

OLED displays are self-illuminating and require no backlight for maximum visibility in all environments. They consume less power and are also significantly thinner compared to LCD displays.

Bolymin offers Character and Graphic OLED displays that can be replaced your current LCD. Read more on directly replace LCD

GRAPHIC

Graphic OLED is meant to display images, letters and numbers.

For example, a 128 x 64 OLED would contain 128 horizontal dots and 64 Vertical dots.

Bolymin is a leading manufacturer of Graphic OLED modules in Taiwan.

We offer many standard graphic OLED, including 64x128, 128x32, 128x56, 128x64, 128x96, 136x160, 160x128, 256x64, 320x132 and also provide customized LCD.

Bolymin Graphic OLED is available in White and Yellow color options and offer Parallel or serial MPU interface (4 / 8-bit 6800 series parallel and I²C interface).



Inch	Display Format	Model No.	Module Size (mm)	Active Area (mm)	Dot Size (mm)	Interface	Compatible with Controller	Download Flyer
0.96	64x128	BL64128A	14.86x28.4	10.924x21.74	0.037x0.15	Parallel / SPI	SSD1357	
1,04	128x32	BL12832B	30.4x14.5	25.58x6.38	0.18x0.18	SPI	SSD1305	
1,04	128x32	BL12832B1	30.4x14.5	25.58x6.38	0.18x0.18	SPI	SSD1305	
1,04	128x32	BL12832B2	30.4x14.5	25.58x6.38	0.18x0.18	SPI	SSD1305	
1,51	128x56	BL12856A	42.04x63.2	35.05x15.32	0.254x0.254	Parallel / SPI / I2C	SSD1309	
2,42	128x64	BL12864G2	75.0x52.7	55.01x27.49	0.4x0.4	Parallel / SPI / I2C	SPD0301	
1,54	128x64	BL12864S	44.0x38.0	35.052x17.516	0.254x0.254	SPI / I2C	SPD0301	
1,32	128x96	BL12896A	33.0x26.8	26.86x20.14	0.19x0.19	Parallel / SPI	SSD1329	
1,27	128x96	BL12896D	33.7x26.9	25.708x19.28	0.047x0.185	Parallel / SPI	SSD1351U3	
1,40	136x160	BL136160A	32.70x54.85	27.18x23.10	0.15x0.15	SPI	SH1108	
1,77	160x128	BL160128A	42.7x33.4	35.015x28.012	0.048x0.199	SPI	SSD1353	
3,21	256x64	BL25664B	87.4x28.5	79.084x19.756	0.289x0.289	Parallel	SSD1322	
5,50	256x64	BL25664D	146.0x65.00	135.65x33.89	0.5x0.5	Parallel / SPI	SSD1322	
3,83	320x132	BL320132A	145.52x41.672	89.90x37.072	0.261x0.261	SPI	SSD1320Z	



BL64128A

Feature

1. OLED Display 64 RGB x 128 dots
2. Built-in controller SSD1357
3. 1.65V ~ 3.5 V power supply
4. 1/128 duty cycle
5. Color: 65K Color

Mechanical Data

Item	Standard Value	Unit
Module Dimension	14.86 x 28.40	mm
Active Area	10.924 x 21.74	mm
Dot Size	0.0370 x 0.150	mm
Dot Pitch	0.0570 x 0.170	mm



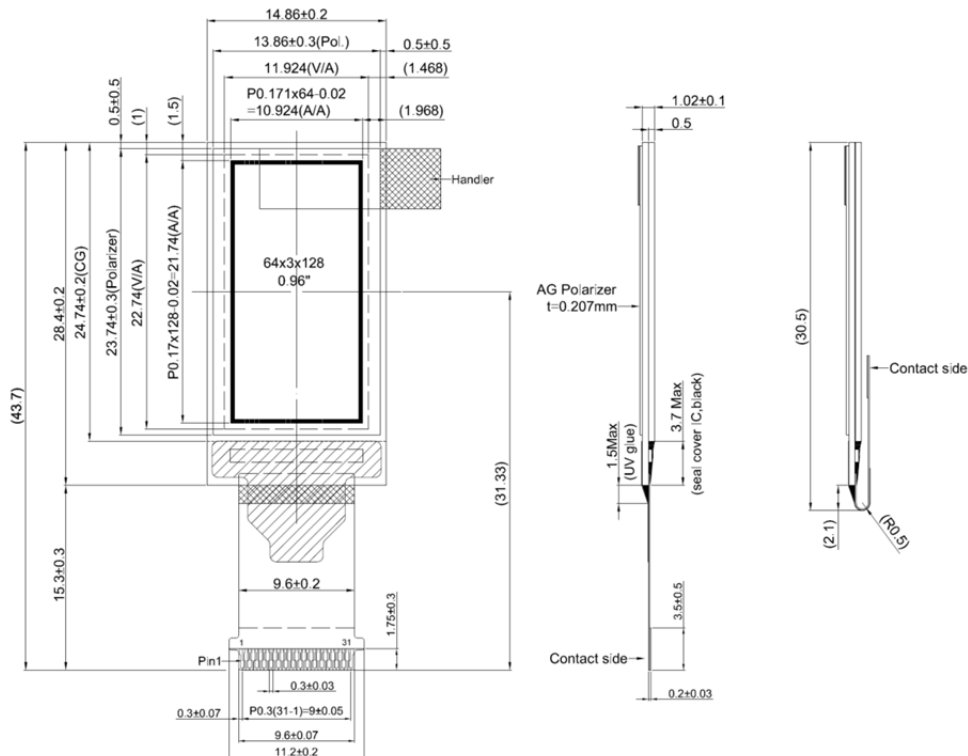
Pin Assignment

Pin	Symbol	Description
1,31	VLSS	Analog system ground pin
2,30	VLS	Segment voltage reference pin
3,29	VCOMH	Com Voltage Output.
4,28	VP	Segment pre-charge voltage
5,27	VCC	Power supply for panel voltage
6	IREF	Segment output current
7	VSS	Ground
8,17	VDD	Power supply for logic.
9	RES#	Reset signal input.
10	D/C#	Data/Command control pin
11	CS#	Chip select
12	BS2	MCU bus interface selection
13	BS1	MCU bus interface selection
14	BS0	MCU bus interface selection
15	R/W#	Read / write control input pin
16	RD#	MCU interface input.
18~25	D7~D0	Data bus
26	VLL	Ground

