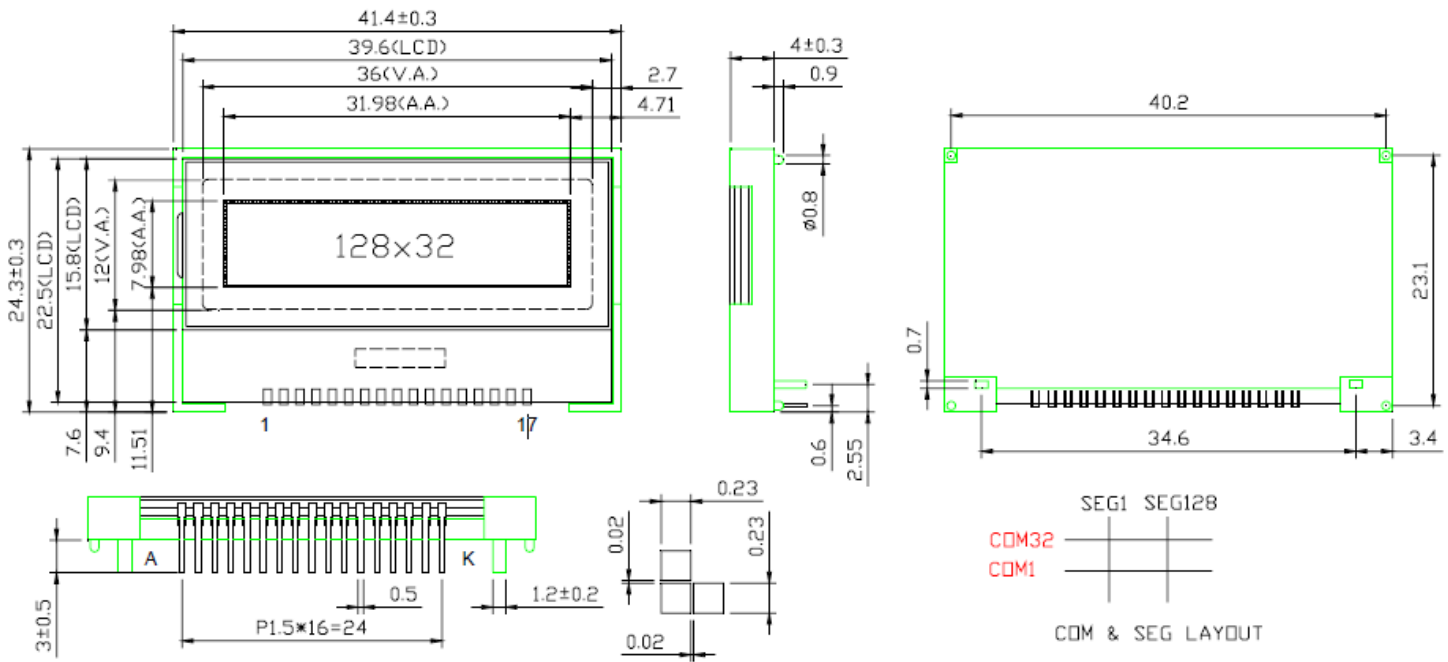




# Basic Graphic LCD Drawing

Part Number: **FDS128x32(41.4x24.3)LGG**



- Features:**
- 128x32 dots Graphic LCD module
  - Built-in controller (ST7565R or Equivalent)
  - 1/33 duty, 1/6 bias, 3.3V power supply
  - 4-line SPI MPU interfaces

## Mechanical Data

ITEM	STANDARD	UNIT
MODULE DIMENSION	41.4 X 24.3	mm
VIEWING AREA	36.0 X 12.0	mm
DOT SIZE	0.23 X 0.23	mm



### Interface Pin Connections

NO	SYM	I/O	FUNCTION
1~5	V0~V4	Power Supply	Power supply LCD
6	C2+		For voltage booster circuit. External capacitor about 0.47uF~2.2uF.
7	C2-		
8	C1+		DC/DC voltage converter
9	C1-		
10	V <sub>OUT</sub>		
11	V <sub>SS</sub>		Signal ground for LCM
12	V <sub>DD</sub>	Power supply for logic for LCM	
13	SDA (SI)	MPU	Input data
14	SCL	MPU	Serial clock
15	A0	MPU	Select registers. 0:instruction; 1:data register
16	RST	MPU	External reset PIN. Must be fixed to V <sub>DD</sub> low active.
17	CS1B	MPU	Chip select in serial interface low active.
A	LED+	LED BKL power supply	Power supply for BKL
K	LED-		

### Absolute Maximum Rating

ITEM	SYMBOL	MIN	TYP	MAX	UNIT
Power Voltage	V <sub>DD</sub> -V <sub>SS</sub>	0	--	6.0	V
Input Voltage	V <sub>IN</sub>	V <sub>SS</sub>	--	V <sub>DD</sub>	
Operating Temperature Range	V <sub>OP</sub>	-20	--	+70	°C
Storage Temperature Range	V <sub>ST</sub>	-30	--	+80	

### Electrical Characteristics

ITEM	SYM	CONDITION	MIN	TYP	MAX	UNIT
Supply Voltage for LCD	V <sub>DD</sub> -V <sub>0</sub>	T <sub>a</sub> = 25°C	--	6.0	--	V
Input Voltage	V <sub>DD</sub>		2.7	3.0	3.3	
Supply Current	I <sub>DD</sub>	T <sub>a</sub> = 25°C, V <sub>DD</sub> =3.0V	--	0.25	0.45	mA
Input Leakage Current	I <sub>LKG</sub>		--	--	1.0	uA
"H" level input voltage	V <sub>IH</sub>		2.2	--	V <sub>DD</sub>	
"L" level input voltage	V <sub>IL</sub>	Twice initial value or less	0	--	0.6	
"H" level output voltage	V <sub>OH</sub>	LOH= -0.25mA	2.4	--	--	
"L" level output voltage	V <sub>OL</sub>	LOH= 1.6mA	--	--	0.4	
Backlight supply voltage	V <sub>F</sub>		--	3.0	--	
Backlight supply current	I <sub>LED</sub>	V <sub>F</sub> -3.0V				