

Phoenix Display International, Inc.

# PRODUCT PREVIEW

## 128 x 64 Monochrome

**TN/STN**

Graphics  
Liquid Crystal Display

### SPECIFICATIONS

#### MODULE

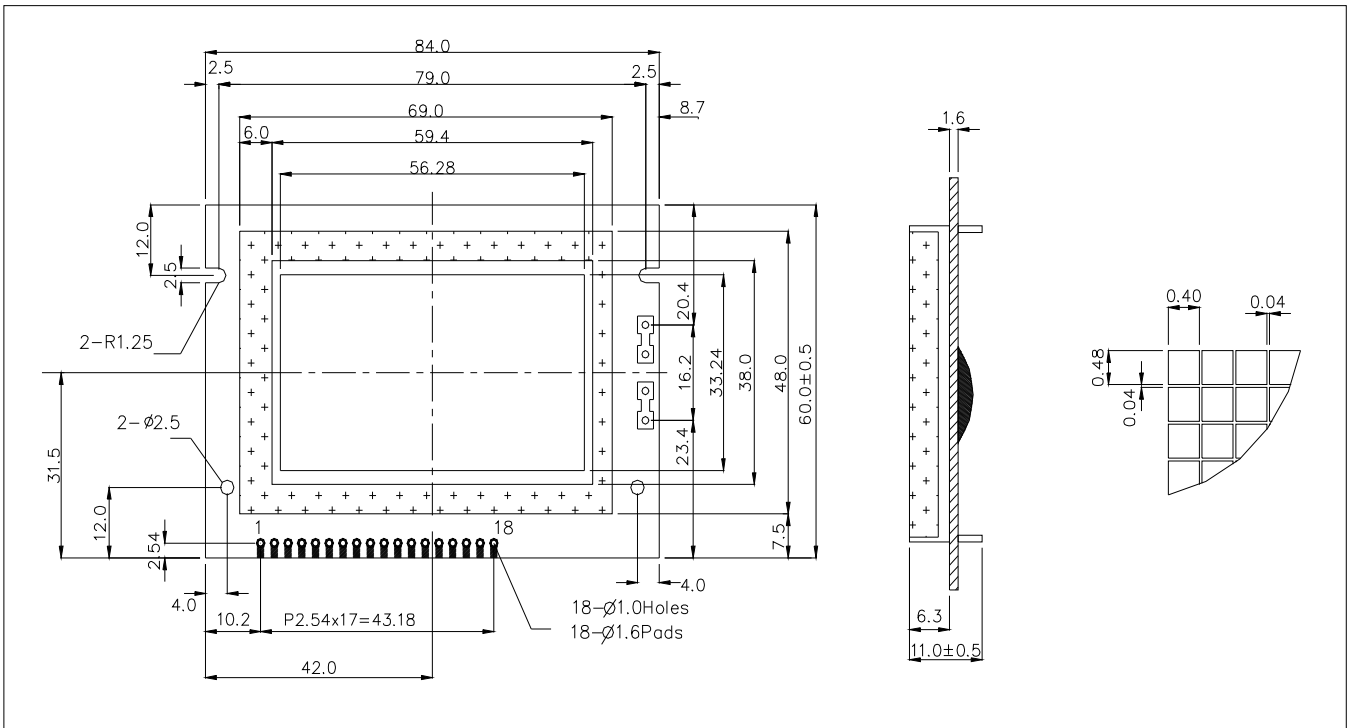
Part Number	G-1286421C-VA
Format	128 Columns by 64 Rows
Controller	KS0108
Overall Dimensions	84.0mm x 60.0mm x 11.5mm
Active Area	56.3mm x 33.2mm
Pixel Pitch	440um x 520um
Pixel Size	400um x 480um
Backlight System	LED
Driver Attach	Chip on Board (COB)
Display Type	STN, FSTN
Duty	1/64
Bias	1/9



