

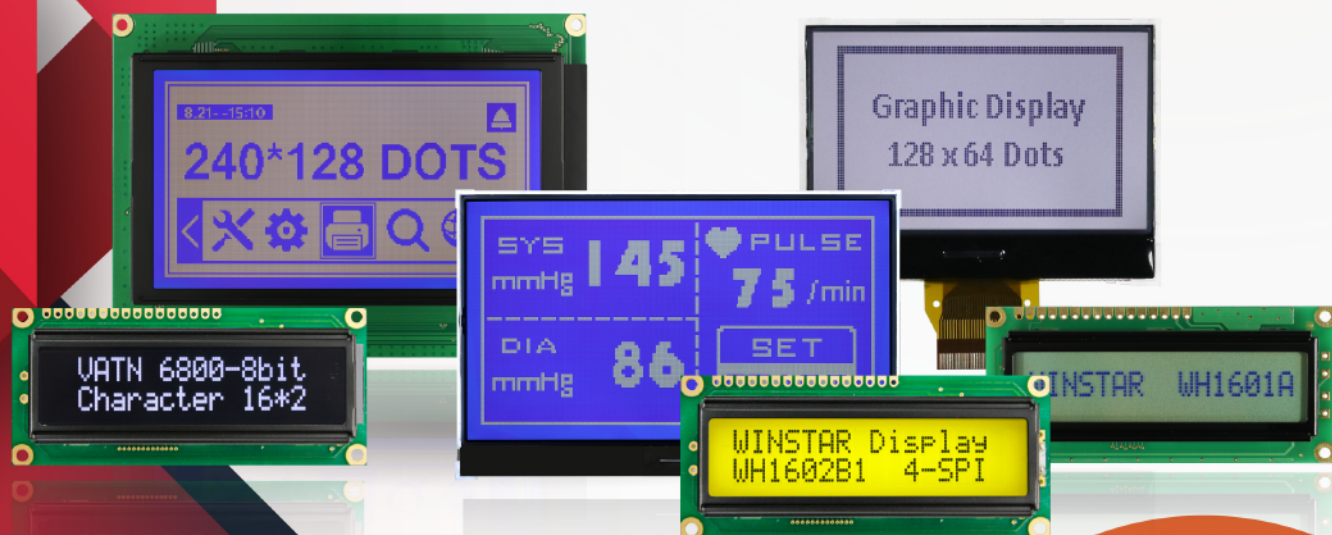


WINSTAR Display Co.,Ltd.
華凌光電股份有限公司



Industrial Display Manufacturer
Industrial Display Manufacturer

STN Display



Graphic
Character
COG
VATN

STN Character LCM



Display Format Char.xline	Model No.	Outline Dimension (WxH)mm	Effective Viewing Area (WxH)mm	Character Size (WxH)mm	Dot Pitch (WxH)mm	Driving Method (Duty)	Interface
8x2	WH0802A1	58.0×32.0	38.0×16.0	2.96×5.56	0.56×0.66	1/16	6800, SPI, I2C
12x2	WH1202A	55.7×32.0	46.0×14.5	2.65×5.50	0.45×0.60	1/16	6800, SPI, I2C
16x1	WH1601A	80.0×36.0	66.0×16.0	3.07×6.56	0.55×0.75	1/16	6800, SPI, I2C
	WH1601B	85.0×28.0	66.0×16.0	3.07×6.56	0.55×0.75	1/16	6800, SPI, I2C
	WH1601L	122.0×33.0	99.0×13.0	4.84×8.06	0.92×1.10	1/16	6800, SPI, I2C
16x2	WH1602A	84.0×44.0	66.0×16.0	2.95×5.55	0.55×0.65	1/16	6800, SPI, I2C
	WH1602B	80.0×36.0	66.0×16.0	2.95×5.55	0.55×0.65	1/16	6800, SPI, I2C
	WH1602C	85.0×36.0	66.0×16.0	2.95×5.55	0.55×0.65	1/16	6800, SPI, I2C
	WH1602D	85.0×30.0	66.0×16.0	2.95×5.55	0.55×0.65	1/16	6800, SPI, I2C
	WH1602J	80.0×36.0	66.0×16.0	2.95×5.55	0.55×0.65	1/16	6800, SPI, I2C
	WH1602L1	122.0×44.0	99.0×24.0	4.84×9.66	0.92×1.10	1/16	6800, SPI, I2C
	WH1602M	85.0×32.6	66.0×16.0	2.95×5.55	0.55×0.65	1/16	6800, SPI, I2C
	WH1602O	85.0×25.2	66.0×16.0	2.95×5.55	0.55×0.65	1/16	6800, SPI, I2C
