

**Phoenix Display International, Inc.**

# PRODUCT PREVIEW

## 128 x 64 Monochrome

**TN/STN**

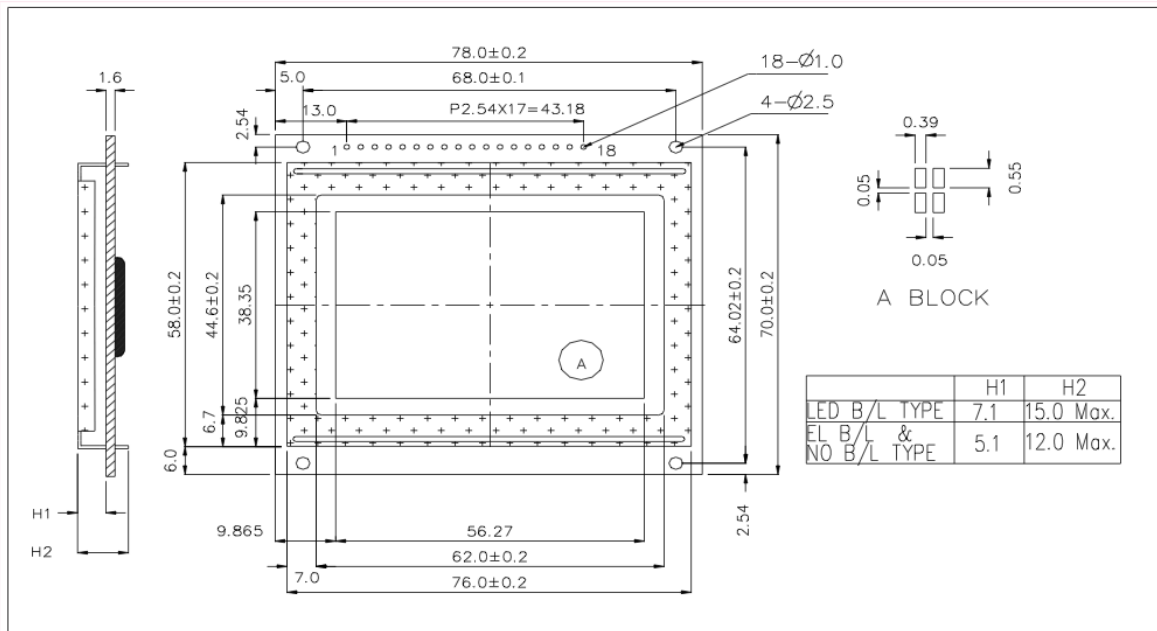
Graphics  
Liquid Crystal Display

### 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)
Glass Type	STN, FSTN
Display Type	R,TF,TM
Duty	1/64

**1.0 DIMENSIONAL DRAWING**



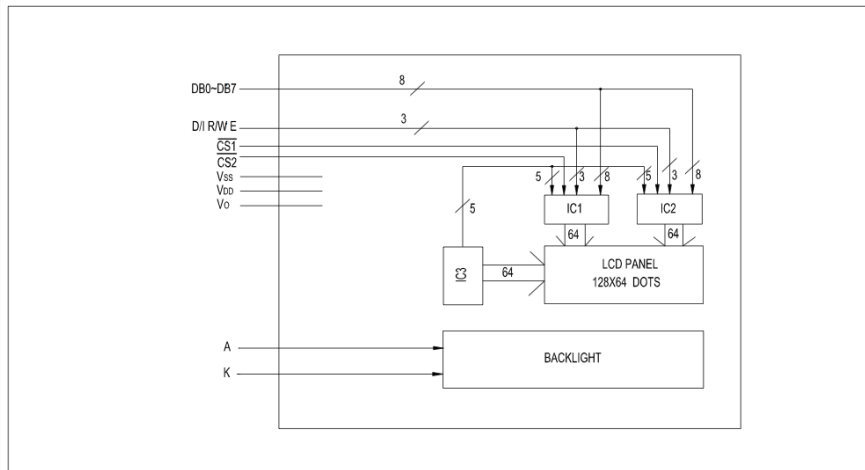
Phoenix Display International reserves the right to change this document without prior notice and disclaims all warranties. It is the recipient's duty to confirm with PDI before proceeding with a design. This document is PDI confidential and should not be reproduced without PDI approval.



# PRODUCT PREVIEW

## 128 x 64 Monochrome

### 2.0 BLOCK DIAGRAM



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

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	$V_{OP}$		-	10.5	-	V
LCM Current Consumption	$I_{OD}$		-	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		Unit
			Min.	Max.	
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**

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

