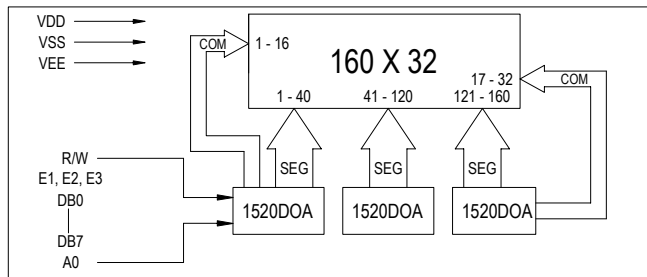
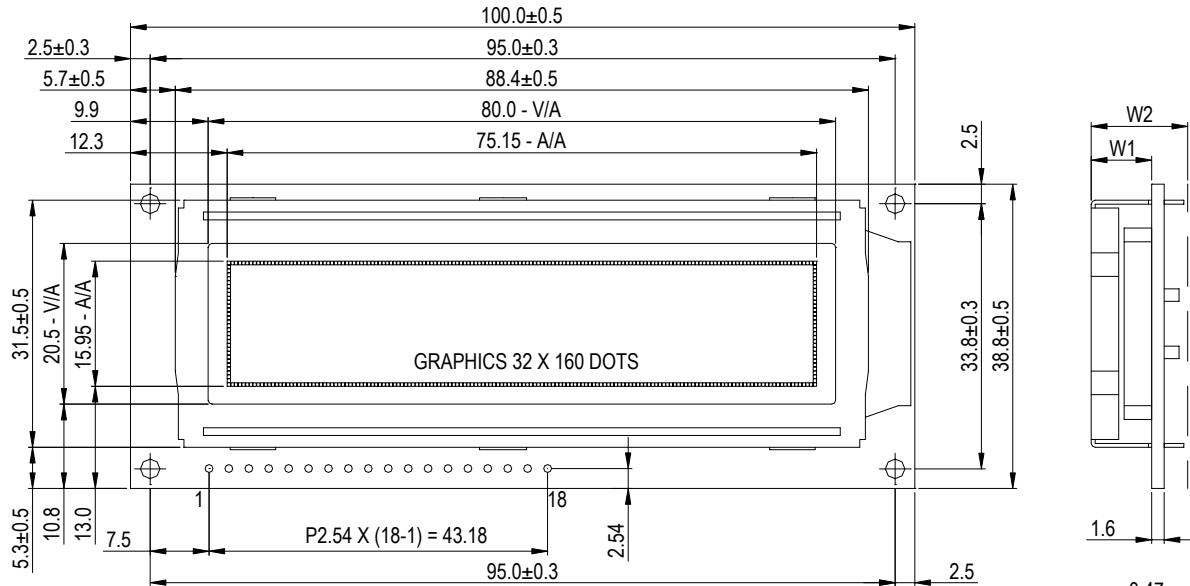




STANDARD GRAPHICS MODULES

G32160x02..... OUTLINE DIMENSION AND BLOCK DIAGRAM



VERSION	W1	W2
NO/EL BACKLIGHT	5.70±0.5	10.5 MAX
BOTTOM LED BACKLIGHT	7.70±0.5	12.5 MAX

The tolerance unless classified ±0.3 mm

PIN ASSIGNMENT		
Pin No.	Symbol	Function
1	VSS	Ground Terminal
2	VDD	Supply Terminal
3	VEE	Negative Supply Voltage
4	A0	Power Supply for LCD Driver
5	R/W	Read/Write Selection
6	E3	Enable IC U ₂
7	DB0	Data Bus Line
8	DB1	Data Bus Line
9	DB2	Data Bus Line
10	DB3	Data Bus Line
11	DB4	Data Bus Line
12	DB5	Data Bus Line
13	DB6	Data Bus Line
14	DB7	Data Bus Line
15	NC	-
16	NC	-
17	E1	Enable IC U ₁
18	E2	Enable IC U ₃
19	BL+	Led Backlight Power Supply
20	BL-	Led Backlight Ground

NOTE :
1. ALL BACKLIGHT : SIDE LED BACKLIGHT

ABSOLUTE MAXIMUM RATING						
Item	Symbol	Conditions	Min.	Max.	Unit	
Power Supply Voltage	Vdd-Vss	-	-0.3	8.0	V	
Input Voltage	Vin	-	Vss	Vdd	V	
NORMAL	OPERATING TEMPERATURE	Topr	Normal	0	+50	°C
	STORAGE TEMPERATURE	Tstg	Normal	-20	+70	°C
WIDE	OPERATING TEMPERATURE	Topr	Normal	-20	+70	°C
	STORAGE TEMPERATURE	Tstg	Normal	-30	+80	°C
ELECTRICAL CHARACTERISTIC (Vdd = + 5v, Ta = 25°C)						
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Logic Supply Voltage	Vdd	-	2.4	-	5.5	V
"H" Input Voltage	V _{ih}	-	2.2	-	Vdd	V
"L" Input Voltage	V _{il}	-	-0.3	-	0.6	V
"H" Output Voltage	V _{oh}	-	2.4	-	-	V
"L" Output Voltage	V _{ol}	-	-	-	0.4	V
Module Supply Current	I _{dd}	-	-	1.5	2.0	mA
LCD Driving Voltage	V _{lcd}	Vdd-Vo	-	7.0	-	V
Negative Supply Voltage	VEE	Vss-VEE	-	-4.0	-	V

BACKLIGHT OPTION						
LED COLOR	OPTION	CONDITION	FORWARD CURRENT (mA)			
			MIN	TYP	MAX	
GREEN	NO	V _{led} = 5.0 V R _{led} = 33.0 ohm	-	35	40	
WHITE	YES	V _{led} = 5.0 V R _{led} = 33.0 ohm	-	35	40	
BLUE	YES	V _{led} = 5.0 V R _{led} = 33.0 ohm	-	35	40	
AMBER	NO	-	-	-	-	
RED	NO	-	-	-	-	
EL	NO	-	-	-	-	

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