

# TSM12232A Series

## Display Feature

Item	Value
Structure	COB With Metal Frame
LCD Display Mode	STN-YG, Positive, Transflective
Viewing Angle	6H
Driving Method	1/32 duty, 1/5 bias
Backlight	Yellow-green LED Backlight
Control/Driver IC	SED1520 or Equivalent



## Mechanical Data

Item	Value
Outline	84.0 x 44.0 x 13.9Max.
Viewing Area	60.0 x 18.0
Active Area	48.76 x 14.36
Dot Pitch	0.4 x 0.45
Dot Size	0.36 x 0.41

## Absolute Maximum

Item	MIN.	MAX.
Operating Voltage(V)	0	6.0
Operating Temperature(°C)	-20	+70
Storage Temperature(°C)	-30	+80

## Electrical Characteristics

Item	Symbol	MIN.	TYP.	MAX
Operating Voltage(V)	V <sub>DD</sub>	4.7	5.0	5.3
Input High Voltage(V)	V <sub>IH</sub>	0.7V <sub>DD</sub>	-	V <sub>DD</sub>
Input Low Voltage(V)	V <sub>IL</sub>	V <sub>SS</sub>	-	0.5
Operating Current(mA)	I <sub>DD</sub>	-	2.0	3.0
Forward Voltage(V)	V <sub>f</sub> BL	-	5.0	-
Forward Current(mA)	I <sub>f</sub> BL	-	90	110

## Terminal Function

No.	Pin Name	Descriptions
1	VSS	Power Supply, (0V)
2	VDD	Positive Power Supply
3	V0	LCD Contrast Reference Supply
4	A0	Register Select
5	E1	Data Enable ( left-half panel )
6	E2	Data Enable ( right-half panel )
7	R/W	Read/write Signal
8	DB0	Data Bus Line
:	:	
15	DB7	
16	/RST	Reset Signal
17	BLA	Backlight Power Supply Anode
18	BLK	Backlight Power Supply Cathode

## Outline Drawing

