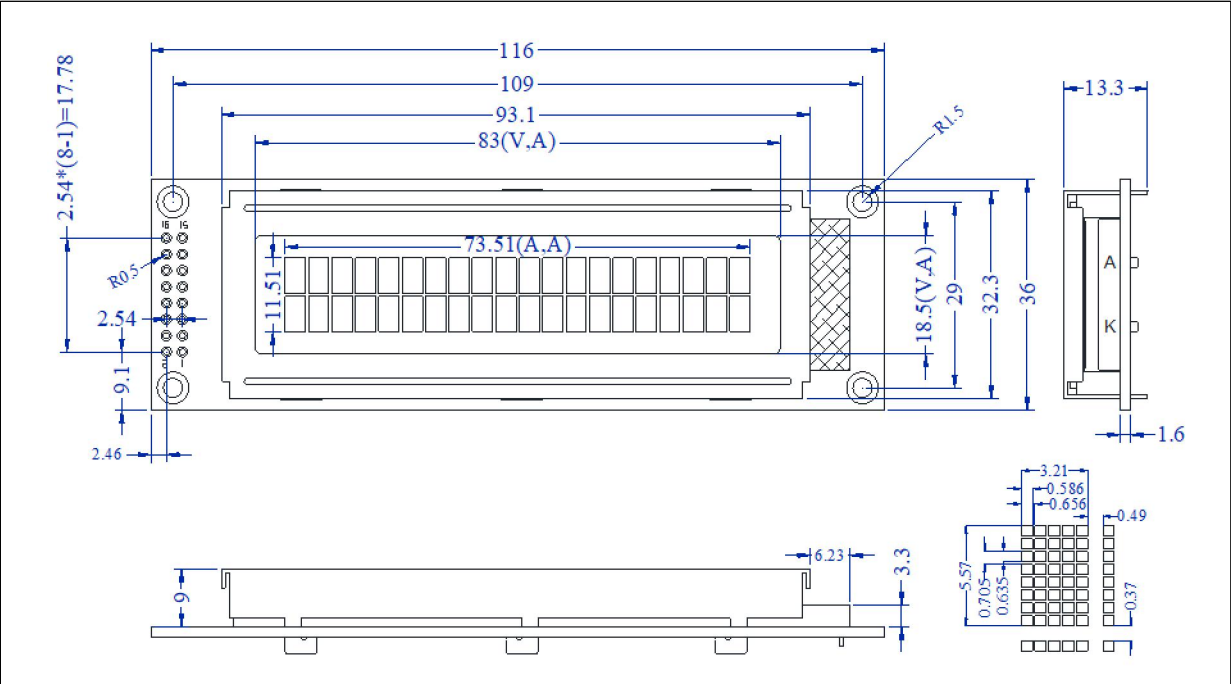


HXC200202-V1

20 characters x 2 rows + white LED backlight, 4/8-bit parallel



ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Min.	Max.	Unit
Supply Voltage(Logic)	$V_{DD} - V_{SS}$	-0.3	7.0	V
Supply Voltage(LCD)	$V_o - V_{ss}$	3.0	10.0	V
Input Voltage	V_i	-0.3	$V_{DD} + 0.3$	V
Operating Temp.	T_{opr}	-20	70	°C
Storage Temp.	T_{stg}	-40	80	°C

MECHANICAL DATA

Item	Nominal Dimensions	Unit
Module Size (W x H x T)	116.0 x 36.0 x 13.3	mm
Viewing Area (W x H)	83.0 x 18.5	mm
Character size (W x H)	3.21 x 5.57	mm
Dot Size (W x H)	0.586 x 0.635	mm
Weight	Approx. 55	g

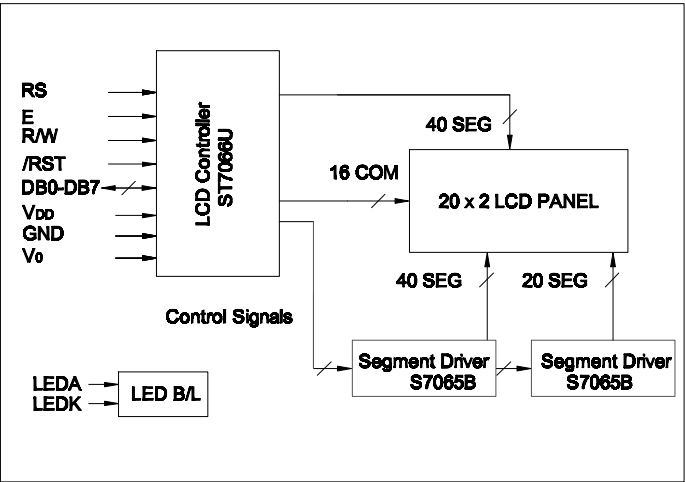
ELECTRICAL CHARACTERISTICS ($V_{DD}=5V \pm 0.15V$)

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Input High Voltage	V_{IH}	—	0.7 V_{DD}	—	V_{DD}	V
Input Low Voltage	V_{IL}	—	0	—	0.6	V
Output High Voltage	V_{OH}	$I_{OH} = -0.1mA$	3.9	—	V_{DD}	V
Output Low Voltage	V_{OL}	$I_{OL} = 0.1mA$	0	—	0.4	V
Supply Current	I_{DD}	$V_{DD} = 5.0V$	—	0.2	0.5	mA
LCD Driving Voltage	$V_o - V_{ss}$	$T_a = 25^\circ C$	4.3	4.5	4.8	V

PIN DESCRIPTIONS

Pin	Symbol	Level	Function
1	GND	0V	GND
2	V_{DD}	5V	Power supply for logic(3.3V optional)
3	V_o	—	Power supply for LCD
4	RS	H/L	Select registers 0: Instruction register(for write) Busy flag: Address counter(for read) 1: Data register(for write and read)
5	R/W	H/L	Select read or write 0: Write 1: Read
6	E	H, H $\rightarrow$ L	Start data read/write Read data when E is high Write data at falling edge of E
7	DB0	H/L	Data bus
8	DB1	H/L	
9	DB2	H/L	
10	DB3	H/L	
11	DB4	H/L	
12	DB5	H/L	
13	DB6	H/L	
14	DB7	H/L	
15	LEDA	5.0V	LED backlight anode(3.3V optional)
16	LEDK	0V	LED backlight cathode

BLOCK DIAGRAM



LED BACKLIGHT SPECIFICATIONS ($T_a=25^\circ C$)

Item	Symbol	Typ.	Max.	Unit
Forward Voltage	V_f	5.0	7.0	V
Forward Current	I_f	15	20	mA
LED Color		White		