Electronic Characteristics

Item	Symbol	Condition	Typical Value	Unit
Supply Voltage	VDD		2.8	V
Supply Current	IDD	VDD=2.8V	1	mA
Life Time	White	100 cd/m ²	16,000	hrs

Dimension





BL12832B1

Feature

1. OLED Display 128 x 32 dots
2. Built-in controller SSD1305
3. +2.4~ +3.5V single power supply
4. 1/32 duty cycle
5. Color: white
6. SPI Interface

Mechanical Data

Item	Standard Value	Unit
Module Dimension	30.4 x 14.5	mm
Active Area	25.58 x 6.38	mm
Dot Size	0.18 x 0.18	mm
Dot Pitch	0.20 x 0.20	mm



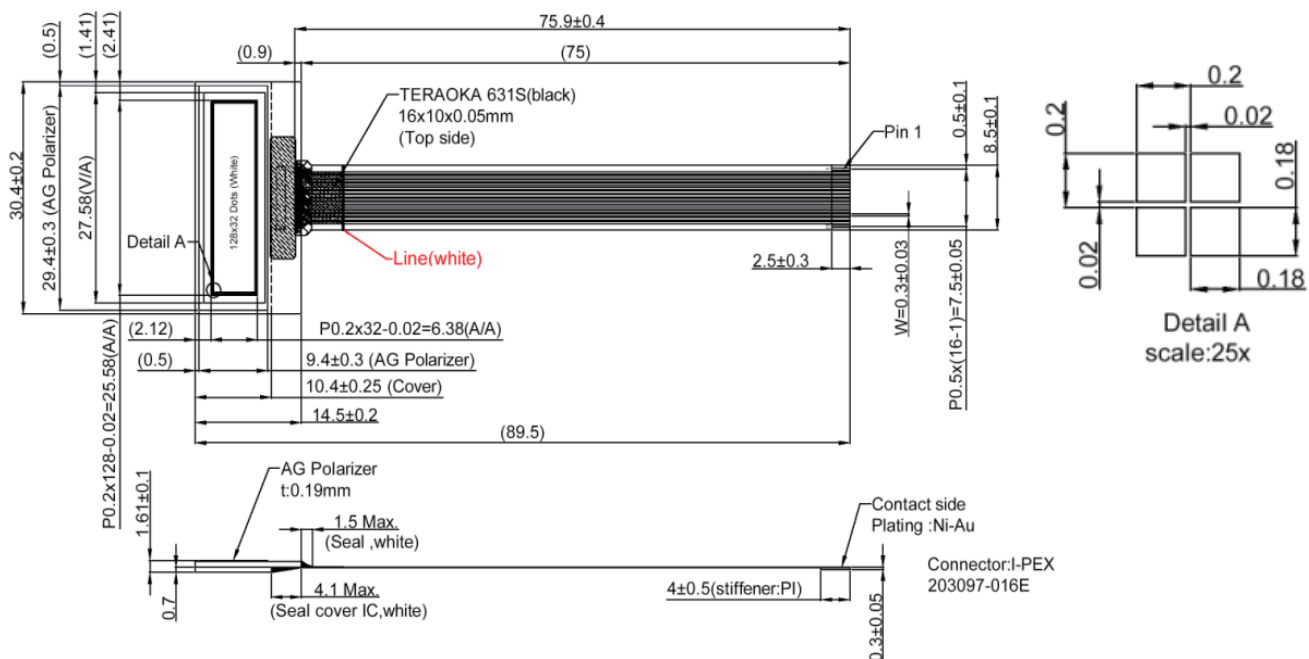
Pin Assignment

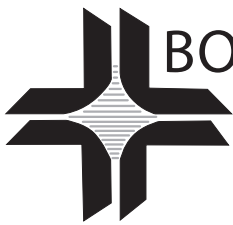
Pin	Symbol	Function
1	NC	No connection
2	Vss	Ground
3	Vcc	Power supply for OLED panel
4	VCOMH	COM voltage output
5	IREF	Reference current input pin
6	D2	In SPI application ,the pin should be floated
7	D1	Data bus(SDIN)
8	D0	Data bus(SCLK)
9	D/C	Data/command control
10	RES	Reset signal input
11	CS	Chip select input.
12	BS1	Interface select pin, SPI: LOW
13	VDDIO	Power supply for I/O buffer
14	VDD	Power supply for logic
15	Vss	Ground
16	NC	No connection

Electronic Characteristics

Item	Symbol	Condition	Typical Value	Unit
Input Voltage	Vdd	Vdd = +3.3V	3.3	V
Supply Current	Idd	Vdd = +3.3V	6	mA
Life Time		100 cd/m ²	30,000	hrs

Dimension





BOLYMIN

go back to the list



BL12832B2

Feature

1. OLED Display 128 x 32 dots
2. Built-in controller SSD1305
3. +2.4~ +3.5V single power supply
4. 1/32 duty cycle
5. Color: white
6. SPI Interface

Mechanical Data

Item	Standard Value	Unit
Module Dimension	30.4 x 14.5	mm
Active Area	25.58 x 6.38	mm
Dot Size	0.18 x 0.18	mm
Dot Pitch	0.20 x 0.20	mm

