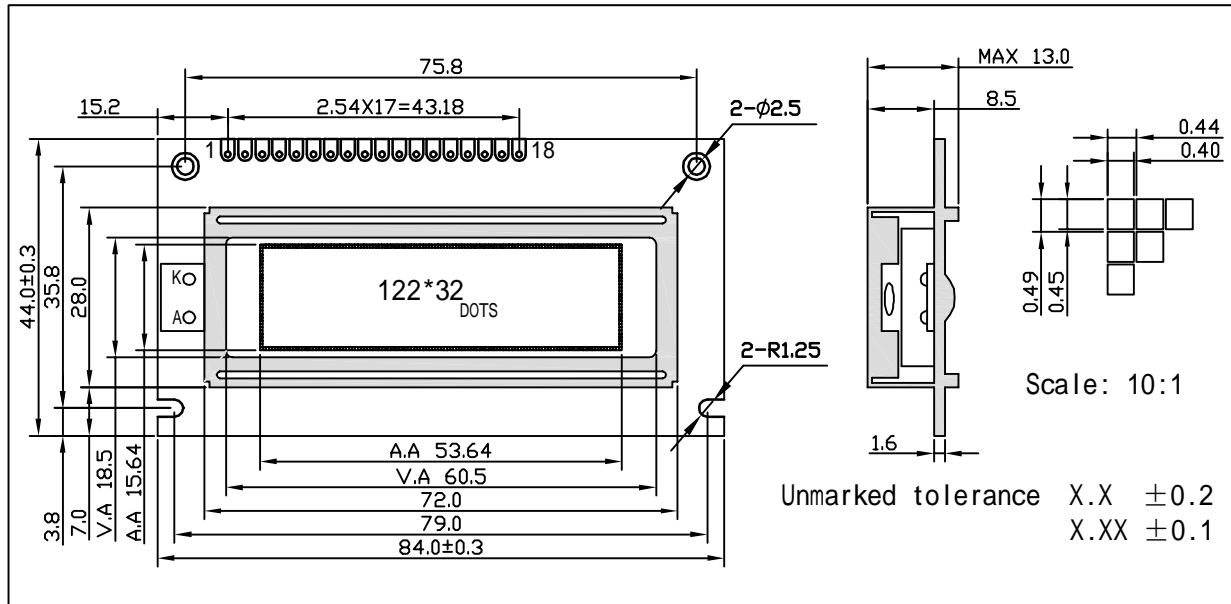


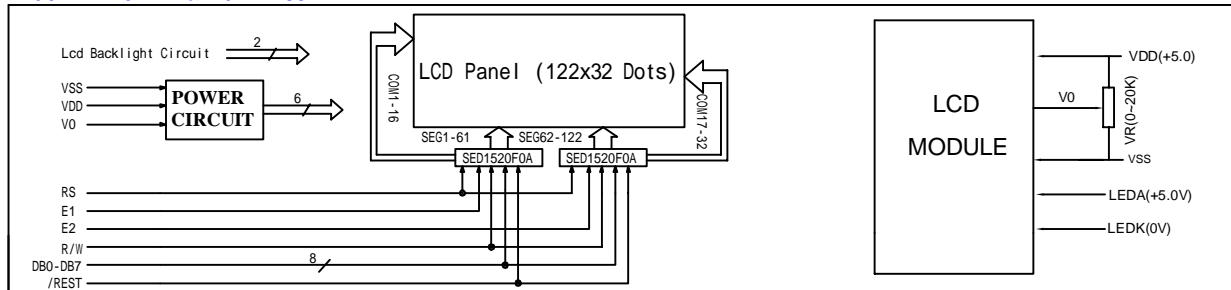
ZL12232D1 Series

122x32 DOTS
1/32 DUTY, 1/6 BIAS
GRAPHIC-COB

OUTLINE DIMENSIONS



BLOCK DIAGRAM & POWER SUPPLY



MECHANICAL SPECIFICATIONS & FEATURE

item	Normal Dimensions(mm)	Feature	
Module Size(W*H*T)	84.0x44.0x13.0MAX	LCD Type	STN FSTN
View Area(W*H)	60.5x18.5	LCD Colour	STN:Yellow-Green ,Gray Other:Gray
DotsxDots(W*H)	122x32	View Angle	6 O'clock , 12 O'clock
Dot Pitch(W*H)	0.44x0.49	Display Type	Positive Type,Negative Type
Dot Size(W*H)	0.40x0.45	Rear Polarizer	Transmissive,Reflective ,Transflective
---	---	Operating Temperature	0°C -50°C
---	---	Backlight	LED: Yellow

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	---	4.5V	---	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	---	150	---	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	E1	H/L→L	Enable signal for IC1 (left half of the panel)
6	E2	H/L→L	Enable signal for IC2 (right half of the panel)
7	R/W	H/L	Read/write selection (H:Read,L:Write)
8-15	DB0-DB7	H/L	Data Bus Lines
16	/RST	L	Reset signal
17	LEDA	--	Power supply for backlight(+5.0V)
18	LEDK	--	Power supply for backlight(0V)

REMARK

- Negative type LCD colour : Blue.
- File Version:01