

## ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Min.	Max.	Unit
Supply Voltage(Logic)	$V_{DD} - V_{SS}$	-0.3	6.0	V
Supply Voltage(LCD)	$V_{OUT} - V_{SS}$	-0.3	19.8	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)	106.0 x 31.0 x 11.5	mm
Viewing Area (W x H)	84.0 x 18.4	mm
Dot Pitch (W x H)	0.30 x 0.23	mm
Dot Size (W x H)	0.28 x 0.21	mm
Weight	Approx. 36	g

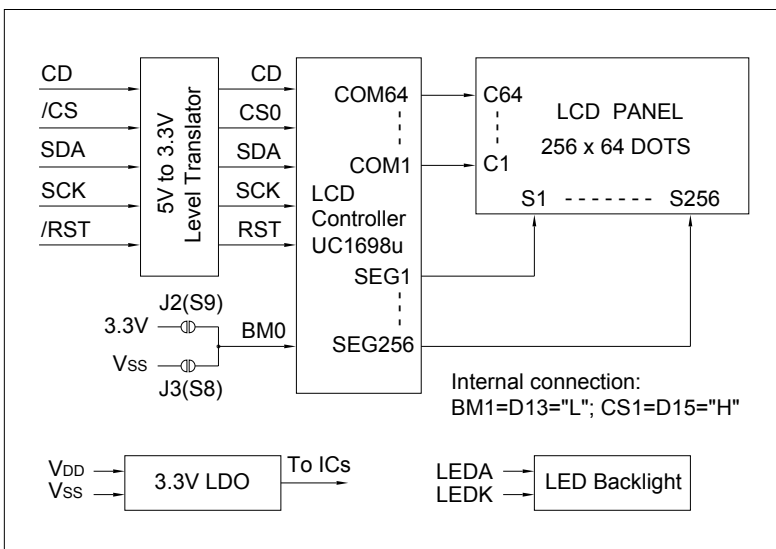
## ELECTRICAL CHARACTERISTICS ( $V_{DD}=3.3V$ to 5.5V )

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Input High Voltage	$V_{IH}$	--	2.0	--	$V_{DD}$	V
Input Low Voltage	$V_{IL}$	--	0	--	0.8	V
Supply Current	$I_{DD}$	$V_{DD} = 3.3V$	--	1.5	2.0	mA
		$V_{DD} = 5.0V$	--	1.5	2.0	mA
LCD Driving Voltage	$V_{LCD} - V_{SS}$	$T_a = 25^\circ C$	--	13.2	--	V

## PIN CONNECTIONS (CN1/CN2)

Pin	Symbol	Level	Function
1	$V_{SS}$	0V	GND
2	$V_{DD}$	3.3V to 5.5V	Power supply for logic
3	CD	H/L	CD="H": Display data CD="L": Instruction code
4	/CS	L	Chip selection signal. Active "L".
5	SDA	H/L	Serial data input
6	SCK	H/L	Serial clock input
7	/RST	L	Reset signal. Active "L".
8	NC	--	No connection
9	LEDA	5V	Power supply for LED backlight
10	LEDK	0V	

## BLOCK DIAGRAM



## SET BUS MODE BY JUMPERS

Jumper Status	J3 Status	BM0 Level	Bus Mode
J2 Open	J3 Close	L	4-wire SPI (S8)
J2 Close	J3 Open	H	3-wire SPI (S9)
J2 Open	J3 Open	Float	Not allowed
J2 Close	J3 Close	--	Not allowed

## LED BACKLIGHT SPECIFICATIONS ( $T_a=25^\circ C$ )

Item	Symbol	Typ.	Max.	Unit
Forward Voltage	$V_f$	2.8	2.9	V
Forward Current	$I_f$	30	--	mA
LED Color		White		