Pin Assignment

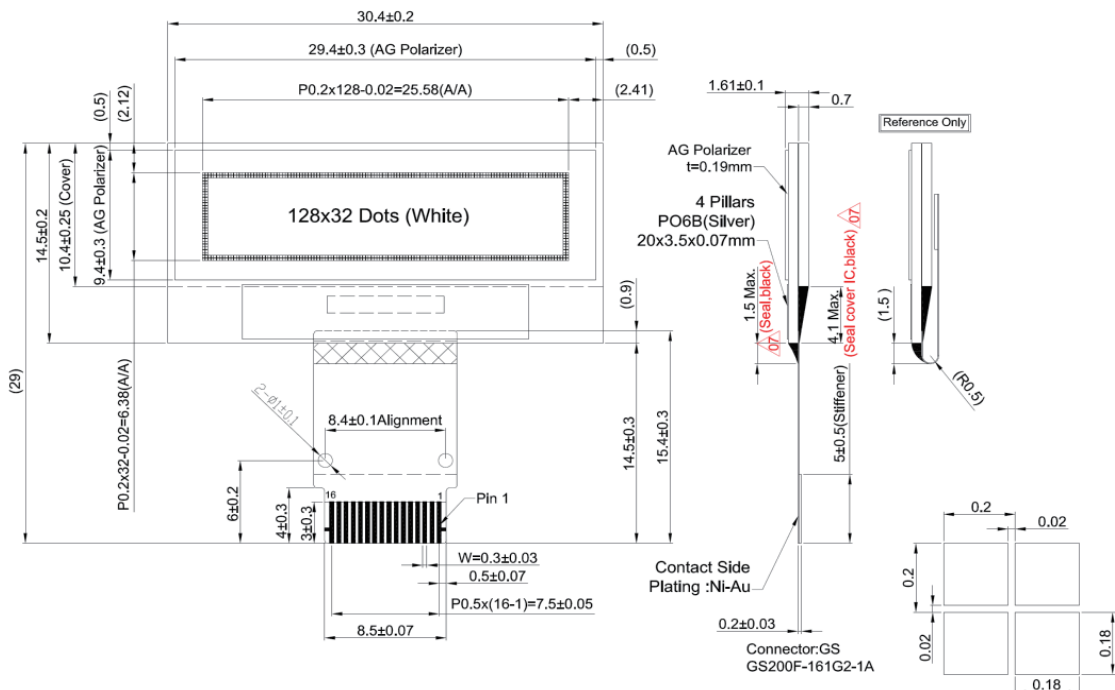
Pin	Symbol	Function
1	NC	No connection
2	Vss	Ground
3	Vcc	Power supply for OLED panel
4	VCOMH	COM voltage output
5	IREF	Reference current input pin
6	D2	In SPI application ,the pin should be floated
7	D1	Data bus(SDIN)
8	D0	Data bus(SCLK)
9	D/C	Data/command control
10	RES	Reset signal input
11	CS	Chip select input.
12	BS1	Interface select pin, SPI: LOW
13	VDDIO	Power supply for I/O buffer
14	VDD	Power supply for logic
15	Vss	Ground
16	NC	No connection

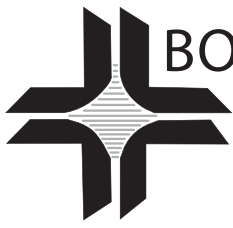


Electronic Characteristics

Item	Symbol	Condition	Typical Value	Unit
Input Voltage	Vdd	Vdd = +3.3V	3.3	V
Supply Current	Idd	Vdd = +3.3V	6	mA
Life Time		100 cd/m ²	30,000	hrs

Dimension





BO LYMIN

[go back to the list](#)

BL12856A

Feature

1. OLED Display 128 x 56 dots
2. Built-in controller SSD1309
3. 1.65V~3.3V power supply
4. Transparent OLED
5. Color : Light Blue

Mechanical Data

Item	Standard Value	Unit
Module Dimension	42.04 x 63.22	mm
Active Area	35.05 x 15.32	mm
Dot Size	0.254 x 0.254	mm
Dot Pitch	0.274 x 0.274	mm

Pin Assignment

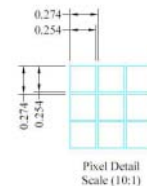
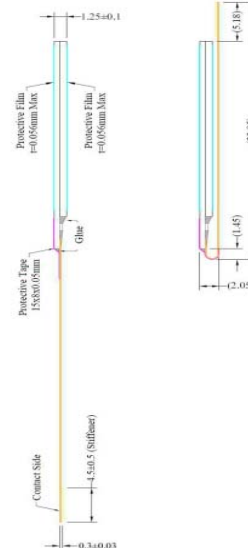
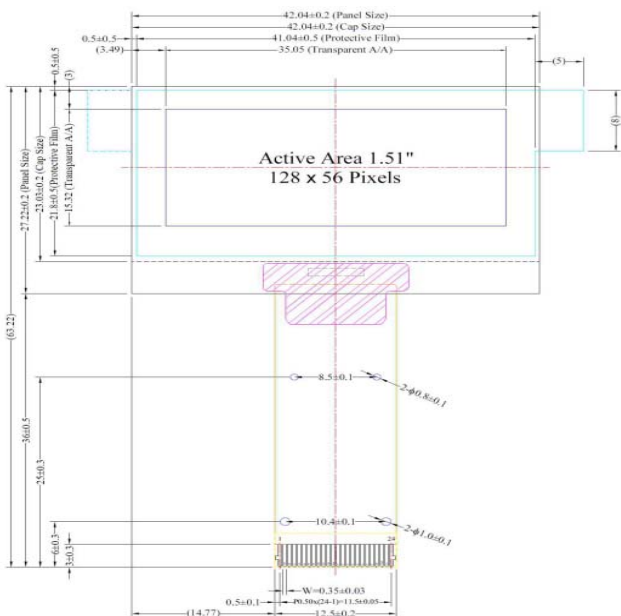
Pin	Symbol	Description
1,24	NC	No connection.
2	VLSS	Ground(Analog).
3	VSS	Ground.
4	NC	No connection.
5	VDD	Power supply for logic.
6	BS1	Interface select pin.
7	BS2	Interface select pin.
8	CS#	Chip select pin.
9	RES#	Hardware reset pin.
10	D/C#	This is data/command control pin.
11	R/W#	Data write.
12	E/RD#	Data read.
13~20	D7~D0	Data bus.
21	IREF	The current reference input pin
22	VCOMH	Com Voltage Output.
23	VCC	Power supply for panel voltage.

