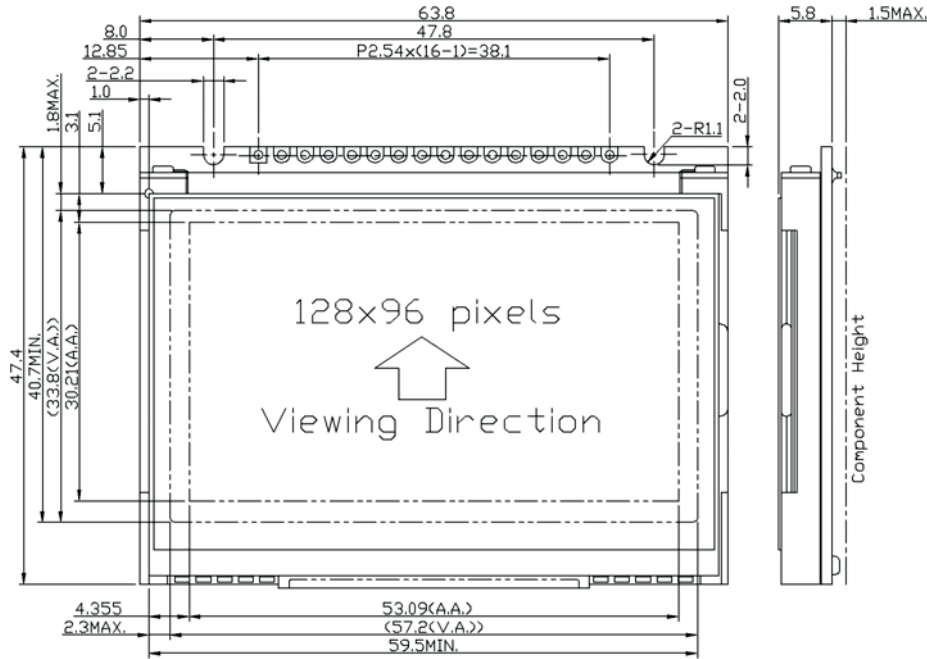


OUTLINE DRAWING



TERMINAL FUNCTIONS

Pin	Name	Descriptions			
		80 mode	68 mode	4 pin serial	3pin serial
1	/CS	Chip selection			
2	/RST	Reset Signal			
3	RS	Register Select			Not use
4	/WR (R/W)	Write Enable	Read/Write Signal	Not use	
5	/RD(E)	Read Enable	Enable Signal	Not use	
6	DB0	8 bit data bus Three state I/O terminal for display data or instruction data.		Not use	
:	:				
11	DB5				
12	DB6 (SCLK)			Serial Clock Signal	
13	DB7 (SID)			Serial Data	
14	VDD	Positive Power Supply			
15	VSS	0V Power Supply, Ground			
16	BLA	LED Backlight Positive Power Supply			

DISPLAY CHARACTERISTICS

Item	Value
LCD Display Mode	FSTN, Positive, Transflective
Viewing Angle	6:00
Driving Method	1/96 duty, 1/10 bias
Backlight	White LED Backlight

MECHANICAL DATA

Item	Value
Outline (mm)	63.8 x 47.4 x 7.3MAX
Viewing Area (mm)	57.2 x 33.8
Active Area (mm)	53.09 x 30.21
Dot Pitch (mm)	0.415 x 0.315
Dot Size (mm)	0.385 x 0.285

ABSOLUTE MAXIMUM

Item	Symbol	Min	Max
Operating Voltage (V)	V _{DD}	0	3.4
Operating Temperature (°C)	T _{OP}	-20	+70
Storage Temperature (°C)	T _{ST}	-30	+80

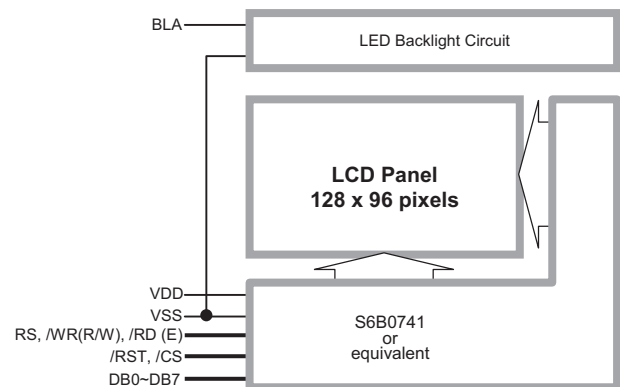
ELECTRICAL CHARACTERISTICS

Item	Symbol	Min	Typ	Max
Operating Voltage (V)	V _{DD}	3.0	3.3	3.4
Input High Voltage (V)	V _{IH}	0.8 V _{DD}	-	V _{DD}
Input Low Voltage (V)	V _{IL}	V _{SS}	-	0.2V _{DD}
Operating Current (mA)	I _{DD}	-	1.3	7.5

BACKLIGHT CHARACTERISTICS

Item	Symbol	Min	Typ	Max
Forward Voltage (V)	V _{fBLA}	-	3.3	-
Forward Current (mA)	I _{fBLA}	-	40	80

BLOCK DIAGRAM



LM9033A series

	Highlight	
	LCD Mode	
LM9033A*	FSTN-Pos	Serial
LM9033A-1	STN-Blue	Serial
LM9033ACW-1	FSTN-Pos	80mode
LM9033AFW-2	STN-Blue	80mode
LM9033AGG	FSTN-Neg	Serial

For similar product or (semi) custom made LCD module, please visit our web site or contact us.

*The above product information is based on this model.