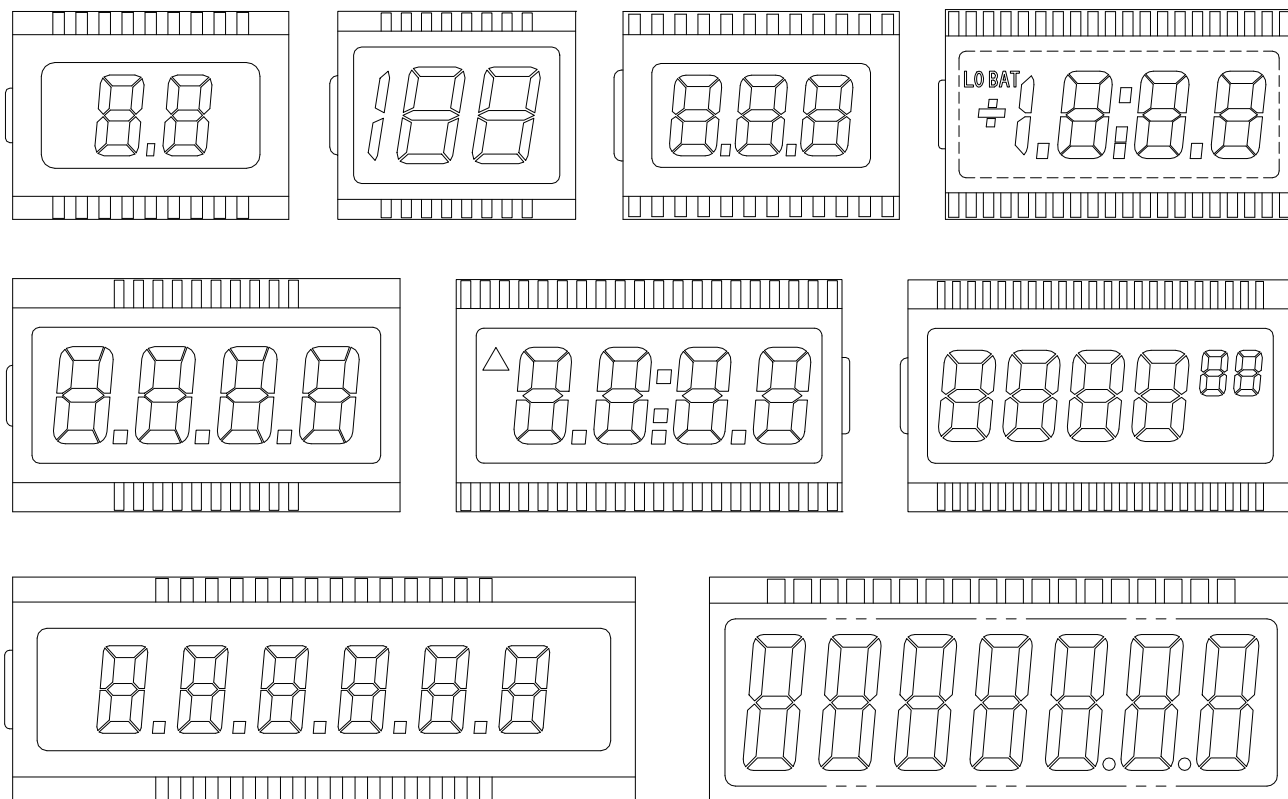
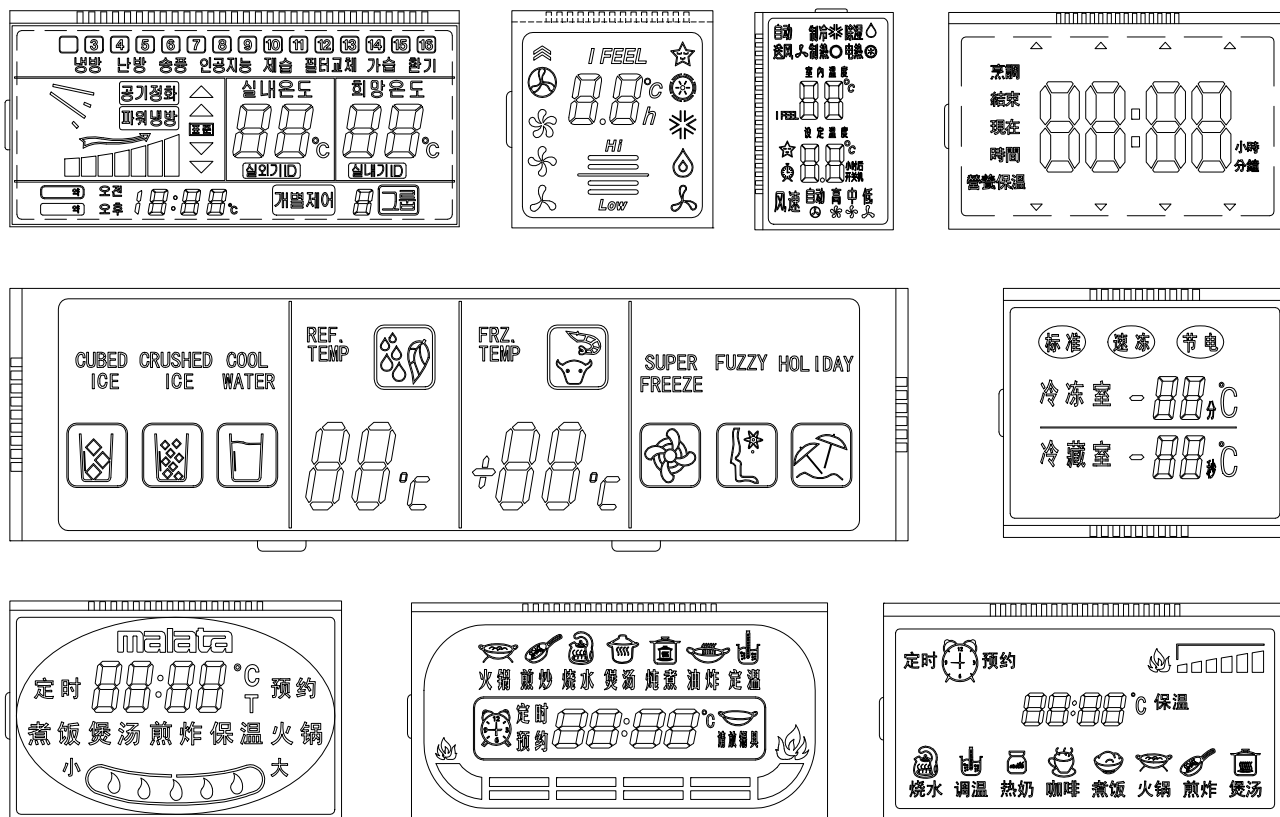


