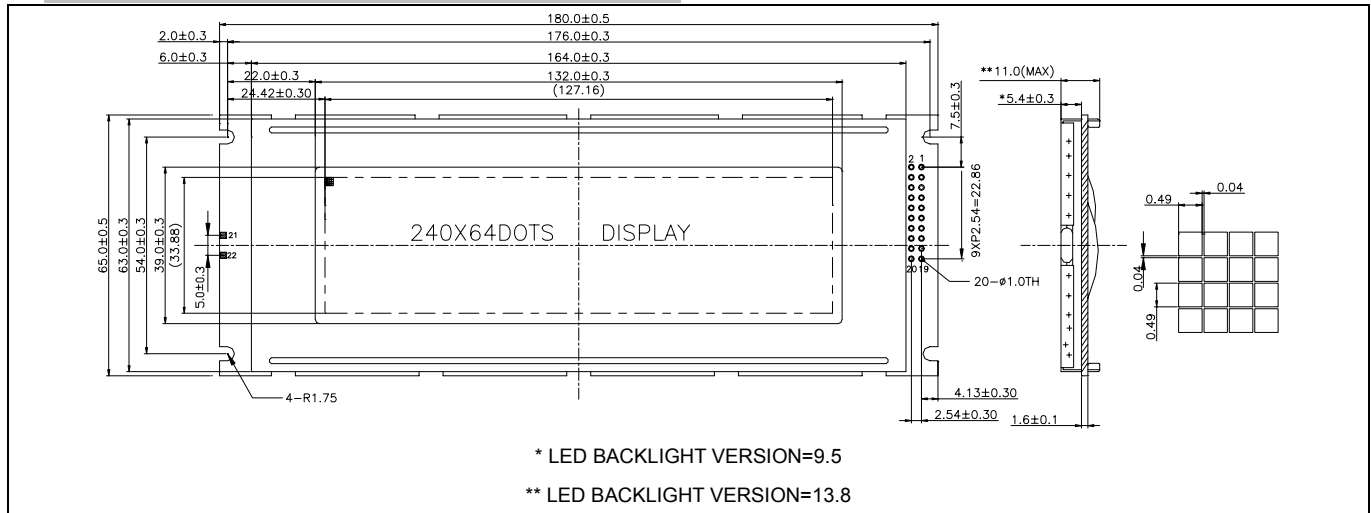


# HE245XX01

240 X 64 Dots

## 1. EXTERNAL DIMENSION AND DISPLAY PATTERN



## 2. MECHANICAL DATA

ITEM	SPECIFICATION	UNIT
Module Size (W×H×T)	180.0×65.0×11.0 (LED:13.8)	mm
Viewing Area (W×H)	132.0×39.0	mm
Number of Dots (W×H)	240×64	dots
Dot Pitch (W×H)	0.53×0.53	mm
Dot Size (W×H)	0.49×0.49	mm

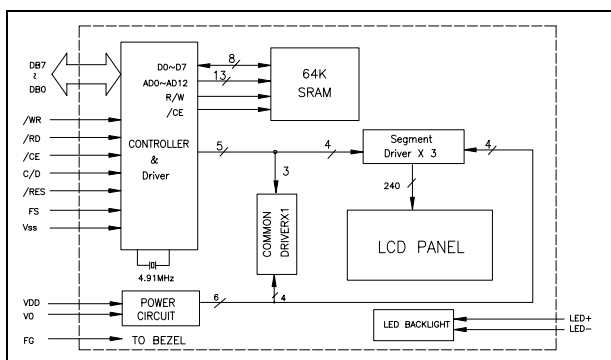
## 3. ELECTRICAL CHARACTERISTICS (Ta=25 °C)

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"	$V_{IH}$	-	$V_{DD} - 2.2$	-	$V_{DD}$
	"LOW"	$V_{IL}$	-	0	-	0.8
Output Voltage	"HIGH"	$V_{OH}$	$I_{OH}=3.0mA$	$V_{DD} - 0.3$	-	$V_{DD}$
	"LOW"	$V_{OL}$	$I_{OL}=3.0mA$	-	-	0.3
LCD Operating Voltage	$V_{DD} - V_o$	$V_{DD}=5V, Ta=25 °C$	-	13.6	-	V
Supply Voltage LCD Drive	$I_o$		-	2.0	3.0	mA

## 4. PIN CONFIGURATION

PIN	SYMBOL	SIGNAL DESCRIPTION	PIN	SYMBOL	SIGNAL DESCRIPTION
1	FG	Frame Ground	12	DB <sub>1</sub>	Data Bit 1
2	V <sub>SS</sub>	Ground	13	DB <sub>2</sub>	Data Bit 2
3	V <sub>DD</sub>	Logic Voltage	14	DB <sub>3</sub>	Data Bit 3
4	V <sub>o</sub>	Operating Voltage for LCD (Variable)	15	DB <sub>4</sub>	Data Bit 4
5	/WR	Write Signal	16	DB <sub>5</sub>	Data Bit 5
6	/RD	Read Signal	17	DB <sub>6</sub>	Data Bit 6
7	/CE	Chip Enable Signal	18	DB <sub>7</sub>	Data Bit 7
8	C/D	H : Instruction Code, L : Data Code	19	FS	Font Select Signal (H : 6×8dots, L : 8×8dots)
9	NC	No Connection	20	NC	No Connection
10	/RES	Reset Signal	21	A	Anode of LED Unit
11	DB <sub>0</sub>	Data Bit 0	22	K	Cathode of LED Unit

## 5. BLOCK DIAGRAM



## 6. BACKLIGHTING CHARACTERISTICS (Ta=25 °C)

### LED

ITEM	SYMBOL	CONDITION	MIN	TYP	MAX	UNIT
Supply Voltage	$V_{LED}$	-	-	8.2	8.5	V
Power Consumption	$P_{LED}$	$I_F=400mA$	-	3280	-	mW
Luminous	$I_V$	$I_F=400mA$	-	-	-	cd/m <sup>2</sup>