	WH1602P	85.0×25.2	66.0×16.0	2.95×5.55	0.55×0.65	1/16	6800, SPI, I2C
	WH1602S	59.0×29.3	52.0×15.3	2.45×4.67	0.45×0.54	1/16	6800, SPI, I2C
	WH1602T	65.4×28.2	54.8×19.0	3.05×5.57	0.51×0.67	1/16	6800, SPI, I2C
	WH1602V2	66.7×23.3	61.0×15.9	2.95×5.55	0.55×0.65	1/16	6800, SPI, I2C
	WH1602W	80.0×36.0	66.0×16.0	2.95×5.55	0.55×0.65	1/16	6800, SPI, I2C
16x4	WH1604A	87.0×60.0	62.0×26.0	2.95×4.75	0.55×0.55	1/16	6800, SPI, I2C
	WH1604B	70.6×60.0	60.0×32.6	2.95×4.75	0.55×0.55	1/16	6800, SPI, I2C
20x2	WH2002A	116.0×37.0	85.0×18.6	3.2×5.55	0.60×0.65	1/16	6800, SPI, I2C
	WH2002D	89.0×21.5	75.0×15.0	2.95×5.15	0.55×0.60	1/16	6800, SPI, I2C
	WH2002L	180.0×40.0	149.0×23.0	6.0×9.66	1.12×1.12	1/16	6800, SPI, I2C
	WH2002M	146.0×43.0	123.0×23.0	4.84×9.22	0.92×1.10	1/16	6800, SPI, I2C
20x4	WH2004A/B	98.0×60.0	77.0×25.2	2.95×4.75	0.55×0.55	1/16	6800, SPI, I2C
	WH2004D	77.0×47.0	60.0×22.0	2.30×4.03	0.42×0.46	1/16	6800, SPI, I2C
	WH2004L	146.0×62.5	123.5×43.0	4.84×9.22	0.92×1.10	1/16	6800, SPI, I2C
	WH2004G	87.0×58.0	74.4×24.8	2.95×4.75	0.55×0.55	1/16	6800, SPI, I2C
	WH2004H	87.0×58.0	74.4×24.8	2.95×4.75	0.55×0.55	1/16	6800, SPI, I2C
24x2	WH2402A	118.0×36.0	94.5×16.0	3.2×5.55	0.60×0.65	1/16	6800, SPI, I2C
40x2	WH4002A	182.0×33.5	154.4×16.5	3.2×5.55	0.60×0.65	1/16	6800, SPI, I2C
40x4	WH4004A	190.0×54.0	147.0×29.5	2.78×4.89	0.50×0.55	1/16	6800