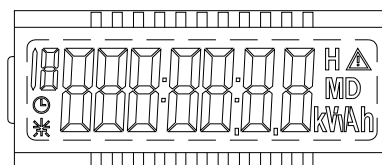
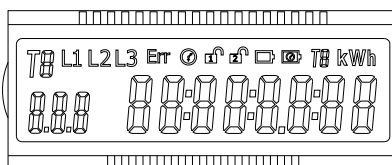
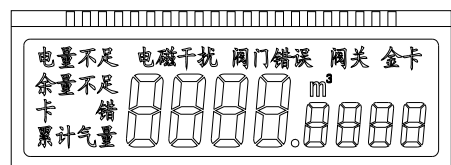
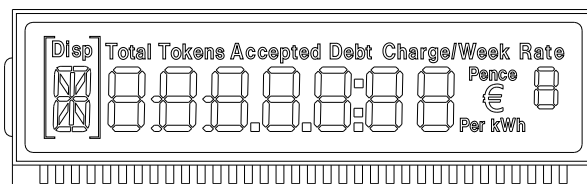
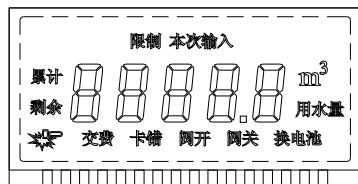
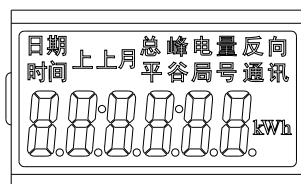
Standard Glass(标准屏)



