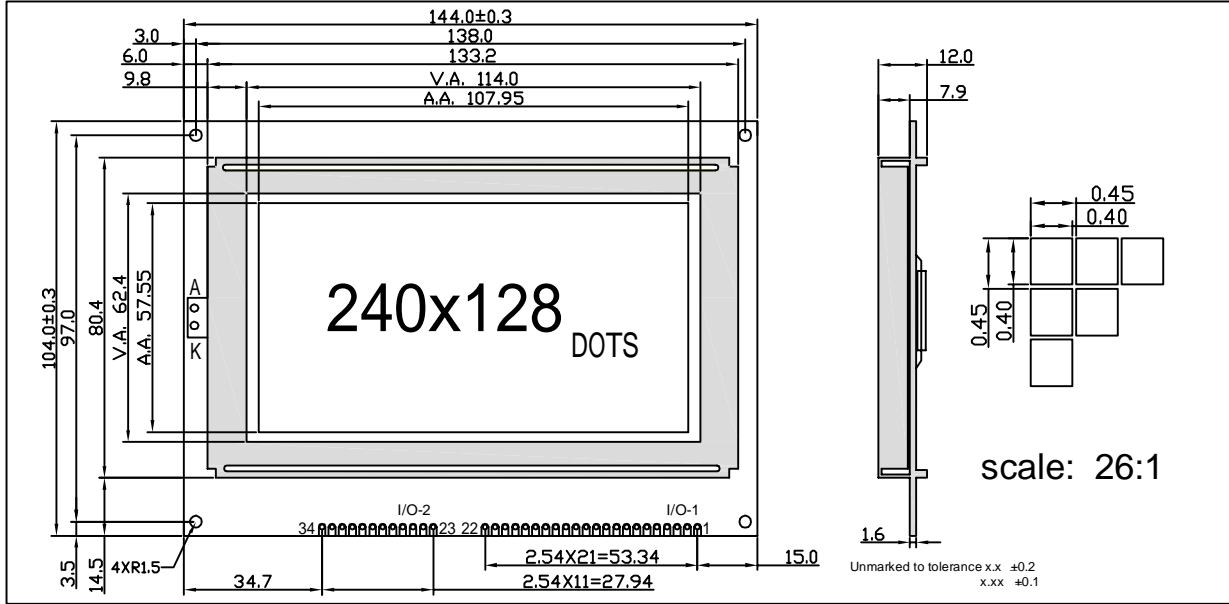


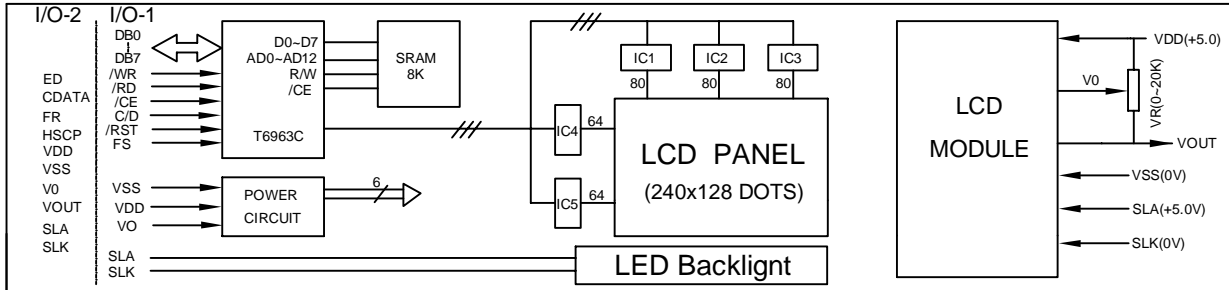
ZL240128A1 Series

240x128 DOTS
1/128 DUTY, 1/12 BIAS
GRAPHIC-COB

OUTLINE DIMENSIONS



BLOCK DIAGRAM & POWER SUPPLY



MECHANICAL SPECIFICATIONS & FEATURE

item	Normal Dimensions(mm)	Feature	
Module Size(W*H*T)	144.0X104.0X12	LCD Type	STN FSTN
View Area(W*H)	114X62.4	LCD Colour	STN:Yellow-Green ,Gray Other:Gray
Dots x Dots (W*H)	240X128	View Angle	6 O'clock , 12 O'clock
Dot Pitch (W*H)	0.45x0.45	Display Type	Positive Type,Negative Type
Dot Size (W*H)	0.40X0.40	Rear Polarizer	Transmissive,Reflective ,Transflective
-----	-----	Operating Temperature	0°C ~50°C , -20°C~70°C
-----	-----	Backlight	LED: Yellow, Bule,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	---	400	---	mA

INTERFACE PIN CONNECTIONS

Pin No	Symbol	Level	Description	Pin No	Symbol	Level	Description
1	FG	---	Connect the metal holder to Ground	23	ED	H/L	Display Data for columns
2	VSS	---	Ground for logic(0V)	24	CDATA	H/L	Synchronous signal for row driver
3	VDD	---	Power supply for logic (+5.0V)	25	FR	H/L	Frame signal
4	V0	---	Supply power for LCD drive	26	LP	H→L	Data latch pulse for column driver
5	/WR	L	Write signal	27	HSCP	H→L	Data shift clock for column driver
6	/RD	L	Read signal	28	NC	---	No Connect
7	/CE	L	Chip enable signal	29	VDD	---	Power supply for logic (+5.0V)
8	C/D	H/L	Data or Instruction select signal	30	VSS	---	Ground for logic(0V)
9	NC	---	No Connect	31	V0	---	Supply power for LCD drive
10	/RST	L	Reset signal	32	VOUT	---	Negative Voltage Output
11-18	DB0-DB7	H/L	Data bus lines	33	SLA	H	LED Backlight (+)
19	FS	H/L	Font selectin terminal	34	SLK	L	LED Backlight (-)
20	VOUT	---	Negative Voltage Output				
21	SLA	H	LED Backlight (+)				
22	SLK	L	LED Backlight (-)				

REMARK

1.Negative type LCD colour : Bule. 2.File Version:01