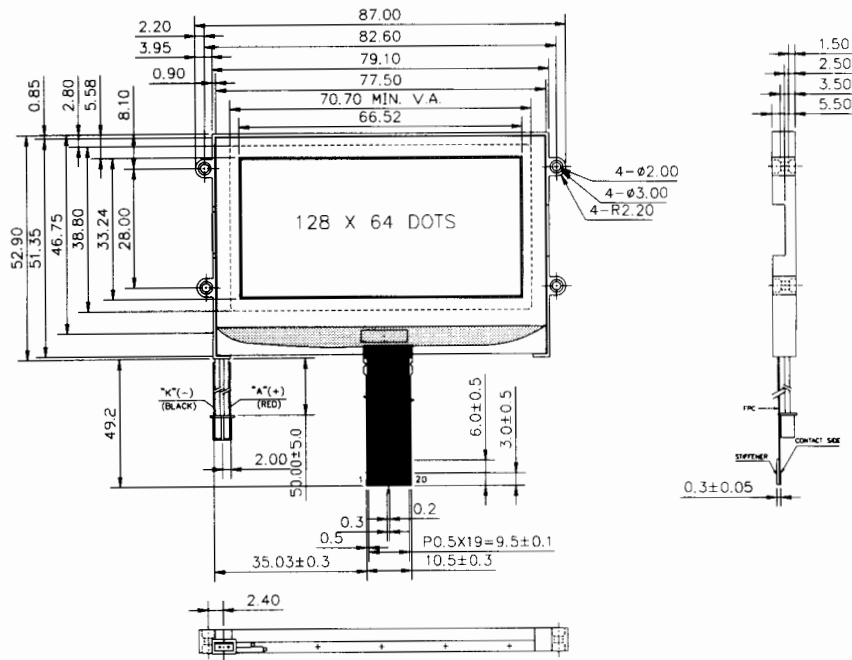
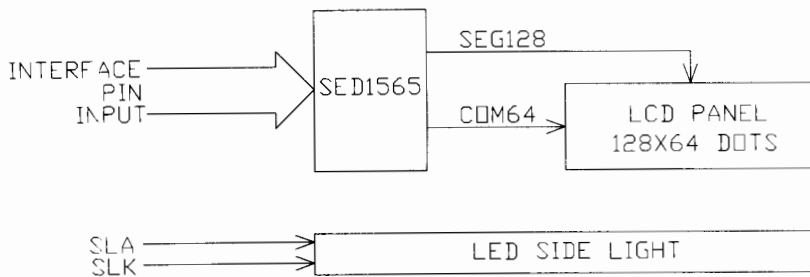


OUTLINE DIMENSION

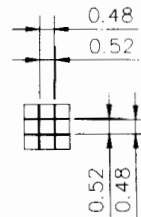


Graphic Type

BLOCK DIAGRAM



DISPLAY PATTERN



MECHANICAL SPECIFICATION

Item	Dimensions (w) X (H)	Units
Overall Size	87.0 X 52.9	MM
View Area	70.7 X 38.8	MM
Dot Size	0.48 X 0.48	MM
Dot Pitch	0.52 X 0.52	MM

PIN ASSIGNMENT

Pin No.	Symbol	Level	Description
1-5	V5-V1	--	LCD operating voltage Value of C2 must be above 1.0uF
6	VRS	--	Can not be used
7	CAP2+	--	DC/DC voltage converter
8	CAP2-	--	DC/DC voltage converter
9	CAP1-	--	DC/DC voltage converter
10	CAP1+	--	DC/DC voltage converter
11	VOUT	--	DC/DC voltage converter
12	VSS	--	Power supply
13	VDD	--	Power supply
14	SI	H/L	Serial data input
15	SCL	H-L	Serial clock input
16	/RD	H-L	8080: active LOW, 6800: HIGH
17	/WR	H-L	8080: active LOW, 6800: H -> read, load -> write
18	A0	H/L	H: D0-D7 display data, L: D0-D7 control data
19	/RESET	H-L	Reset
20	/CS1	H-L	Chip select siget

ABSOLUTE MAXIMUM RATING

Item	Symbol	Condition	Min.	Max.	Units
Supply for logic voltage	VDD	25°C	-0.3	7.0	V
LCD driving supply voltage	VLCD	25°C	-18	0.3	V
Input voltage	VI	25°C	-0.3	VDD+0.3	V

ELECTRICAL CHARACTERISTICS

Item	Symbol	Condition	Value	Units
Supply voltage for logic and for converter voltage	VDD	25°C	2.8+/-0.1	V
Supply voltage for LCD	VLCD	25°C	9.0+/-0.1	V
Consumption voltage of the whole LCD module	VOUT	25°C	10.0+/-0.2	V
Input voltage	VI	25°C	680(max)	uA

REMARKS:

- LCD options: STN, FSTN.
- Back light Options: EL Back light feature, other Specs not available on catalog is under request.