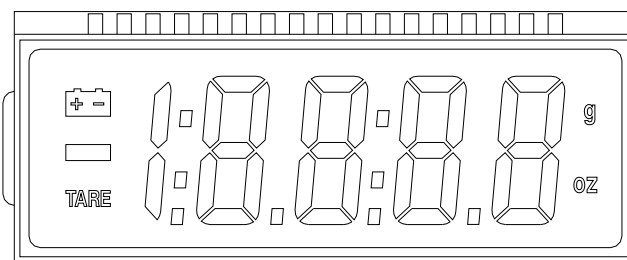
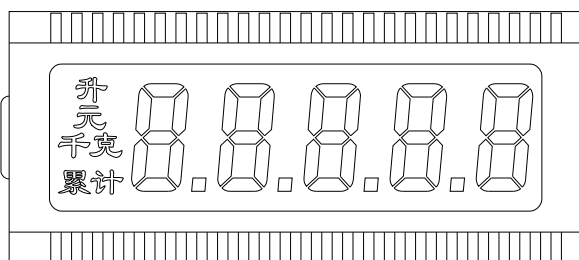
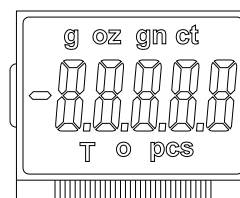
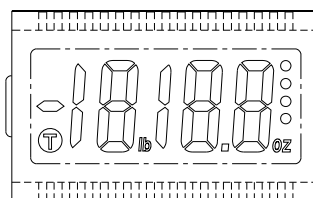
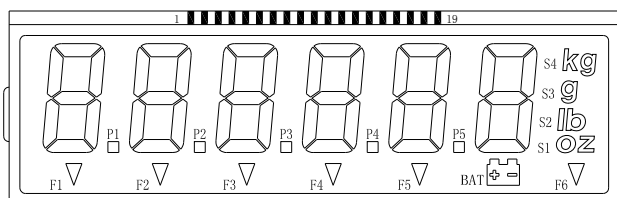
Home Electrical Appliances(家电)



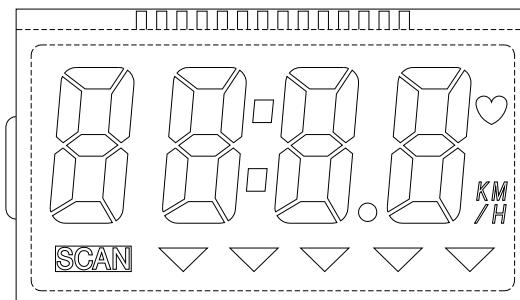
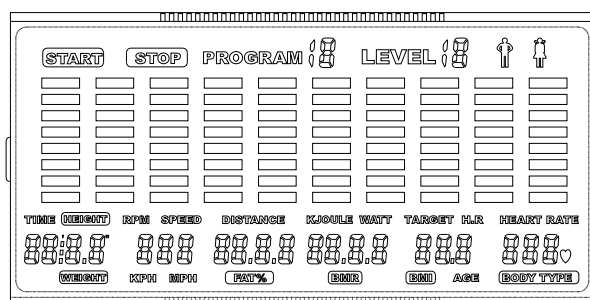
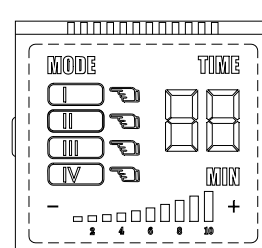
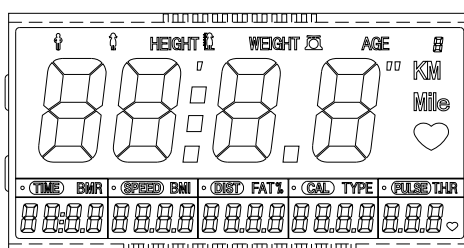
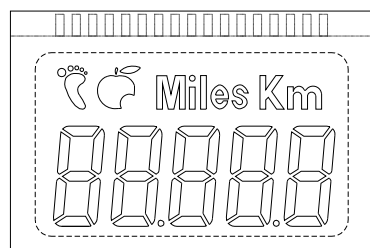
Intelligent Meter(智能表)