STN Character VATN LCM



Display Format Char.xline	Model No.	Outline Dimension (WxH)mm	Effective Viewing Area (WxH)mm	Character Size (WxH)mm	Dot Pitch (WxH)mm	Driving Method (Duty)	Interface
8x2	WH0802A1	58.0x32.0	38.0x16.0	2.96x5.56	0.56x0.66	1/16	6800, SPI, I2C
16x1	WH1601A	55.7x32.0	66.0x16.0	3.07x6.56	0.55x0.75	1/16	6800, SPI, I2C
16x2	WH1602B	80.0x36.0	66.0x16.0	2.95x5.55	0.55x0.65	1/16	6800, SPI, I2C
16x4	WH1604A	122.0x33.0	62.0x26.0	2.95x4.75	0.55x0.55	1/16	6800, SPI, I2C
20x2	WH2002G	84.0x44.0	85.0x18.6	3.20x5.55	0.60x0.65	1/16	6800
20x4	WH2004A	80.0x36.0	77.0x25.2	2.95x4.75	0.55x0.55	1/16	6800

STN Graphic LCM



Display Format	Model No.	Outline Dimension (WxH)mm	Effective Viewing Area (WxH)mm	Dot Size (WxH)mm	Dot Pitch (WxH)mm	Driving Method (Duty)	Built-in Controller	Interface
122x32	WG12232A/C	84.0x44.0	60.0x18.0	0.40x0.45	0.44x0.49	1/32	SBN1661G	6800
	WG12232B/G	65.4x28.2	54.8x19.0	0.36x0.41	0.40x0.45	1/32	SBN1661G	6800
	WG12232BP1	65.4x28.2	54.8x19.0	0.36x0.41	0.40x0.45	1/32	SBN1661G	6800
	WG12232D	59.0x29.3	52.0x15.0	0.345x0.345	0.375x0.375	1/32	SBN1661G	6800
	WG12232E/J	80.0x36.0	60.0x18.0	0.40x0.45	0.44x0.49	1/32	SBN1661G	6800
	WG12232I	59.0x29.3	52.0x15.0	0.345x0.345	0.375x0.375	1/32	SBN1661G	6800
	WG12232K	59.0x32.1	52.0x15.0	0.345x0.345	0.375x0.375	1/32	SBN1661G	6800
	WG12232O	77.8x27.2	60.0x18.0	0.40x0.45	0.44x0.49	1/32	SBN1661G	6800
	WG12232L	84.0x44.0	60.0x18.0	0.40x0.45	0.44x0.49	1/32	ST7920	6800/SPI
	WG12232M	65.4x28.2	54.8x19.0	0.36x0.41	0.40x0.45	1/32	ST7920	6800/SPI
	WG12232N	59.0x29.3	52.0x15.0	0.345x0.345	0.375x0.375	1/32	ST7920	6800/SPI
128x64	WG12864A	93.0x70.0	72.0x40.0	0.48x0.48	0.52x0.52	1/64	NT7107, NT7108	6800
	WG12864B	75.0x52.7	58.8x31.4	0.39x0.39	0.43x0.43	1/64	NT7107, NT7108	6800
	WG12864C	78.0x70.0	62.0x44.0	0.42x0.58	0.44x0.60	1/64	NT7107, NT7108	6800
	WG12864D	78.0x70.0	62.0x44.0	0.42x0.58	0.44x0.60	1/64	RA6963	8080
	WG12864E/E1/EP2	54.0x50.0	43.5x29.0	0.28x0.35	0.32x0.39	1/64	NT7107, NT7108	6800
	WG12864I	80.0x70.0	72.0x40.0	0.48x0.48	0.52x0.52	1/64	NT7107, NT7108	6800
	WG12864J3/J5	93.0x70.0	72.0x40.0	0.48x0.48	0.52x0.52	1/32	ST7920	6800/SPI
	WG12864K	113.0x53.0	72.0x40.0	0.48x0.48	0.52x0.52	1/64	NT7107, NT7108	6800
	WG12864M	95.5x50.2	72.0x40.0	0.48x0.48	0.52x0.52	1/64	NT7107, NT7108	6800
128x128	WG128128A	85.0x100.0	62.0x62.0	0.40x0.40	0.43x0.43	1/128	RA6963	8080
	WG128128I	72.5x69.9	50.0x49.0	0.32x0.32	0.35x0.35	1/128	RA6963	8080
144x32	WG14432A	85.0x36.0	66.0x16.0	0.38x0.38	0.42x0.42	1/32	ST7920	6800/SPI
	WG14432B	80.0x36.0	66.0x16.0	0.38x0.38	0.42x0.42	1/32	ST7920	6800/SPI
	WG14432D	85.5x30.0	66.0x16.0	0.38x0.38	0.42x0.42	1/32	ST7920	6800/SPI

