

# SPECIFICATIONS FOR GRAPHIC MODULES

## SUPERTWIST GRAPHIC MODULE PRODUCT GUIDE

MODEL	DOTS	DOT SIZE W X H	DOT PITCH	EFFECTIVE VIEWING AREA	MODULE SIZE	BUILT-IN CONTROLLER	SRAM 8K	STN STD	STN HT	EL	LED BACKLIGHT				PAGE
											01	02	03	04	
MGLS - 8032A	80x32	0.43x0.43	0.48x0.48	46x18	84x84	---		○	○	○		○			55
MGLS - 8032B	80x32	0.43x0.43	0.48x0.48	46x18	84x84	HD61830	○	○	○	○		○			55
MGLS - 8464	84x64	0.50x0.50	0.55x0.55	51x40	90x60	HD61830	○	○		○					56
MGLS - 10032A	100x32	0.50x0.60	0.55x0.65	60x26.5	75x54	---		○	○	○				○	56
MGLS - 10032B	100x32	0.62x0.56	0.72x0.66	76x25.2	98x50	---		○	○	○		○	○	○	57
MGLS - 10032D	100x32	0.38x0.45	0.43x0.50	46x18.4	65x28.4	---		○	○		○				57
MGLS - 12032A	120x32	0.425x0.6	0.475x0.65	60x26.5	75x54	---		○	○					○	58
MGLS - 12032B	120x32	0.65x0.61	0.60x0.66	76x25.2	98x50	---		○	○	○		○	○	○	58
MGLS - 12864	128x64	0.39x0.55	0.44x0.60	62x44	78x70	---		○	○	○				○	59
MGLS - 12864T	128x64	0.39x0.55	0.44x0.60	62x44	78x70	T6963C	○	○	○	○				○	59
MGLS - 128128	128x128	0.50x0.50	0.55x0.55	73x73	92x106	T6963C	○	○	○					○	59
MGLS - 19264	192x64	0.36x0.36	0.41x0.41	84x31	100x60	---		○	○	○				○	60
MGLS - 24064	240x64	0.48x0.48	0.53x0.53	132x39	176x65	T6963C	○	○	○	○				○	60
MGLS - 240128	240x128	0.40x0.40	0.45x0.45	114x64	144x104	HD61830	○	○	○	○				○	61
MGLS - 240128T	240x128	0.40x0.40	0.45x0.45	114x64	144x104	T6963C	○	○	○	○				○	61
MGLS - 256128	256x128	0.47x0.47	0.52x0.52	128x67	200x110										62
MGLS - 32064	320x64	0.36x0.36	0.41x0.41	136.8x33.6	165x45	HD61830	○	○	○	○					62

### GRAPHIC MODEL NUMBER NOTATION

MGL S - 12864 - G - HT

GRAPHIC MODULE ———

SUPERTWIST ———

MODULE NUMBER ———

OPERATING TEMPERATURE OPTION

Blank Standard 0°C to 50°C

HT\* -20°C to 70°C

STN MODE (Please refer to P 42)

G Green/Yellow

S Silver

B Blue (Negative)

F B/W FSTN\*\*

D B/W DSTN\*\*

\* Not all models are available with HT version, please consult VARITRONIX  
 Please consult VARITRONIX for backlite version availability  
 \*\* Please consult VARITRON for availability

■ ELECTRICAL CHARACTERISTICS†						Ta = 25°C
Item	Symbol	Condition	Standard value (STD, HT)			Unit
			Min	Typ	Max	
Supply Voltage (Logic)	VCC - VSS	-----	4.5	5.0	5.5	V
Supply Voltage (LCD Drive)	VCC - VEE	-----	8.0	-----	26	V
Supply Current	ICC	-----	-----	5.0	-----	mA
	IEE	-----	-----	-----	30	mA
Input Voltage "H" Level	VIH	High Level	VCC - 2.2	-----	VCC	V
Input Voltage "L" Level	VIL	Low Level	0	-----	0.8	V
Supply Voltage for LCD Drive 1/32 duty	VCC - VEE	Ta = 0°C	-----	(8.0, 10.5)	(9.0, 11.5)	V
		Ta = 25°C	-----	-----	-----	V
		Ta = 50°C	(7.0, 9.5)	-----	-----	V
Supply Voltage for LCD Drive 1/64 duty	VCC - VEE	Ta = 0°C	-----	-----	(11.5, 16)	V
		Ta = 25°C	-----	(10.8, 15)	-----	V
		Ta = 50°C	(9.3, 14)	-----	-----	V
Supply Voltage for LCD Drive 1/128 duty	VCC - VEE	Ta = 0°C	-----	-----	(---, 21.5)	V
		Ta = 25°C	-----	(---, 20.5)	-----	V
		Ta = 50°C	(---, 19.5)	-----	-----	V

† Minimum environmental mechanical specifications as listed on P 22. Please consult VARITRONIX for special requests. These are typical values and under constant improvement, specifications are subjected to change without prior notice.