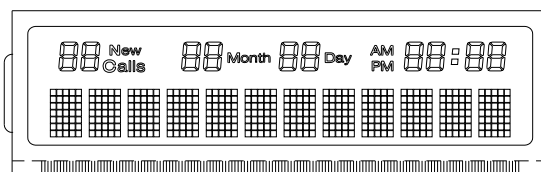
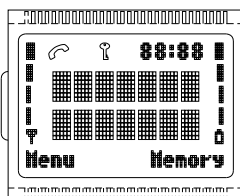
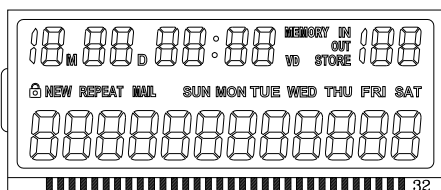
Electronic Scale(电子秤)



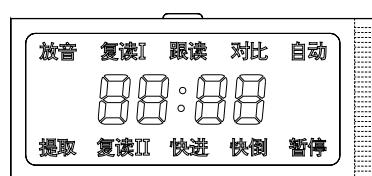
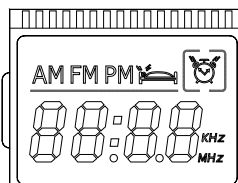
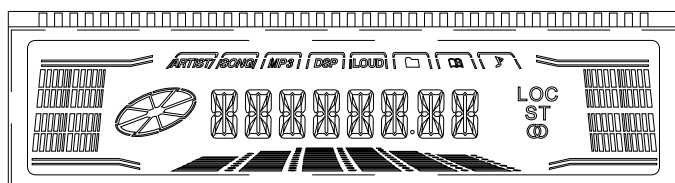
Fitness & Health Care(健身保健)



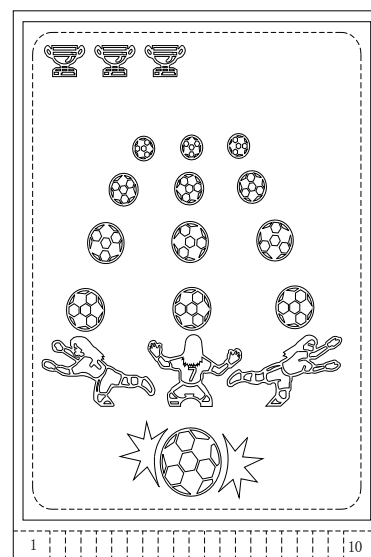
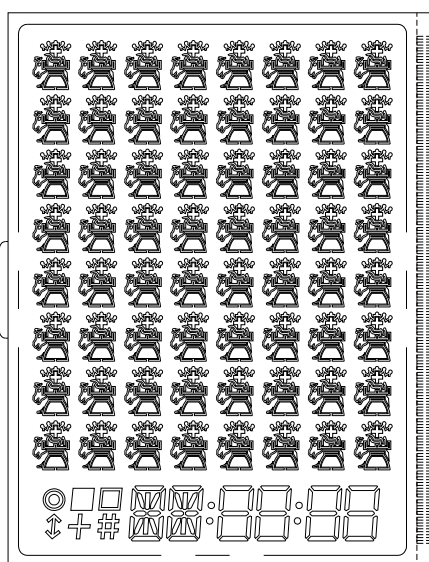
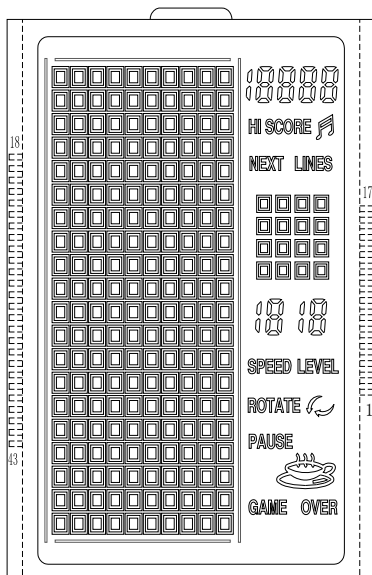
Telecom(通讯)