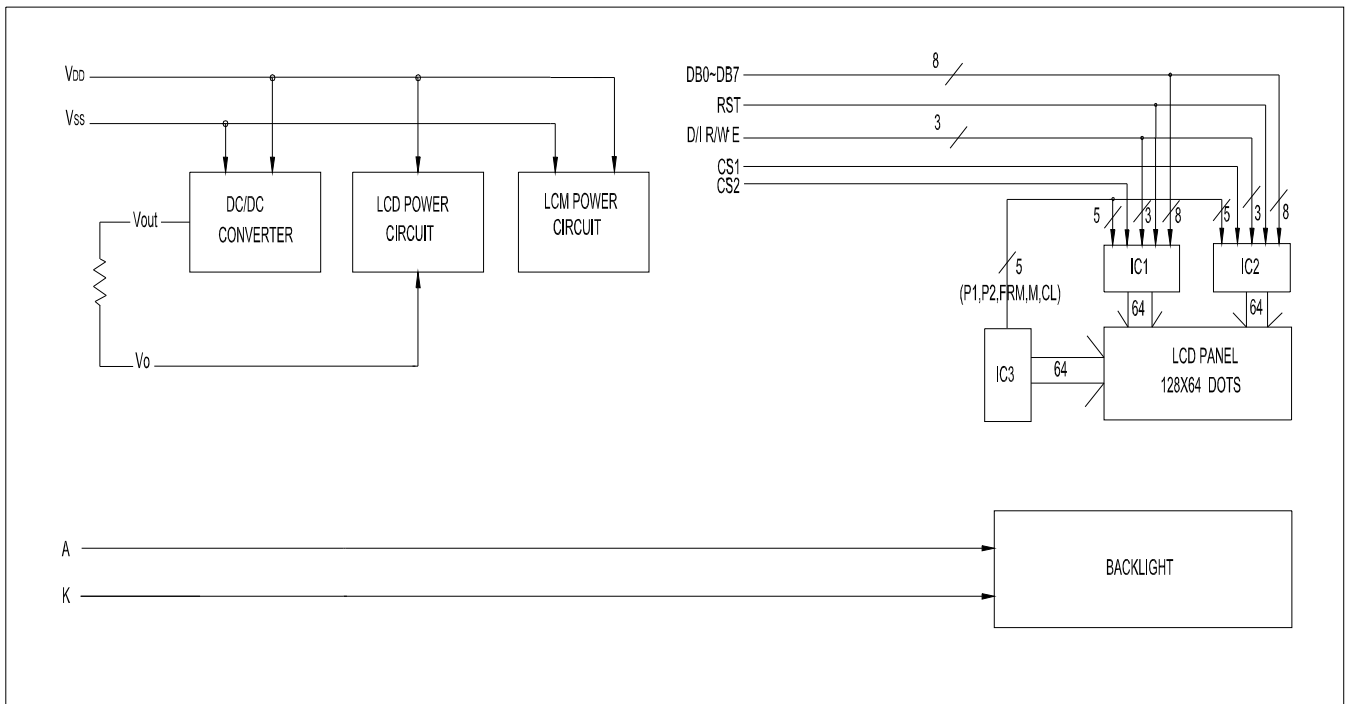
# G-1286421C-VA

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			Unit
			Min.	Typ.	Max.	
Power Supply Voltage	$V_{DD}-V_{SS}$	25°C	4.5	5.0	5.5	V
LCD Operation Voltage	$V_{OP}$		-	9.5	-	V
LCM Current Consumption	$I_{BD}$		-	9.0	15.0	mA
Backlight Forward Voltage	$V_F$		-	4.0	-	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	7.0	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
1~8	DB0~DB7	Data bus
9	E	Enable signal
10	R/W	Read/Write selection H: Read L: Write
11	D/I	Register selection H: Display data, L: Instruction
12	nc	No connection
13	$V_{DD}$	Power supply
14	GND	Power supply(GND)
15	LEDK	LED Back-light
16	LEDA	LED Back-light
17	CS1	Chip select signal for IC1
18	CS2	Chip select signal for IC2

**Remark**

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