

### ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Min.	Max.	Unit
Supply Voltage(Logic)	V <sub>DD</sub> - V <sub>SS</sub>	-0.3	6.0	V
Supply Voltage(LCD)	V <sub>OUT</sub> - V <sub>SS</sub>	-0.3	7.0	V
Input Voltage	V <sub>I</sub>	-0.3	V <sub>DD</sub> + 0.3	V
Operating Temp.	T <sub>opr</sub>	-20	70	°C
Storage Temp.	T <sub>stg</sub>	-30	80	°C

### MECHANICAL DATA

Item	Nominal Dimensions	Unit
Module Size ( W x H x T )	36.2 x 24.0 x 8.5	mm
Viewing Area ( W x H )	31.6 x 13.0	mm
Character Size ( W x H )	2.95 x 5.55	mm
Dot Size ( W x H )	0.55 x 0.65	mm
Weight	Approx. 7	g

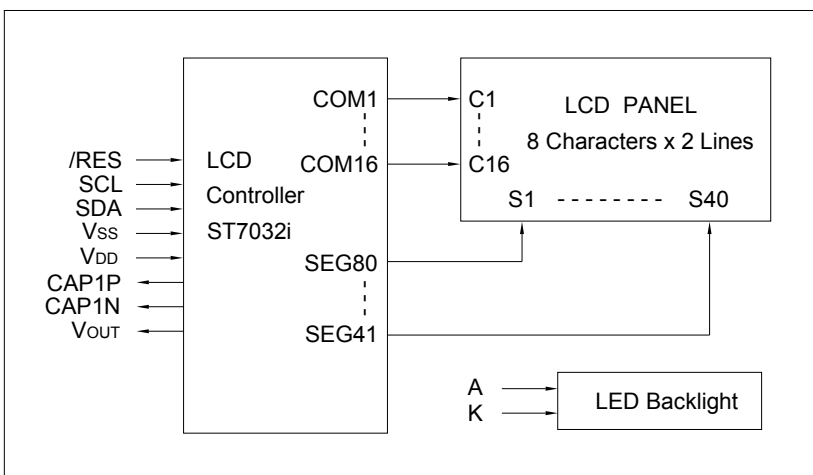
### ELECTRICAL CHARACTERISTICS (V<sub>DD</sub>=2.7 to 3.5V or 4.8 to 5.5V)

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Input High Voltage	V <sub>IH</sub>	V <sub>DD</sub> =2.7 to 3.5V	1.9	--	V <sub>DD</sub>	V
Input Low Voltage	V <sub>IL</sub>	V <sub>DD</sub> =2.7 to 3.5V	0	--	0.8	V
Input High Voltage	V <sub>IH</sub>	V <sub>DD</sub> =4.8 to 5.5V	2.7	--	V <sub>DD</sub>	V
Input Low Voltage	V <sub>IL</sub>	V <sub>DD</sub> =4.8 to 5.5V	0	--	0.8	V
Supply Current	I <sub>DD</sub>	V <sub>DD</sub> =2.7 to 5.5V	--	200	250	uA
LCD Driving Voltage	V <sub>0</sub> - V <sub>SS</sub>	T <sub>a</sub> =25°C	--	4.6	--	V

### PIN CONNECTIONS

Pin	Symbol	Level	Function
1	/RES	L	Reset signal. Active "L".
2	SCL	H/L	I2C Serial clock input
3	SDA	H/L	I2C Serial data input
4	VSS	0V	GND
5	VDD	2.7 to 3.5V or 4.8 to 5.5V	Power supply for logic and booster
6	CAP1P	--	Capacitor for voltage converter. VDD=3.3V: Connect a 1uF/16V capacitor between CAP1P and CAP1N.
7	CAP1N	--	VDD=5V: Keep CAP1P and CAP1N open.
8	VOUT	--	DC/DC voltage converter output. VDD=3.3V: Connect a 1uF/16V capacitor between VOUT and VDD. VDD=5V: Connect VOUT to VDD.

### BLOCK DIAGRAM



### LED BACKLIGHT SPECIFICATIONS (T<sub>a</sub>=25°C)

Item	Symbol	Typ.	Max.	Unit
Forward Voltage	V <sub>f</sub>	2.9	3.1	V
Forward Current	I <sub>f</sub>	20	--	mA
LED Color		White		