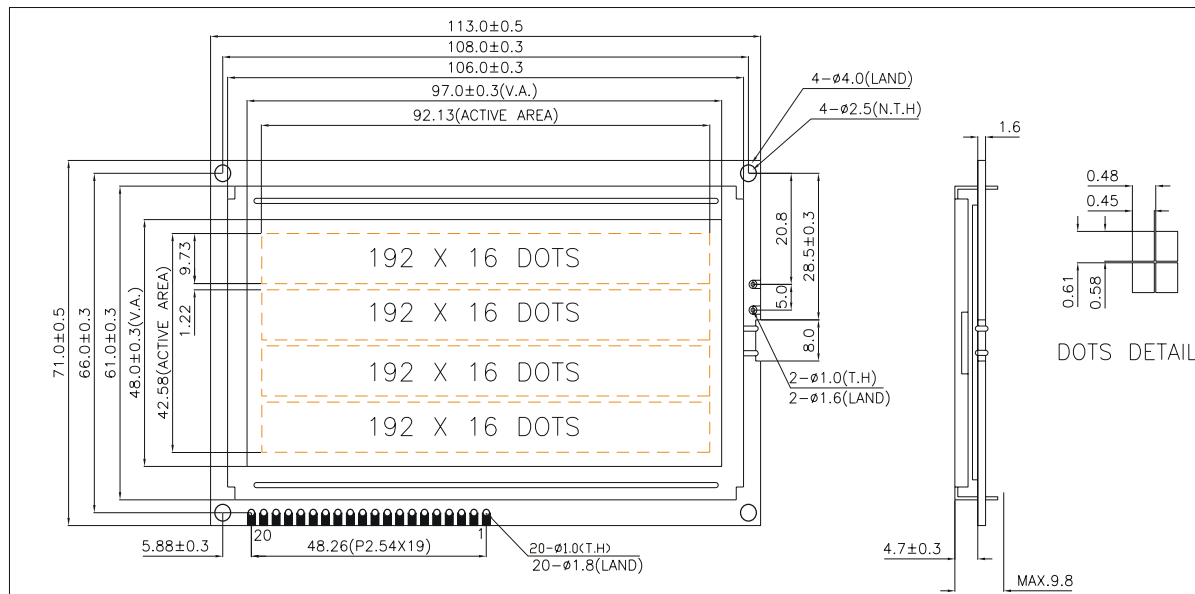


GTG-192641

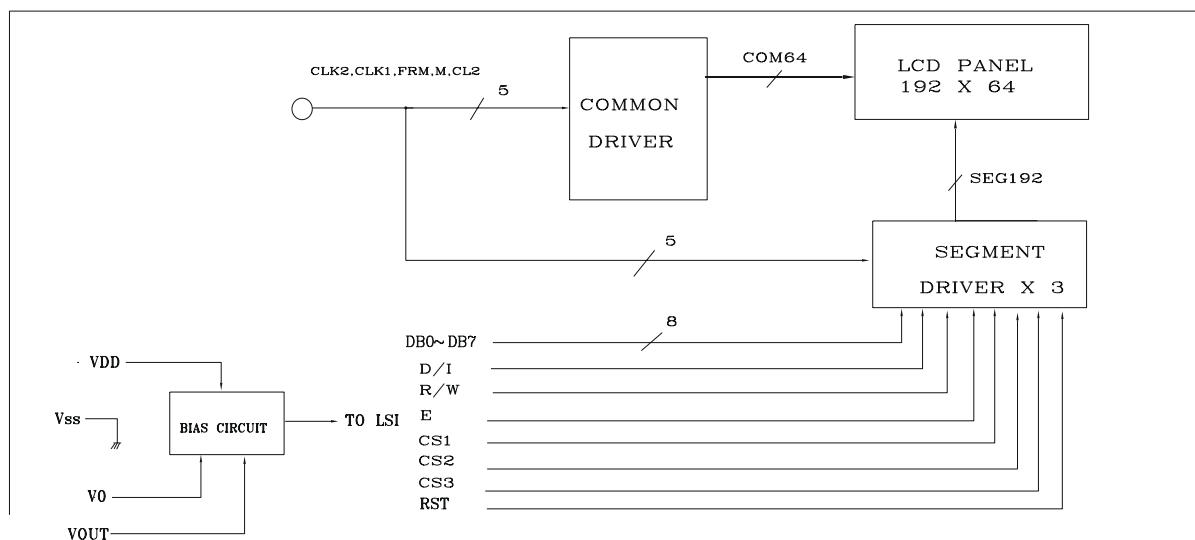
(192 x 64 dots)

1/64 DUTY, 1/9 BIAS

1.0 DIMENSIONAL DRAWING



2.0 BLOCK DIAGRAM



3.0 MECHANICAL SPECIFICATIONS

Item	Nominal Dimensions	Unit
Module Size(WxHxT)	113.0 X 71.0 X 9.8	mm
Viewing Area(WxH)	97.0 X 48.0	mm
Dots x Dots(WxH)	192 X 64	dots
Dot Pitch(WxH)	0.48 X 0.61	mm
Dot Size(WxH)	0.45 X 0.58	mm

4.0 ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Test Condition	Standard Value		Unit
			Min.	Max.	
Supply Voltage for Logic	VDD-VSS	Ta=25°C	-0.3	7.0	V
Supply Voltage for LCD	VDD-Vo		0	14	V
Input Voltage	VI		-0.3	VDD+0.3	V
Operating Temperature	Topr	—	0	50	°C
Storage Temperature	Tstg	—	-20	70	°C

5.0 ELECTRICAL CHARACTERISTICS(Ta=25°C,VDD=5.0±0.25V)

Item		Symbol	Test Condition	Standard Value			Unit
				Min.	Typ.	Max.	
Supply Voltage for	Logic	VDD-VSS	—	4.5	5.0	5.5	V
	LCD	VDD-Vo	—	—	—	17.0	V
Supply Current for	Logic	IDD	—	—	5.0	7.5	mA
	LCD	IEE	—	—	—	—	mA
Operating Voltage for LCD (Recommended)		VDD-Vo	Ta=25°C	—	9.0	—	V
Input Voltage	'H'Level	VIH	High Level	0.7VDD	—	VDD	V
	'L'Level	VIL	Low Level	0	—	0.3VDD	V

6.0 INTERFACE PIN CONNECTIONS

Pin No	Symbol	Level	Description
1	VSS	—	Ground
2	VDD	—	Supply voltage for logic and LCD
3	Vo	—	Operating voltage for LCD
4	D/I	H/L	H:Data Input L:Instruction Code Input
5	R/W	H/L	Read/write selection H:Read, L:Write
6	E	H,H-L	Enable signal
7~14	DB0~DB7	H/L	Data bus
15	CS1	H	Chip Selection for IC1
16	CS2	H	Chip Selection for IC2
17	CS3	H	Chip Selection for IC3
18	RST	H	Reset signal
19	VoUT	—	Output Voltage for LCD driving
20	NC	—	No Connection