

*Phoenix Display International, Inc.*

# PRODUCT PREVIEW

## 128 x 64 Monochrome

**TN/STN**

Graphics

Liquid Crystal Display

### SPECIFICATIONS

#### MODULE

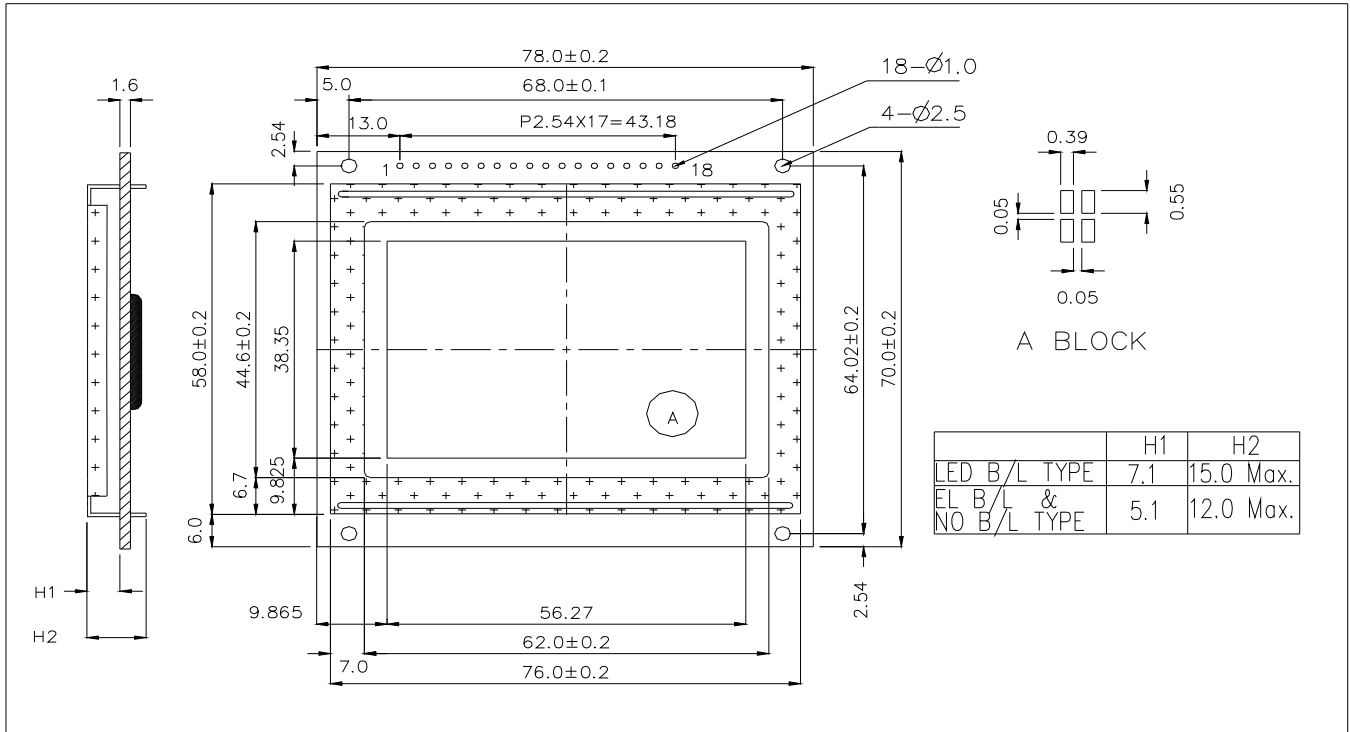
Part Number	G-1286408C-VA
Format	128 Columns by 64 Rows
Controller	KS0108
Overall Dimensions	78.0mm x 70.0mm x 12.0mm
Active Area	56.3mm x 38.4mm
Pixel Pitch	440um x 600um
Pixel Size	390um x 550um
Backlight System	None, EL or LED
Driver Attach	Chip on Board (COB)
Display Type	STN, FSTN
Duty	1/64
Bias	1/9