Electronic Characteristics

Item	Symbol	Condition	Typical Value	Unit
Input Voltage	VDD		2.8	V
Supply Current	IDD	VDD=2.8V	1.0	mA
Life Time		120 cd/m2	5000	hrs



Dimension





BL12864G2

Feature

1. OLED display 128 x 64 dots
2. Built-in controller SPD0301
3. +3.3V power supply
4. 1/64 duty cycle
5. Color: white or yellow
6. Option: 6800, SPI, I²C interface



Mechanical Data

Item	Standard Value	Unit
Module Dimension	75.0 x 52.7	mm
Viewing Area	60.0 x 30.0	mm
Dot Size	0.40 x 0.40	mm
Dot Pitch	0.43 x 0.43	mm

Pin Assignment

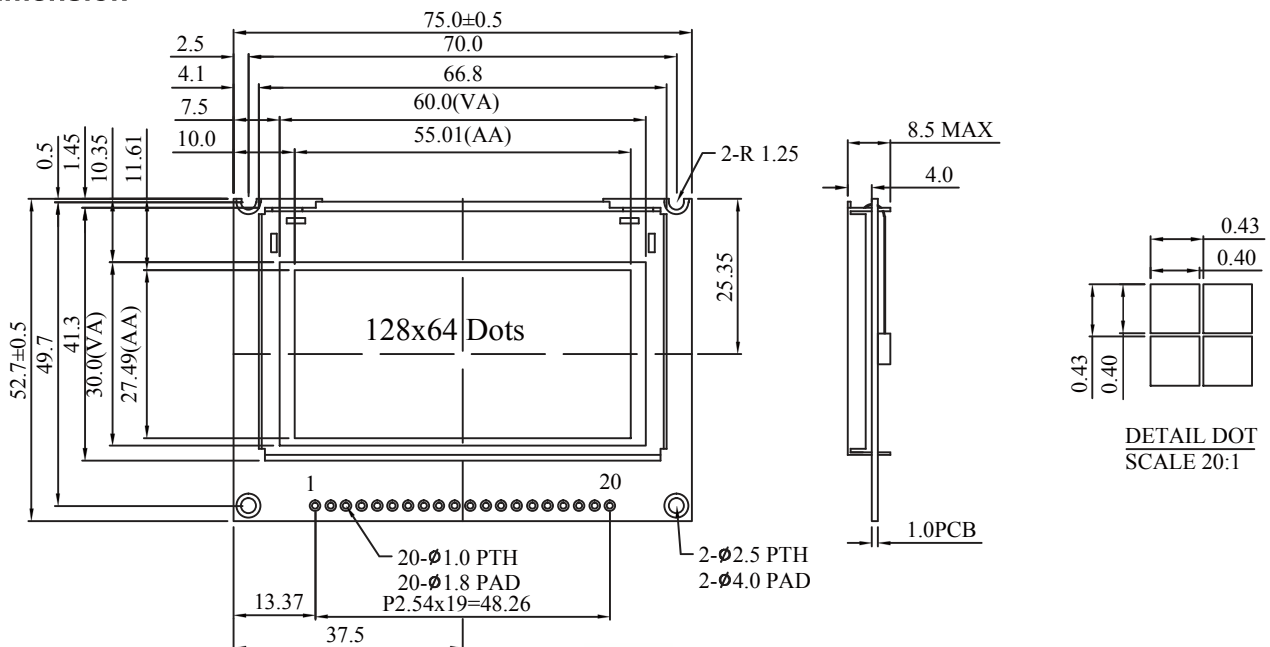
Pin	Symbol	Level	Function
1	Vdd	3.3V	Supply voltage for logic
2	Vss	0V	Grond
3	NC	...	No connection
4-11	DB0-7	H/L	Data bus line
12	CS	H/L	Chip select pin
13	NC	...	No connection
14	/RES	H/L	Hardware Reset pin
15	WR	H/L	Data write enable pin
16	RS	H/L	H: Data, L: Command
17	RD	H/L	Data read enable pin
18	NC	...	No connection
19	DISF VCC	H/L H	DISF: VCC Voltage ON/OFF VCC: Supply Voltage for OLED
20	NC	No connection

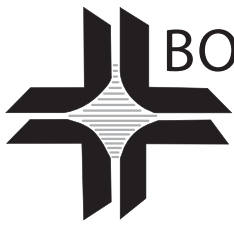
Electronic Characteristics

Item	Symbol	Condition	Value	Unit
Input Voltage	Vdd	Vdd = +3.3V	3.3 (Typ.)	V
Supply Current	Idd	Vdd = +3.3V	220 (Max.)	mA
Pixel Brightness	Lu	Vdd = +3.3V	70	cd / m ²

* Contrast setting:0Xa0,Color: white ,Pixel all on

Dimension





BL12864S



Feature

1. OLED Display 128 x 64 dots
2. Built-in controller SPD0301
3. +3.3V power supply
4. 1/64 duty

Mechanical Data

Item	Standard Value	Unit
Module Dimension	44.0 x 38.0	mm
Active Area	35.052 x 17.516	mm
Dot Size	0.254 x 0.254	mm
Dot Pitch	0.274 x 0.274	mm