STN Graphic LCM



Display Format	Model No.	Outline Dimension (WxH)mm	Effective Viewing Area (WxH)mm	Dot Size (WxH)mm	Dot Pitch (WxH)mm	Driving Method (Duty)	Built-in Controller	Interface
160×32	WG16032A	85.2×55.0	74.0×22.0	0.40×0.56	0.44×0.61	1/32	SBN1661G	6800/8080
	WG16032D3/D5	122×44.0	99.0×24.0	0.55×0.55	0.6×0.6	1/32	ST7920	6800/SPI
	WG16032E	85.2×55.0	72.0×22.0	0.40×0.56	0.44×0.61	1/32	SBN1661G	6800/8080
160×80	WG16080C1	100.0×54.0	72.0×40.0	0.39×0.39	0.42×0.42	1/80	RA6963	8080
	WG16080D	93.0×70.0	72.0×40.0	0.39×0.39	0.42×0.42	1/80	RA6963	8080
160×128	WG160128B	129.0×102.0	101.0×82.0	0.56×0.56	0.60×0.60	1/128	RA6963	8080
	WG160128C	150.0×112.0	101.0×82.0	0.56×0.56	0.60×0.60	1/128	RA6963	8080
	WG160128E	129.0×102.0	101.0×82.0	0.54×0.54	0.58×0.58	1/128	RA6963	8080
160×160	WG160160A	89.2×85.0	62.0×62.0	0.34×0.34	0.38×0.38	1/160	NO	No controller
	WG160160D5	85.0×100.0	62.0×62.0	0.36×0.36	0.38×0.38	1/160	RA8822	6800/8080
192×32	WG19232B	116.0×37.0	85.0×18.6	0.38×0.46	0.42×0.50	1/32	ST7920	6800/SPI
	WG19232C	116.0×37.0	85.0×18.6	0.38×0.46	0.42×0.50	1/32	ST7920	6800/SPI
192×64	WG19264A	130.0×65.0	102.0×39.0	0.46×0.46	0.508×0.508	1/64	NT7107, NT7108	6800
	WG19264D	120.0×62.0	102.0×39.0	0.46×0.46	0.50×0.50	1/64	NT7107, NT7108	6800
	WG19264E	150.0×62.5	123.5×43.0	0.59×0.59	0.63×0.63	1/64	NT7107, NT7108	6800
192×128	WG192128C	102.3×86.0	78.5×55.0	0.35×0.35	0.37×0.37	1/128	RA6963	8080
202×32	WG20232A	146.0×43.0	123.0×23.0	0.57×0.57	0.59×0.59	1/32	SBN1661G	6800/8080
240×64	WG24064A	180.0×65.0	133.0×39.0	0.49×0.49	0.53×0.53	1/64	RA6963	8080
	WG24064C	180.0×65.0	133.0×39.0	0.49×0.49	0.53×0.53	1/64	RA6963	8080
	WG24064E	180.0×60.0	137.0×44.0	0.50×0.50	0.53×0.53	1/64	RA6963	8080
	WG24064J	180.0×65.0	132.6×39.0	0.48×0.48	0.53×0.53	1/64	RA6963	8080
240×128	WG240128A	170.0×93.4	128.0×74.0	0.47×0.47	0.50×0.50	1/128	RA6963	8080
	WG240128B	144.0×104.0	114.0×64.0	0.43×0.43	0.45×0.45	1/128	RA6963	8080
	WG240128E	144.0×104.0	114.0×64.0	0.43×0.43	0.45×0.45	1/128	RA6963	8080
320×240	WG320240A	160.0×109.0	122.0×92.0	0.34×0.34	0.36×0.36	1/240	NO	No controller
	WG320240B0	160.0×109.0	122.0×92.0	0.34×0.34	0.36×0.36	1/240	RA8835	6800/8080
	WG320240BX/BP2/BP3	160.0×109.0	122.0×92.0	0.34×0.34	0.36×0.36	1/240	S1D13700	6800/8080
	WG320240C0	148.02×120.24	120.14×92.14	0.34×0.34	0.36×0.36	1/240	RA8835	6800/8080
	WG320240CX	148.02×120.24	120.14×92.14	0.34×0.34	0.36×0.36	1/240	S1D13700	6800/8080
	WG320240D/D1	142.0×96.0	104.0×79.3	0.27×0.27	0.30×0.30	1/240	NO	No controller
	WG320240D0	142.0×96.0	104.0×79.3	0.27×0.27	0.30×0.30	1/240	RA8835	6800/8080
	WG320240O	139.0×100.0	104.0×79.3	0.27×0.27	0.30×0.30	1/240	RA8835	6800/8080

