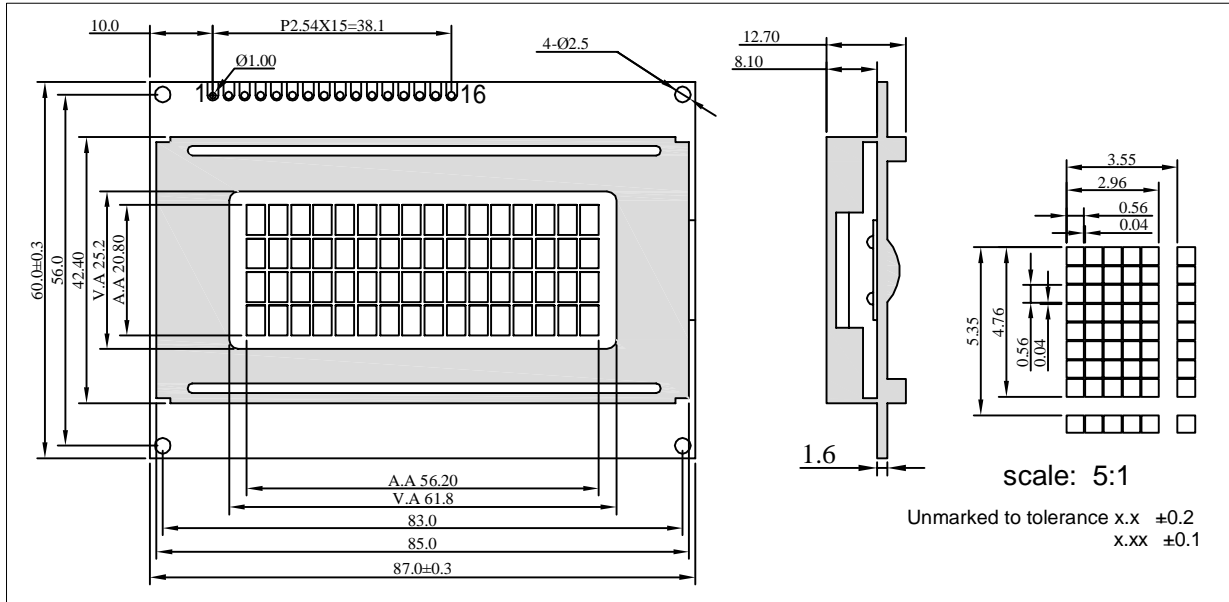


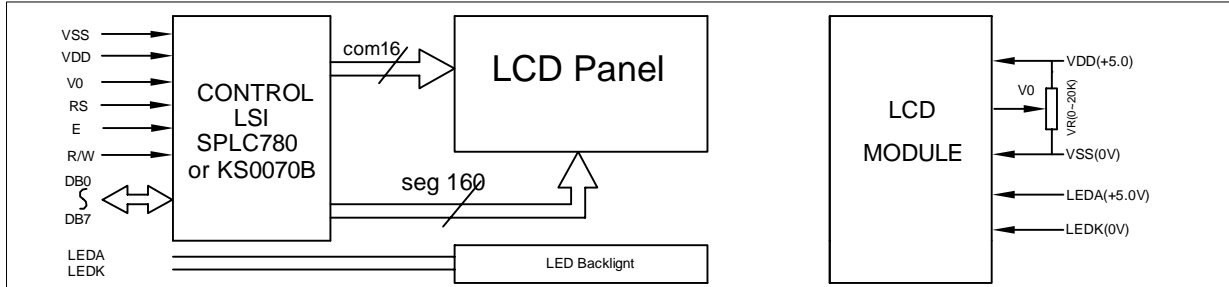
# ZL1604A1 Series

16x4 CHARACTERS  
1/16 DUTY, 1/5 BIAS  
CHARACTER-COB

## OUTLINE DIMENSIONS



## BLOCK DIAGRAM & POWER SUPPLY



## MECHANICAL SPECIFICATIONS & FEATURE

item	Normal Dimensions(mm)	Feature	
Module Size(W*H*T)	87.0X60.0X12.7	LCD Type	STN FSTN
View Area(W*H)	61.8X25.2	LCD Colour	STN:Yellow-Green ,Gray Other:Gray
Character Pitch(W*H)	3.55X5.35	View Angle	6 O'clock , 12 O'clock
Character Size(W*H)	2.96X4.76	Display Type	Positive Type,Negative Type
Character Font	5X8	Rear Polarizer	Transmissive,Reflective ,Transflective
Dot Pitch(W*H)	0.60X0.60	Operating Temperature	0 °C ~50 °C , -20 °C~70 °C
Dot Size(W*H)	0.56X0.56	Backlight	LED: Yellow, Blue,White,Green

## ELECTRICAL CHARACTERISTICS

item	Symbol	Test Condition	Min.	Type.	Max.	Unit
Operating Voltage	Vdd	Ta=25 °C	---	5.0V	---	V
Operating Voltage for LCD	Vlcd	Ta=25 °C	---	4.6V	---	V
Supply Current	Idd	Ta=25 °C,Vdd=5.0V	---	2.0	3.0	mA
Supply Current for Backlight	If	Ta=25 °C,Vf=4.2V	---	100	---	mA

## INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Level	Description
1	VSS	---	Ground for Logic
2	VDD	---	Power supply for Logic
3	V0	---	Power supply for LCD drive
4	RS	H/L	Register selection (H:Data register,L:Instruction register)
5	R/W	H/L	Read/Write selection (H:read,L:Write)
6	E	H/L → L	Enable signal for LCM
7~14	DB0~DB7	H/L	Data Bus Lines
15	LEDA	---	Power supply for backlight(+)
16	LEDK	---	Power supply for backlight(-)

## REMARK

- Negative type LCD colour : Blue.
- CGROM font option:English,Japanese,Russian,Etc.
- File Version:01