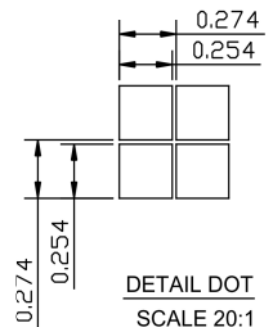
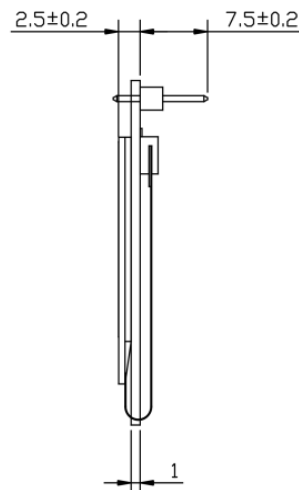
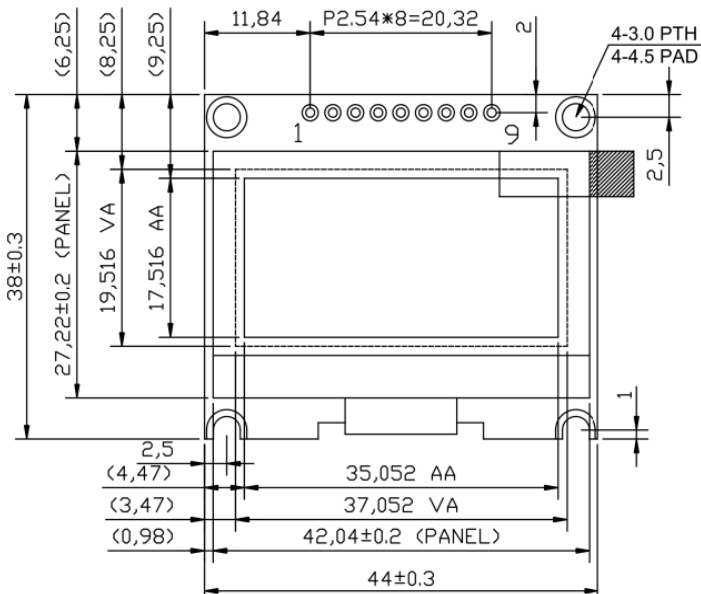
Pin Assignment

Pin	Symbol	Description
1	D1(SDI)	I2C mode : SDA in. Tied to D2 SPI mode : Serial data input.
2	D0(SCL)	I2C mode : Serial clock input. SPI mode : Serial clock input.
3	D/C	This is data/command control pin H: Data input ,L: Command input .
4	/RES	Hardware reset pin
5	/CS	This is chip select control pin
6	VDD	Voltage power supply for logic.
7	GND	This is ground pin
8	D2(SDO)	I2C mode : SDA out. Tied to D1 SPI mode : NC.
9	BS1	BS1 =VDD=> I2C mode BS1 =GND=> SPI mode

Electronic Characteristics

Item	Symbol	Condition	Typical Value	Unit
Input Voltage	VDD		3.3	V
Supply Current	IDD	VDD=3.3V	150.0	mA
Life Time		130 cd/m2	13000	hrs

Dimension



BL12896A



Feature

1. OLED Display 128 x 96 dots
2. Built-in controller SSD1329
3. +3.3V single power supply, with Built-in positive voltage
4. 1/96 duty cycle
5. Color: white or blue
6. Option: external positive voltage for LCD
7. Option: SPI interface
8. 16 Gray Scale

Mechanical Data

Item	Standard Value	Unit
Module Dimension	33.0 x 26.8	mm
Active Area	26.86 x 20.14	mm
Dot Size	0.19 x 0.19	mm
Dot Pitch	0.21 x 0.21	mm



(blue)

(white)

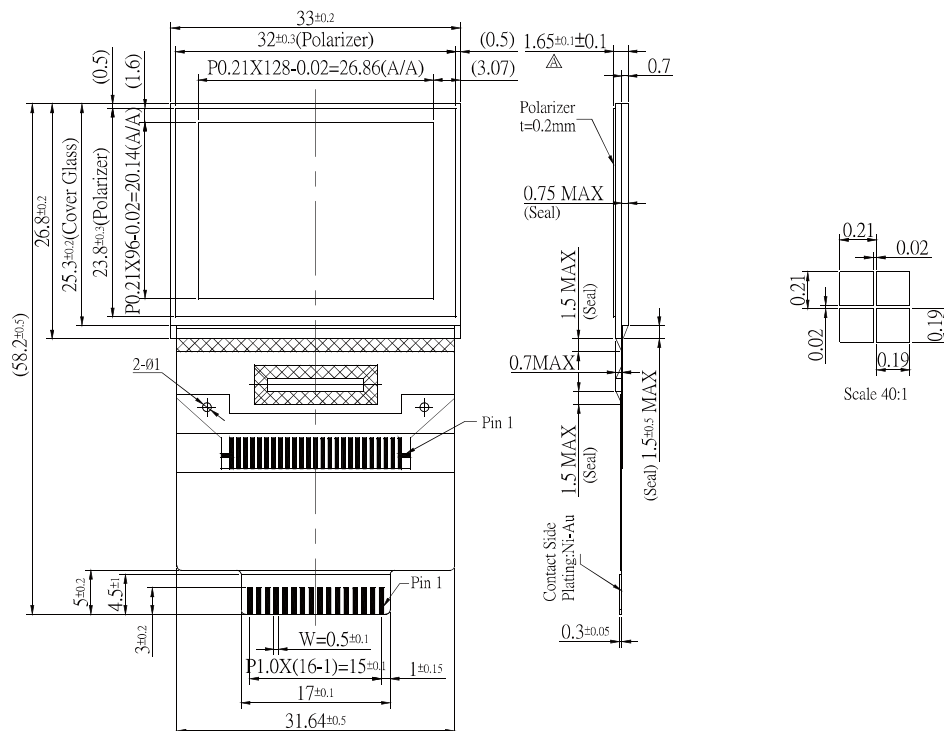
Pin Assignment

Pin	Symbol	Function
1	Vss	Ground
2	Vdd	Power supply for logic
3	CS	Chip select input
4	RES	Reset signal
5	D/C	Data/Command select
6	WR	Write signal
7	RD	Read signal
8~15	DB0~DB7	Data bus
16	DISPOFF/Vcc	Display OFF/power supply for LCD

Electronic Characteristics

Item	Symbol	Condition	Typical Value	Unit
Input Voltage	Vdd	Vdd = +3.3V	3.3	V
Supply Current	Idd	Vdd = +3.3V	155	mA
Life Time(blue)		60 cd/m ²	8,600	hrs
Life Time(white)		100 cd/m ²	13,000	hrs