STN COG



Display Format Char.xline	Model No.	Outline Dimension (WxH)mm	Effective Viewing Area (WxH)mm	Dot Size (WxH)mm	Dot Pitch (WxH)mm	Driving Method (Duty)	Built-in Controller	Interface
16x2	WO1602B	85.0×30.0	76.0×18.0	0.75×0.9	0.79×0.97	1/16	ST7032i	I2C
	WO1602F	72.1×29.6	61.0×15.1	0.55×0.65	0.60×0.70	1/16	ST7032i	6800/SPI/I2C
	WO1602G	74.2×25.2	61.0×15.1	0.55×0.65	0.60×0.70	1/16	ST7032i	I2C
	WO1602H	62.8×23.0	51.5×12.2	0.48×0.54	0.53×0.59	1/16	ST7032i	I2C
	WO1602I	51.2×20.7	40.0×10.0	0.36×0.43	0.41×0.48	1/16	ST7032i	I2C
20x2	WO2002A	74.2×25.2	61.0×15.1	0.45×0.54	0.50×0.59	1/16	ST7036i	I2C
20x4	WO2004A	74.3×36.4	60.5×22.18	0.45×0.54	0.50×0.59	1/33	SSD1803AM1Z	I2C
24x2	WO2402A	86.2×24.7	72.3×11.84	0.45×0.54	0.50×0.59	1/17	RW1062	I2C
128x64	WO12864A1	60.1×44.5	54.6×32.0	0.36×0.40	0.39×0.43	1/64	ST7565P	6800/8080/SPI
	WO12864B	89.7×49.8	69.0×36.5	0.47×0.47	0.50×0.50	1/64	ST7565P	6800/8080/SPI
	WO12864C2	55.2×39.8	45.2×27.0	0.28×0.34	0.32×0.38	1/64	ST7565P	6800/8080/SPI
	WO12864D2	90.0×52.8	70.7×38.8	0.48×0.48	0.52×0.52	1/64	ST7565P	6800/8080/SPI
	WO12864D3	80.0×54.0	70.7×38.8	0.48×0.48	0.52×0.52	1/64	ST7565P	6800/8080/SPI
	WO12864H	80.0×54.0	70.7×38.8	0.48×0.48	0.52×0.52	1/64	ST7567-G	6800/8080/SPI
	WO12864T	38.0×26.42	29.58×16.22	0.18×0.20	0.20×0.22	1/65	ST7565P	6800/8080/SPI
	WO12864U	58.2×44.7	52.0×33.5	0.40×0.35	0.42×0.37	1/64	ST7565P	6800/8080/SPI
144x64	WO14464A5	80.0×54.0	70.7×38.8	0.43×0.50	0.45×0.52	1/64	RA8816N	6800/8080/SPI/I2C
160x160	WO160160A	83.8×76.5	60.0×60.0	0.32×0.32	0.34×0.34	1/160	UC1698U	6800/8080
	WO160160B	82.2×77.5	60.0×60.0	0.32×0.32	0.34×0.34	1/160	UC1698U	6800/8080
240x64	WO24064A1	149.5×51.7	130.2×37.6	0.50×0.50	0.53×0.53	1/64	ST7565P	6800/8080/SPI
	WO24064B	142.5×51.7	129.0×37.6	0.5×0.5	0.53×0.53	1/64	ST7586S-G4	6800/8080/SPI
	WO24064C	111.4×45.5	106.2×31.2	0.4×0.4	0.43×0.43	1/64	ST7586S	6800/8080/SPI
	WO24064D	86.2×39.3	80.8×24.8	0.3×0.3	0.32×0.32	1/64	ST7586S	6800/8080/SPI
240x128	WO240128A	98.7×67.7	92.0×53.0	0.325×0.325	0.35×0.35	1/128	UC1608	6800/8080/SPI
	WO240128B	120.2×77.6	114.0×64.0	0.43×0.43	0.45×0.45	1/128	ST7586S-G4	6800/8080/SPI
240x160	WO240160A	93.0×64.2	78.5×47.50	0.255×0.27	0.275×0.29	1/160	ST7529	6800/8080
256×128	WO256128A	80.0×54.0	70.7×38.8	0.24×0.24	0.26×0.26	1/128	ST75256	6800/8080/SPI/I2C
320x240	WO320240A	160.0×109.0	120.0×90.0	0.33×0.33	0.36×0.36	1/240	NO	No controller
	WO320240B	160.0×109.0	120.0×90.0	0.33×0.33	0.36×0.36	1/240	RA8835	6800/8080
	WO320240D	94.7×83.3	81.4×61.0	0.223×0.225	0.238×0.240	1/240	RA8835	6800/8080
	WO320240G	94.7×83.3	81.4×61.0	0.223×0.225	0.238×0.240	1/240	NO	6800/8080