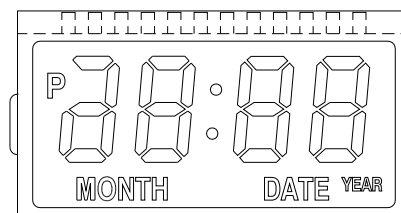
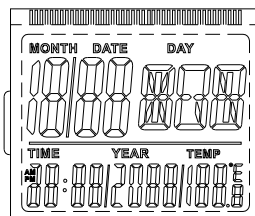
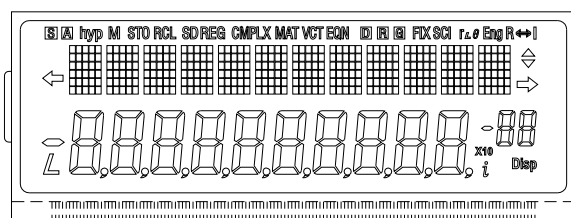
Audio Play(音响)



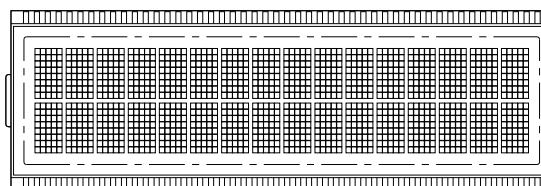
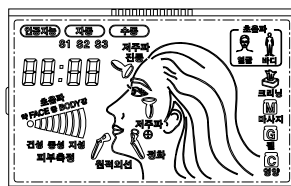
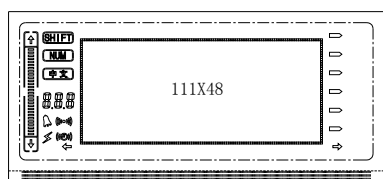
Game & Toy(游戏机)

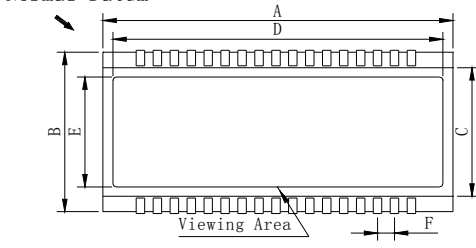
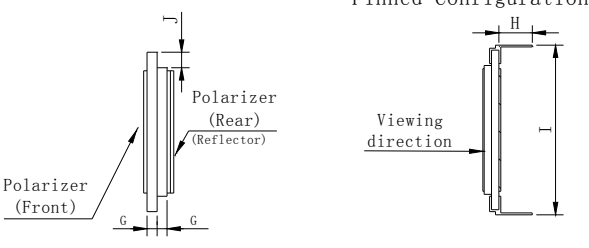
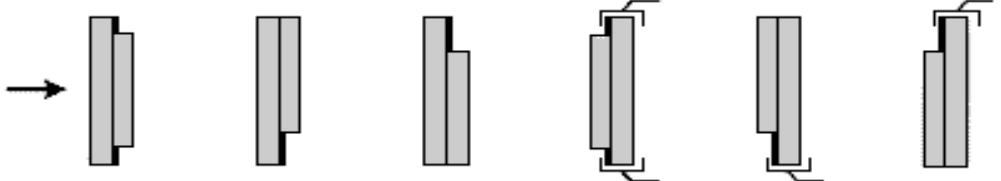


Calculator, Calendar, Clock(计算器, 万年历, 时钟)



Others(其它)