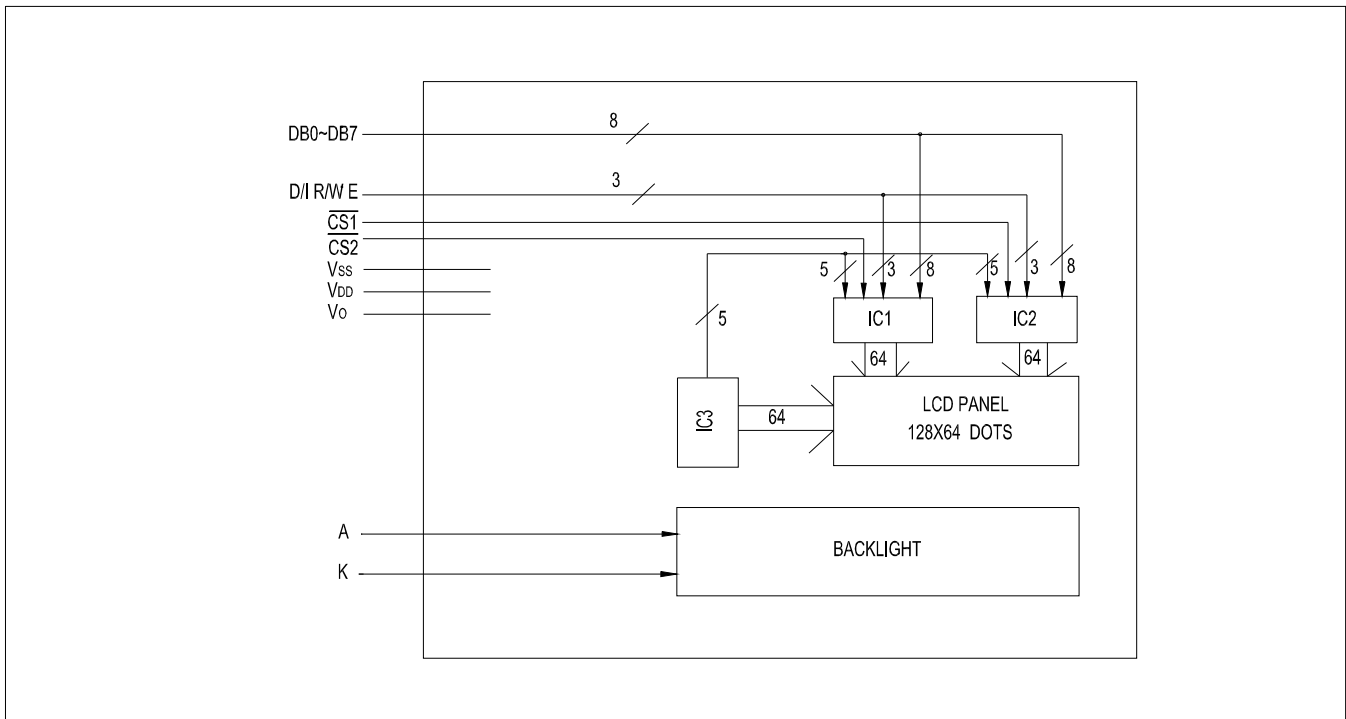
# G-1286408C-VA

1/64 DUTY, 1/9 BIAS  
128x64 DOTS

## 1.0 DIMENSIONAL DRAWING



## 2.0 BLOCK DIAGRAM



## 3.0 ELECTRICAL CHARACTERISTICS $T_a=25^\circ\text{C}$ $V_{DD}=5.0\text{V}\pm 0.25\text{V}$

Item	Symbol	Test Condition	Standard Value			
			Min.	Typ.	Max.	Unit
Power Supply Voltage	$V_{DD}-V_{SS}$	25°C	4.5	5.0	5.5	V
LCD Operation Voltage	$V_{OP}$		-	10.5	-	V
LCM Current Consumption	$I_{DD}$		-	9.0	15.0	mA
Backlight Forward Voltage	$V_F$		-	4.5	4.25	V

## 4.0 ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Test Condition	Standard Value		
			Min.	Max.	Unit
Supply Voltage (Logic)	$V_{DD}-V_{SS}$	25°C	-0.3	7	V
Supply Voltage (LCD)	$V_{DD}-V_{O}$		-0.3	17.5	V
Input Voltage	$V_{IN}$		-0.3	$V_{DD}+0.3$	V
Operating Temp.	$T_{OPR}$	-	0	50	°C
Storage Temp.	$T_{STG}$	-	-20	70	°C

## 5.0 PIN ASSIGNMENT

PIN No.	Symbol	Description
1	/CS1	Chip select signal for IC1
2	/CS2	Chip select signal for IC2
3	GND	Power supply(GND)
4	$V_{DD}$	Power supply
5	$V_o$	Power supply for LCD
6	D/I	Register selection H: Display data; L: Instruction
7	R/W	Read/Write selection H: Read; L: Write
8	E	Enable signal
9~16	D0~D7	Data bus
17	LEDK	LED Back-light
18	LEDA	LED Back-light

### Remark

1. LCD option: STN, FSTN .
2. Standard module.
3. Backlight option: LED,EL backlight feature, other specs not available on catalog is under request.