Dimension



BL12896D

Feature

1. OLED Display 128 RGB x 96 dots
2. Built-in controller SSD1351U3
3. 2.4V~3.5V power supply
4. 1/96 duty cycle
5. Color : 262K Color

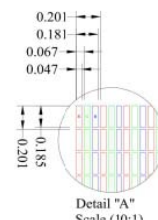
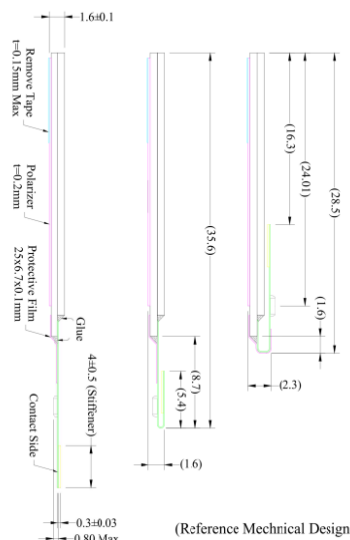
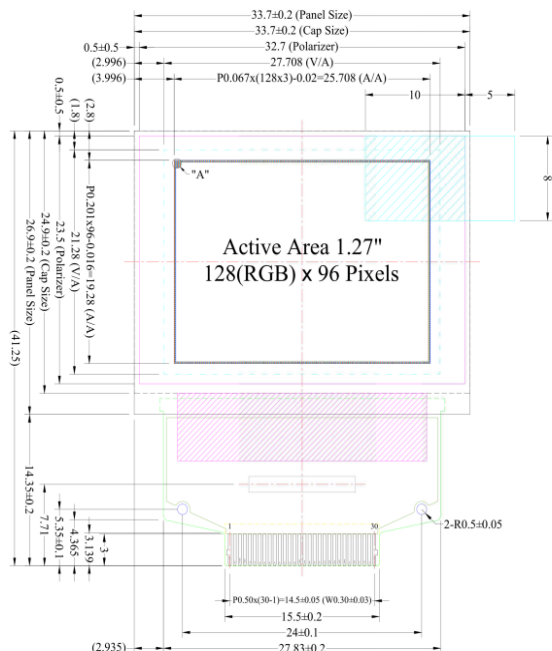
Mechanical Data

Item	Standard Value	Unit
Module Dimension	33.7 x 26.9	mm
Active Area	25.708 x 19.28	mm
Dot Size	0.047 x 0.185	mm
Dot Pitch	0.067 x 0.201	mm

Pin Assignment

Pin	Symbol	Description
1,30	NC	No connection.(ESD)
2	VCC	Power supply for panel voltage.
3	VCOMH	Com Voltage Output.
4	VDDIO	Power supply for logic.
5	VSL	Seg Voltage Output.
6,25,29	NC	No connection.
7	D7~D0	Data bus.
8	E/RD#	Data read.
9	R/W#	Data write.
10	BS0	Interface select pin.
11	BS1	Interface select pin.
12	CS#	Chip select pin.
13~20	D/C#	This is data/command control pin.
21	RES#	Hardware reset pin.
22	IREF	The current reference input pin
23	GPIO1	General purpose input/output.
24	GPIO0	General purpose input/output.
26	VDD	Power supply for logic.
27	VCI	Power supply for operation.
28	VSS	Ground.

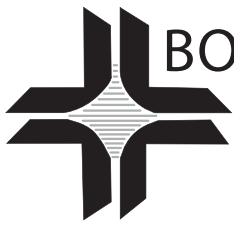
Dimension



Electronic Characteristics

Item	Symbol	Condition	Typical Value	Unit
Input Voltage	VDD		2.8	V
Supply Current	IDD	VDD=2.8V	1.0	mA
Life Time	White	100 cd/m2	10000	hrs





BL136160A

Feature

1. OLED Display 136 x 160 dots
2. Built-in controller SH1108
3. 1.65V~3.3V power supply
4. OLED : Round OLED
5. Color : White

Mechanical Data

Item	Standard Value	Unit
Module Dimension	32.70 x 54.85	mm
Active Area	27.18 x 23.10	mm
Dot Size	0.15 x 0.15	mm
Dot Pitch	0.17 x 0.17	mm

Pin Assignment

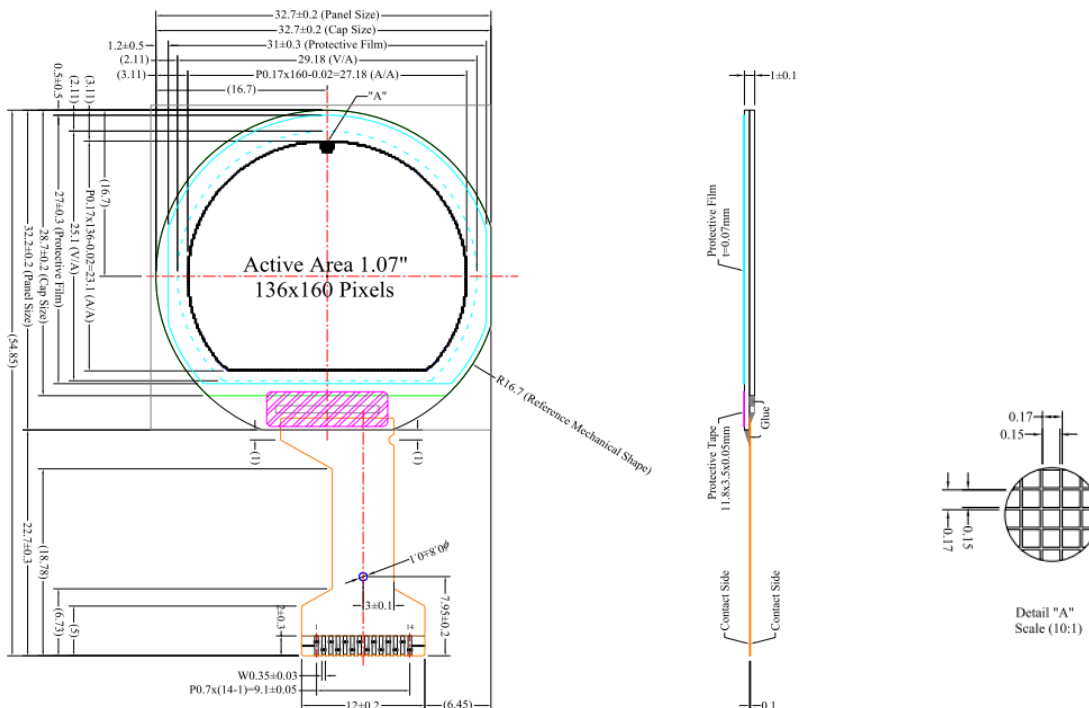
Pin	Symbol	Description
1	GND	Ground.
2	VPP	Power supply for panel voltage.
3	VSL	Voltage Reference of Seg.
4	VSEGM	Voltage output High level for Seg.
5	VSEGH	Voltage output High level for Com.
6	GND	Ground.
7	VDD	Power supply for logic.
8	IREF	Current reference for brightness.
9	CSB	Chip select pin.
10	RESB	Hardware reset pin.
11	A0	This is data/command control pin.
12	SCL	Serial Clock Input Signal
13	SI	Serial Data Input Signal
14	GND	Ground.(ESD ground)