WINSTAR Display Co.,Ltd.

Company Facilities

Operations Center

428台中市大雅區科雅路31號5樓
5F, No.31, Keya Rd., Daya Dist., Taichung City 428, Taiwan
TEL/+886-4-2568 9987 FAX/+886-4-2568 7763
E-mail/sales@winstar.com.tw

China-Jiang Su LCM Facility

江蘇省常熟市辛庄鎮台資工業區
Taiwan Industrial Park, Xin Zhuang Town, Chang Shu City,
Jiang Su Province, China
TEL/+86-512 5248 8236 FAX /+86-512 5248 8235
E-mail/ china@winstar.com.tw

China-Dongguan LCM Facility

廣東省東莞市大嶺山鎮向東工業區
Xiangdong Industrial District, Dalingshan Town,
Dongguan City, Guangdong, China
TEL/+86-769 8278 8236 FAX/+86-769 8278 8235

Myanmar-Bago LCM Facility

Holding No. 21/1-A, Latpanwin Kwin, Field No. (1172),
Latpanwin Village, Bago Township, Myanmar
E-mail/sales@winstar.com.tw

China-Hubei Branch

湖北省武汉市东湖开发区光谷时代广场B座2512号
No. 2512, Block B, Optics Valley Times Square,
East Lake High-tech Development Zone,
Wuhan City, Hubei Province, China
TEL/ +86-27-5936 2559/8/7 FAX/ +86-27-5959 8157

USA-Dallas Texas Subsidiary

16990 N. Dallas Parkway Suite #210, Dallas, TX 75248, U.S.A.
TEL/+1-469-248-2256

www.winstar.com.tw