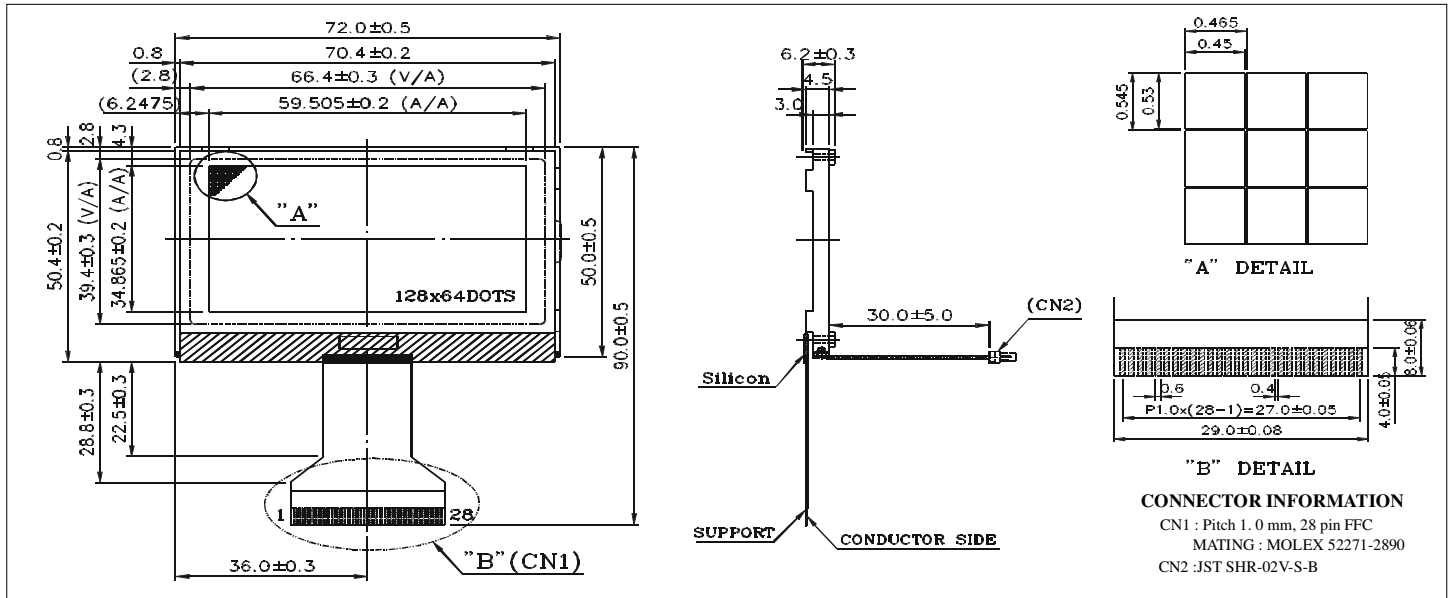


# HDG12864L-6

# Chip On Glass technology

## Dimensional Drawing

128 X 64 Dots Graphic, LED Backlight



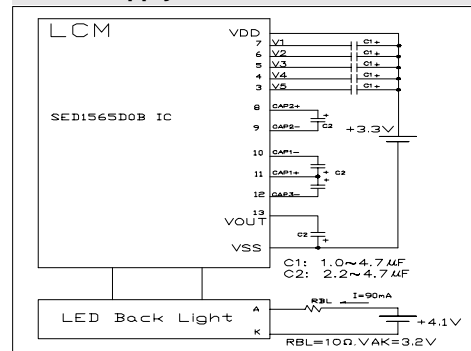
### Features

- Back light .....Blue LED
- Connection .....Flat Flex Cable
- Options.....STN/FSTN, Transflective Polarizer
- Built-in Controller.....Epson SED1565D0B or Compatible

### Physical Data

- Module Size.....72.0W x 50.4H x 6.2T mm
- Viewing Area Size.....67.0W x 40.0H mm
- Dot Pitch.....0.465W x 0.545H mm
- Dot Size.....0.45W x 0.53H mm
- Weight.....25.7g

### Power Supply



### Absolute Maximum Ratings

PARAMETER	SYMBOL	MIN	MAX	UNIT
SUPPLY VOLTAGE	$V_{DD}-V_{SS}$	- 0.3	5.5	V
INPUT VOLTAGE	$V_{IN}$	- 0.3	$V_{DD}$	V
OPERATING TEMPERATURE	$T_{OP}$	-20	70	°C
STORAGE TEMPERATURE	$T_{STG}$	-30	80	°C

### Electrical Characteristics (VDD=3.3±0.33V 25°C)

PARAMETER	SYM	CONDITION	MIN	TYP	MAX	UNIT
INPUT HIGH VOLTAGE	$V_{IH}$	-	$0.8V_{DD}$	-	$V_{DD}$	V
INPUT LOW VOLTAGE	$V_{IL}$	-	0	-	$0.2V_{DD}$	V
LCD DRIVING VOLTAGE	$V_{DD}-V_L$	$T_A=25^{\circ}C$	8.3	8.6	8.9	V
LCD POWER CURRENT	$I_{DD}$	$V_{DD}=3.3V$	-	0.4	0.6	mA
LED FORWARD VOLTAGE	$V_F$	$I_F = 90\text{ mA}$	-	3.2	3.5	V
LED FORWARD CURRENT	$I_F$	$V_F = 3.2\text{ V}$	-	90	120	mA
BRIGHTNESS	L	All Dots ON	-	0.59	-	cd/m <sup>2</sup>
		All Dots OFF	-	1.26	-	
DRIVE METHOD		1/64 Duty				

### Pin Connections

PIN NO.	SYMBOL	FUNCTION
1	P/S	Select Paralle/ Serial mode
2	C86	'H': 6800 Series MPU, 'L': 8080 MPU
3 - 7	V5-V1	This is a multi-level power supply for LCD drive
8	CAP2+	DC/DC Voltage Converter capacitors
9	CAP2-	
10	CAP1-	
11	CAP1+	
12	CAP3-	
13	VOUT #	
14	$V_{SS}$	Ground
15	$V_{DD}$	Power supply for Logic
16	D7 (SI)	Data Bus 7 or Serial Data Input
17	D6 (SCL1)	Data Bus 6 or Serial Clock Input
18 - 23	D5-D0	Data Bus
24	$\overline{RD}$ (E)	Enable Clock Input
25	$\overline{WR}$ (R/W)	Signal to select Read or Write
26	A0	Control/Data Select Signal
27	$\overline{RES}$	Reset Signal
28	$\overline{CS1}$	Chip Select Signal

#Has built-in inverter for negative power supply