Electronic Characteristics

Item	Symbol	Condition	Typical Value	Unit
Input Voltage	VDD		2.8	V
Supply Current	IDD	VDD=2.8V	1.0	mA
Life Time		200 cd/m2	20000	hrs

Dimension



BL160128A



Feature

1. OLED Display 160 x 128 dots
2. Built-in controller SSD1353
3. +3.3V single power supply, with Built-in positive voltage
4. 1/128 duty cycle
5. Color: 262K color
6. Option: external positive voltage for LCD
7. Option: SPI interface

Mechanical Data

Item	Standard Value	Unit
Module Dimension	42.7 x 33.4	mm
Viewing Area	37.015 x 30.012	mm
Dot Size	0.048 x 0.199	mm
Dot Pitch	0.073 x 0.219	mm

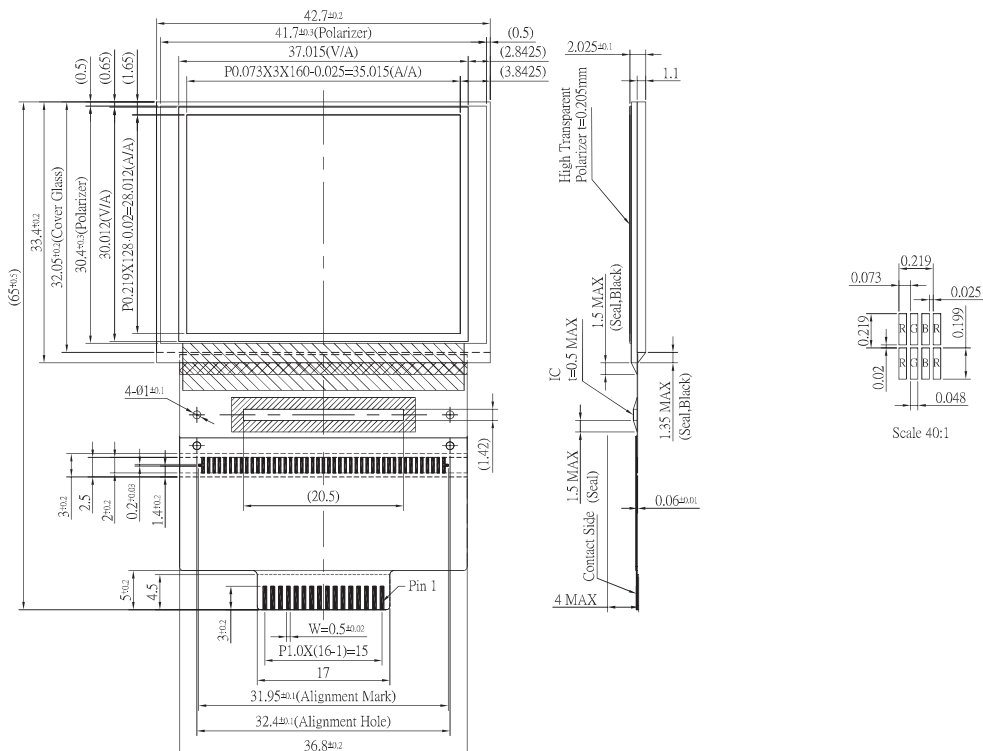
Pin Assignment

Pin	Symbol	Function
1	Vss	Ground
2	Vdd	Power supply for logic
3	CS	Chip select input
4	RES	Reset signal
5	D/C	Data/Command select
6	WR	Write signal
7	RD	Read signal
8~15	DB0~DB7	Data bus
16	DISPOFF/Vcc	Display OFF/power supply for LCD

Electronic Characteristics

Item	Symbol	Condition	Typical Value	Unit
Input Voltage	Vdd	Vdd = +3.3V	3.3	V
Supply Current	Idd	Vdd = +3.3V	280	mA
Life Time		80 cd/m ²	12,000	hrs

Dimension



BL25664B



Feature

1. OLED Display 256 x 64 dots
2. Built-in controller SSD1322
3. +3.3V single power supply, with Built-in positive voltage
4. 1/64 duty cycle
5. Serial or Parallel interface
6. Color: white
7. Option: external positive voltage for LCD
8. 16 Gray Scale

Mechanical Data

Item	Standard Value	Unit
Module Dimension	87.4 x 28.5	mm
Viewing Area	81.08 x 21.75	mm
Dot Size	0.289 x 0.289	mm
Dot Pitch	0.309 x 0.309	mm

