



## ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Min.	Max.	Unit
Supply Voltage(Logic)	$V_{DD}/V_{DD2} - V_{SS}$	-0.3	3.6	V
Supply Voltage(LCD)	$V_{OUT} - V_{SS}$	-0.3	13.5	V
Input Voltage	$V_I$	-0.3	$V_{DD} + 0.3$	V
Operating Temp.	$T_{opr}$	-20	70	°C
Storage Temp.	$T_{stg}$	-30	80	°C

## MECHANICAL DATA

Item	Nominal Dimensions	Unit
Module Size ( W x H x T )	55.0 x 28.24 x 8.7	mm
Viewing Area ( W x H )	52.0 x 15.0	mm
Dot Pitch ( W x H )	0.365 x 0.415	mm
Dot Size ( W x H )	0.345 x 0.395	mm
Weight	Approx. 6	g

## ELECTRICAL CHARACTERISTICS ( $V_{DD}/V_{DD2}=2.7V$ to $3.3V$ )

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Input High Voltage	$V_{IH}$	--	$0.8V_{DD}$	--	$V_{DD}$	V
Input Low Voltage	$V_{IL}$	--	0	--	$0.2V_{DD}$	V
Output High Voltage	$V_{OH}$	$I_{OH} = -0.1mA$	$0.8V_{DD}$	--	$V_{DD}$	V
Output Low Voltage	$V_{OL}$	$I_{OL} = 0.1mA$	0	--	$0.2V_{DD}$	V
Supply Current	$I_{DD}$	$V_{DD}/V_{DD2}=3.0V$	--	150	250	uA
LCD Driving Voltage	$V_0 - V_{SS}$	$T_a=25^\circ C$	--	7.6	--	V

## PIN CONNECTIONS

Pin	Symbol	Level	Function
1	NC	--	No connection
2	NC	--	No connection
3-18	NIL	--	Nil
19	NC	--	No connection
20	NC	--	No connection
21	V0	--	Power supply for LCD drive
22	V1	--	Power supply for LCD drive
23	V2	--	Power supply for LCD drive
24	V3	--	Power supply for LCD drive
25	V4	--	Power supply for LCD drive
26	Vss	0V	GND
27	CAP2N	--	Capacitor 2 negative connection
28	CAP2P	--	Capacitor 2 positive connection
29	CAP1P	--	Capacitor 1 positive connection
30	CAP1N	--	Capacitor 1 negative connection
31	CAP3P	--	Capacitor 3 positive connection
32	Vout	--	DC/DC voltage converter output
33	Vss	0V	GND
34	VDD2	2.7 to 3.3V	Power supply for booster
35	VDD	2.7 to 3.3V	Power supply for logic
36	SI	H/L	Serial data input
37	SCL	H/L	Serial clock input
38	A0	H/L	H: Display data L: Instruction code
39	/RES	L	Reset signal. Active "L".
40	/CS1	L	Chip selection signal. Active "L".

## BLOCK DIAGRAM

