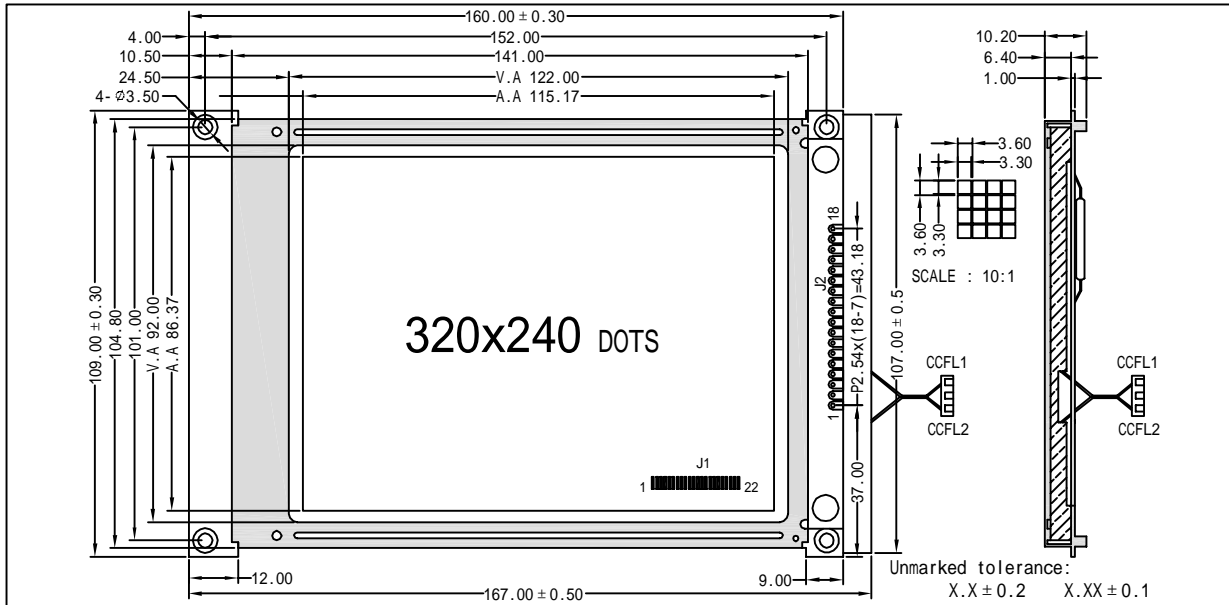


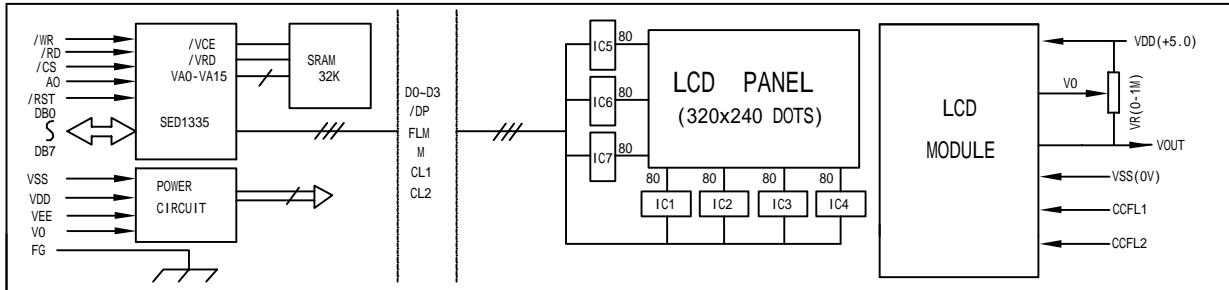
ZL320240A4 Series

320x240 DOTS
1/240 DUTY, 1/17 BIAS
GRAPHIC-COB

OUTLINE DIMENSIONS



BLOCK DIAGRAM & POWER SUPPLY



MECHANICAL SPECIFICATIONS & FEATURE

item	Normal Dimensions(mm)	Feature	
Module Size(W*H*T)	167.0/160.0x109.0x12.0MAX	LCD Type	FSTN
View Area(W*H)	122.0x92.0	LCD Colour	FSTN: Blue, Gray
Dots x Dots (W*H)	320x240	View Angle	6 O'clock, 12 O'clock
Dot Pitch (W*H)	0.36x0.36	Display Type	Positive Type, Negative Type
Dot Size (W*H)	0.33x0.33	Rear Polarizer	Transmissive, Reflective, Transflective
-----	-----	Operating Temperature	0°C ~ 50°C, -20°C ~ 70°C
-----	-----	Backlight	CCFL: White

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

J1: (1~22)				J2: (1~18)			
Pin No	Symbol	Level	Description	Pin No	Symbol	Level	Description
1	VSS	L	Ground for logic(0V)	1	VSS	L	Ground for logic(0V)
2	VDD	H	Power supply for logic (+5.0V)	2	VDD	H	Power supply for logic (+5.0V)
3	V0	---	Power supply for LCD drive	3	V0	---	Power supply for LCD drive
4	A0	H/L	Registr selection	4	/WR	L	Write signal
5	/WR	L	Write signal	5	/RD	L	Read signal
6	/RD	L	Read signal	6	/CS	L	Chip Selection
7-14	DB0-DB7	H/L	Data bus lines	7	A0	H/L	Registr selection
15	/CS	L	Chip Selection	8	/RST	L	Reset signal
16	/RST	L	Reset signal	9-16	DB0-DB7	H/L	Data bus lines
17	VEE	- - -	Negative voltage Output	17	NC	- - -	No connection
18	SEL1	L	Ground for logic(0V)	18	VEE	- - -	Negative voltage Output
19-22	NC	- - -	No connection				

REMARK

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