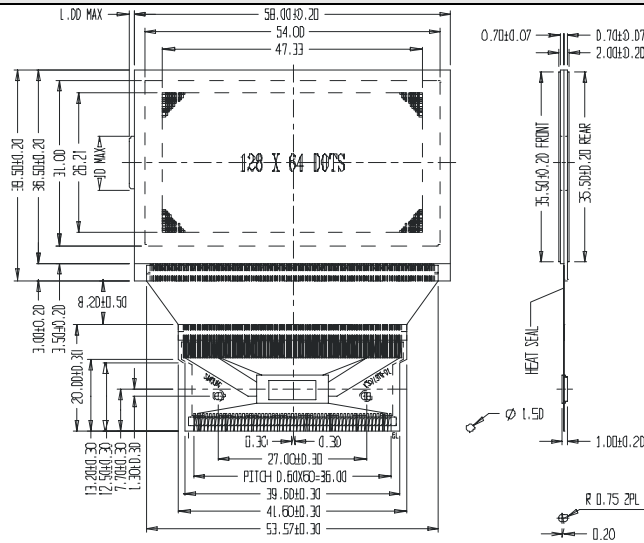
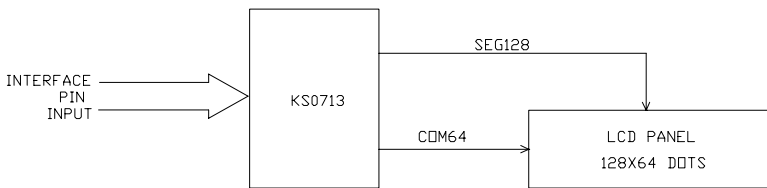


OUTLINE DIMENSION

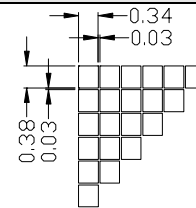


Tolerance: $\pm 0.20\text{mm}$, unless otherwise specified.

BLOCK DIAGRAM



DISPLAY PATTERN



MECHANICAL SPECIFICATION

Item	Dimensions(W)X(H)	Unit
Overall Size	59.0x39.5	MM
View Area	54.0x31.0	MM
Dot Size	0.34x0.38	MM
Dot Pitch	0.37x0.41	MM

PIN ASSIGNMENT

Pin no	Symbol	Pin no	Symbol	Pin no	Symbol	Pin no	Symbol
1	DUMMY	16-23	DB0-DB7	38	VOUT	57	INTRS
2	FRS	24	VSS	39	C3+	58	VSS
3	M	25	TEST L1	40	C3-	59	TEMPS
4	CL	26	TEST L2	41	C1+	60	VDD
5	DISP	27	VDD	42	C1-	61	DUMMY
6	VSS	28	DUTY 0	43	C2+		
7	CS1B	29	DUTY 1	44	CS2-		
8	CS2	30	VSS	45	VSS		
9	VDD	31	MS	46	VR		
10	RESET B	32	CLS	47-51	VO-V4		
11	RS	33	VDD	52	VSS		
12	VSS	34	MI	53	BSTS		
13	RW_WR	35	PS	54	DCDC5B		
14	E_RD	36	VSS	55	VDD		
15	VDD	37	VDD	56	HPM		

ABSOLUTE MAXIMUM RATING

Item	Symbol	Condition	Min	Max	Unit
Supply for logic voltage	VDD	25°C	-0.3	7.0	V
LCD driving supply voltage	VLCD	25°C	+0.3	17	V
Input voltage	VI	25°C	-0.3	VDD+0.3	V

ELECTRICAL CHARACTERISTICS

Item	Symbol	Condition	Min	Typical	Max	Unit
Supply voltage for logic and for converter voltage	VDD	25°C	---	3.0±0.1	---	V
Current consumption	IDD	25°C	---	70.0	---	uA
Input voltage " H " level	VIH	VDD=3V	0.8VDD	---	VDD	V
Input voltage " L " level	VIL	VDD=3V	VSS	---	0.2VDD	V

REMARKS:

- LCD options: STN, FSTN.
- Back light type: Without Back light feature.