Customer Information 客户信息	Company 公司:				Contact 联系人:	
	Address 地址:				Tel 电话:	
	E-mail 邮件:		Website 网站:		Fax 传真:	
	Target Market 目标市场:		Sales Revenue 销售额:		Business Type 业务类型:	
Schedule 计划	Item 项目	Drawing 图纸	Prototypes 样品	Production 批量	Monthly 每月	Total 总计
	Date 日期					
	Quantity 数量					
Application 应用						
LCD Type 类型	☐ TN ☐ HTN ☐ STN Yellow-Green ☐ STN Gray ☐ STN Blue ☐ FSTN B/W					
Dimensions 尺寸	Normal Datum  Pinned Configuration 					
	Item 项目	Size 尺寸	Item 项目	Size 尺寸		
	A. Width of Glass 玻璃长度		F. Pitch of Terminal Electrodes 电极间距			
	B. Front Glass Height 上玻璃宽度		G. Glass Thickness (1.1, 0.7, 0.55mm) 玻璃厚度			
	C. Rear Glass Height 下玻璃宽度		H. Connector Pin Length 金属管脚长度			
	D. Viewing Area Width 视窗长度		I. Width Between Pin lines 金属管脚跨度			
	E. Viewing Area Height 视窗宽度		J. Terminal Height 引出端子长度			
	Unit 单位	☐ mm ☐ Inch	Note 备注:			
LCD Configuration 构造	(1) ☐ (2) ☐ (3) ☐ (4) ☐ (5) ☐ (6) ☐  The bold lines show the terminal electrodes 粗体线表示电极引出端					
View Direction 视角方向	☐ 12:00 (from Up-Side, 从上向下看) ☐ 6:00 (from Down-Side, 从下向上看) ☐ Others 其它					
Display Mode 显示模式	☐ Positive Image 正显 ☐ Negative Image 负显					
Polarizer Mode 偏振片模式	☐ Reflective 反射式 ☐ Transflective (Semi-Transmissive) 半透式 ☐ Transmissive 全透式					
Driving Method 驱动	Operating Voltage 工作电压 Vop _____ Frame Frequency 频率 _____ Hz ☐ Static 静态 ☐ Multiplex 动态 Duty 占空比 _____ Bias 偏压比 _____					
Connector 连接	☐ Rubber Connector 导电胶条连接 ☐ Heat-Seal Connector 热压连接 ☐ FPC Connector FPC 连接 ☐ Straight-Pin Connector 直型金属引脚 ☐ Curve-Pin Connector 弯型金属引脚 Pin Quantity 引脚数: _____ Pin Pitch 脚距: _____					
Temperature Range 温度范围	Operating Temperature 工作温度 _____ deg C ~ _____ deg C Storage Temperature 储存温度 _____ deg C ~ _____ deg C					
Other Requirements 其它要求						