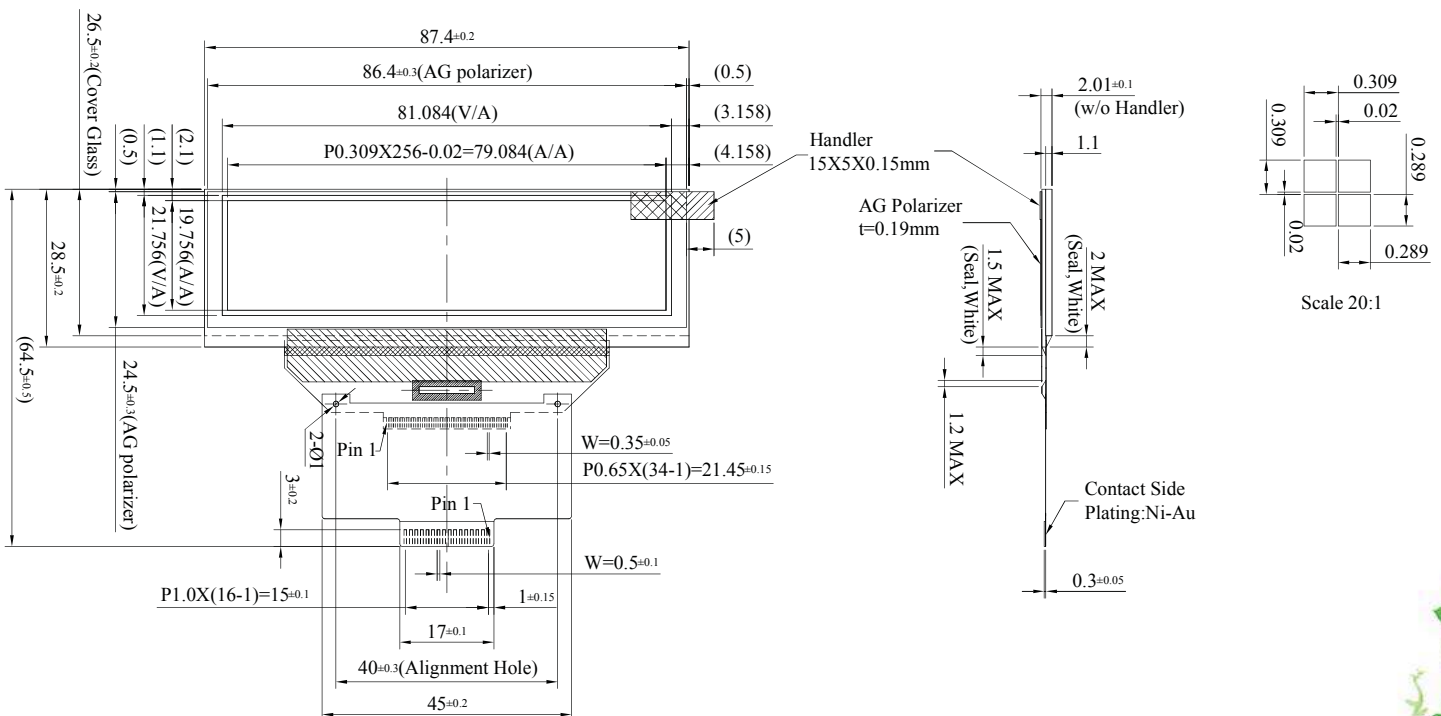
Pin Assignment

Pin	Symbol	Function
1	Vss	Ground
2	Vdd	Power supply for logic
3	CS	Chip select input
4	RES	Reset signal
5	D/C	Data/Command select
6	WR	Write signal
7	RD	Read signal
8~15	DB0~DB7	Data bus
16	DISPOFF/Vcc	Display OFF/power supply for LCD

Electronic Characteristics

Item	Symbol	Condition	Typical Value	Unit
Input Voltage	Vdd	Vdd = +3.3V	3.3	V
Supply Current	Idd	Vdd = +3.3V	270	mA
Life Time		60 cd/m ²	19,000	hrs

Dimension



BL320132A

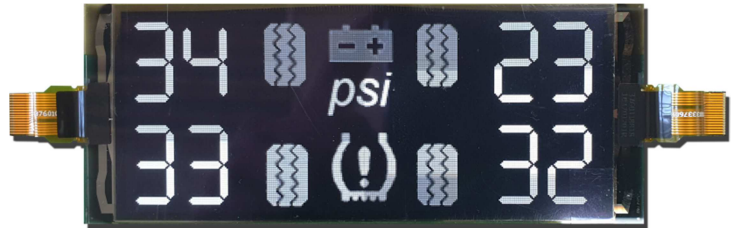


Feature

1. OLED Display 320 x 132 dots
2. Built-in controller SSD1320Z *2
3. +1.65~ +3.5V single power supply
4. 1/132 duty cycle
5. Color: white
6. SPI Interface

Mechanical Data

Item	Standard Value	Unit
Module Dimension	145.52 x 41.672	mm
Active Area	89.90 x 37.072	mm
Dot Size	0.261 x 0.261	mm
Dot Pitch	0.281 x 0.281	mm



Electronic Characteristics

Item	Symbol	Condition	Typical Value	Unit
Input Voltage	Vdd	Vdd=+2.8V	2.8	V
Supply	Idd	Vdd=+2.8V	95	mA
Life Time		90 cd/m ²	20,000	hrs

Pin Assignment

FPC_1		FPC_2	
Pin	Symbol	Pin	Symbol
1	VCC	1	VCC
2	VCOMH_1	2	VCOMH_2
3	VSL_1	3	VSL_2
4	VLSS	4	VLSS
5	VP_1	5	VP_2
6	VDD	6	VDD
7	FR_1	7	FR_2
8	CS#_1	8	CS#_2
9	RES#	9	RES#
10	D/C#	10	D/C#
11	D0(SCLK)	11	D0(SCLK)
12	D1(SDIN)	12	D1(SDIN)
13	VSS	13	VSS
14	VLSS	14	VLSS
15	IREF_1	15	IREF_2
16	VCC	16	VCC

Dimension

