

ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Min.	Max.	Unit
Supply Voltage(Logic)	V _{DD} - V _{SS}	-0.3	7.0	V
Supply Voltage(LCD)	V _{DD} - V _O	-0.3	30.0	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)	160.0 x 109.0 x 13.5	mm
Viewing Area (W x H)	122.0 x 92.0	mm
Dot Pitch (W x H)	0.36 x 0.36	mm
Dot Size (W x H)	0.33 x 0.33	mm
Weight	Approx. 220	g

ELECTRICAL CHARACTERISTICS (V_{DD}=3.3V to 5.0V)

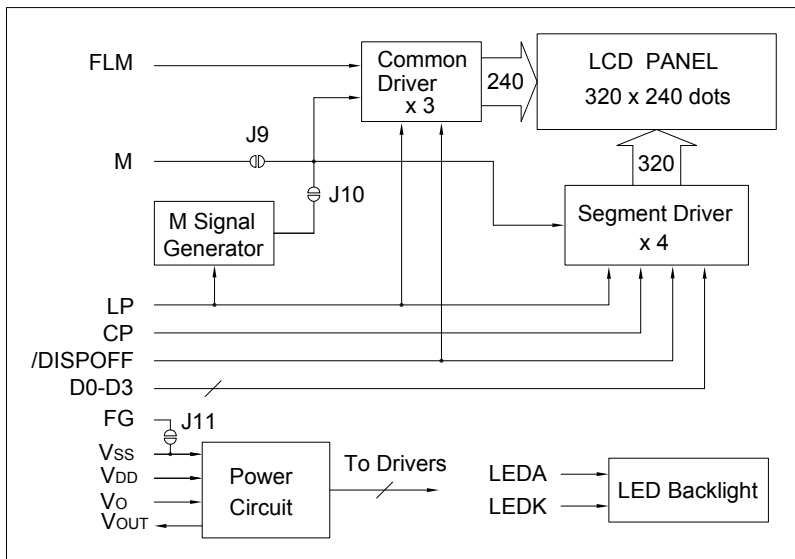
Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Input High Voltage	V _{IH}	--	0.8V _{DD}	--	V _{DD}	V
Input Low Voltage	V _{IL}	--	0	--	0.2V _{DD}	V
Supply Current	I _{DD}	V _{DD} = 5.0V	--	30.0	60.0	mA
		V _{DD} = 3.3V	--	40.0	80.0	mA
LCD Driving Voltage	V _{DD} - V _O	T _a =25°C	--	22.7	--	V

PIN CONNECTIONS (CN1/CN2/CN3)

Pin	Symbol	Level	Function
1	D0	H/L	Data bus
2	D1	H/L	
3	D2	H/L	
4	D3	H/L	
5	/DISPOFF	H/L	H: display on L: display off
6	FLM	H	Scan start-up pulse
7	NC (M)	--	No connection (J10 close and J9 open) or external M signal (J9 close and J10 open). Note 1
8	LP	H>L	Display data latch pulse
9	CP	H>L	Display data shift pulse
10	V _{DD}	3.3V-5V	Power supply for logic
11	V _{SS}	0V	GND
12	V _{OUT}	-22V	Output voltage for LCD driving
13	V _O	--	Operating voltage for LCD
14	FGND	--	Frame ground
15	LEDA	5V	Power supply for LED backlight
16	LEDK	0V	Note 2

Note: Only CN1 is with Pin15 and Pin16 terminals

BLOCK DIAGRAM



LED BACKLIGHT SPECIFICATIONS (T_a=25°C)

Item	Symbol	Typ.	Max.	Unit
Forward Voltage	V _f	3.1	3.3	V
Forward Current	I _f	150	--	mA
LED Color		White		