CHARACTER MODULE

FORM	MODULE P/N	OUTLINE DIMENSION W X H X D (mm)	VIEWING AREA W X H (mm)	CHARACTER SIZE W X H (mm)	DOT SIZE W X H (mm)	DUTY	CONTROLLER
8X1	SLC0801A	84.0X44.0X10.0/13.5	61.0X15.8	6.45X10.75	1.25X1.30	1/8	S6A0069
	SLC0801C	69.0X28.0X8.0/13.5	45.2X13.8	4.20X7.71	0.80X0.92	1/8	S6A0069
	SLC0801D	45.0X24.0X15.0	40.0X10.0	3.71X5.96	0.71X0.75	1/8	S6A0069
8X2	SLC0802A	40.0X30.4X8.5/13.0	30.4X13.9	2.95X4.75	0.55X0.55	1/16	S6A0069
	SLC0802B	58.0X32.0X9.5/13.5	38.0X16.0	2.96X5.56	0.56X0.66	1/16	S6A0069
	SLC0802C	58.0X32.0X9.5/13.5	38.0X16.0	2.96X5.56	0.56X0.66	1/16	S6A0069
12X2	SLC1202A	55.7X32.0X9.2/13.0	46.7X17.5	2.65X5.50	0.45X0.60	1/16	S6A0069
15X1	SLC1501A	38.0X15.0X15.5	32.0X6.03	1.56X3.53	0.28X0.47	1/16	S6A0069
16X1	SLC1601A	80.0X36.0X9.5X13.5	64.0X13.8	3.07X6.56	0.55X0.75	1/16	S6A0069
	SLC1601B	122.0X33.0X9.5/13.5	99.0X13.0	4.92X9.68	0.92X1.10	1/16	S6A0069
	SLC1601C	122.0X33.0X9.5/13.5	99.0X13.0	4.84X9.22	0.92X1.10	1/16	S6A0069
	SLC1601G	151.0X40.0X9.5/13.5	120.0X23.0	6.00X14.54	1.152X1.765	1/16	S6A0069
16X2	SLC1602A	80.0X36.0X9.5/13.5	64.0X13.8	2.95X4.35	0.55X0.50	1/16	S6A0069
	SLC1602B	84.0X44.0X9.5/13.5	64.5X16.4	3.00X5.23	0.56X0.61	1/16	S6A0069
	SLC1602B1	84.0X44.0X9.5/13.5	64.5X16.4	2.95X5.55	0.56X0.61	1/16	S6A0069
	SLC1602C	66.0X25.0X7.0	61.7X15.6	2.95X5.55	0.55X0.65	1/16	S6A0069
	SLC1602E	85.0X36.0X9.5/13.5	63.0X16.4	3.00X5.23	0.56X0.61	1/16	S6A0069
	SLC1602H	65.5X36.7X9.5/13.5	54.0X14.4	2.55X4.99	0.47X0.58	1/16	S6A0069
	SLC1602K	80.0X36.0X9.5/13.5	64.5X16.4	3.00X5.23	0.56X0.61	1/16	S6A0069
	SLC1602K1	80.0X36.0X9.5/13.5	64.5X16.4	2.95X5.55	0.55X0.55	1/16	S6A0069
	SLC1602K2	80.0X36.0X9.5/13.5	64.5X16.4	2.95X5.55	0.55X0.55	1/16	S6A0069
	SLC1602L	80.0X36.0X9.5/13.5	64.0X13.8	2.95X4.35	0.55X0.50	1/16	S6A0069
	SLC1602M	53.0X20.0X7.6	36.0X10.0	1.85X3.15	0.33X0.35	1/16	S6A0069
	SLC1602N	85.0X29.5X9.5/13.5	64.5X16.4	3.00X5.23	0.56X0.61	1/16	S6A0069
	SLC1602N1	85.0X29.5X9.5/13.5	64.5X16.4	3.00X5.23	0.56X0.61	1/16	S6A0069
	SLC1602P	80.0X36.0X9.5/13.5	64.0X13.8	2.95X4.35	0.55X0.50	1/16	S6A0069
	SLC1602Q	66.0X26.0X8.5	51.0X14.8	2.46X5.56	0.46X0.66	1/16	S6A0069
	SLC1602S	122.0X44.0X9.5/13.5	99.0X24.0	5.20X9.55	1.00X1.15	1/16	S6A0069
	SLC1602S2	122.0X44.0X9.5/13.5	99.0X24.0	4.84X9.66	0.92X1.10	1/16	S6A0069
16X4	SLC1604B	87.0X60.0X9.5/13.5	61.8X25.2	2.95X4.75	0.55X0.55	1/16	S6A0069
	SLC1604C	87.0X60.0X9.5/13.5	61.8X25.2	2.95X4.75	0.55X0.55	1/16	S6A0069
20X2	SLC2002A	146.0X43.0X9.5/13.5	123.0X23.0	4.84X9.22	0.92X1.10	1/16	S6A0069
	SLC2002B	180.0X40.0X9.5/13.5	149.0X23.0	6.00X9.66	1.12X1.12	1/16	S6A0069
	SLC2002D	116.0X37.0X9.5/13.5	83.0X18.6	3.20X5.55	0.60X0.65	1/16	S6A0069
20X4	SLC2004A	77.0X47.0X13.5	60.0X22.0	2.3X4.03	0.42X0.46	1/16	S6A0069
	SLC2004C	98.0X60.0X9.5/14.0	76.0X25.2	2.95X4.75	0.55X0.55	1/16	S6A0069
	SLC2004D	98.0X60.0X9.5/14.0	78.0X25.2	2.95X4.75	0.55X0.55	1/16	S6A0069
	SLC2004F	146.0X62.5X10.5/14.0	123.0X42.5	4.85X9.23	0.93X1.11	1/16	S6A0069
24X2	SLC2402B	116.0X37.0X9.5/13.5	83.0X18.6	2.70X5.55	0.50X0.65	1/16	S6A0069
	SLC2402C	118.0X36.0X9.5/14.0	94.0X17.8	3.2X5.55	0.60X0.65	1/16	S6A0069
40X1	SLC4001A	182.0X33.5X9.5/13.5	154.5X16.5	3.20X8.20	0.60X0.70	1/16	S6A0069
40X2	SLC4002A	182.0X33.5X9.5/13.5	154.5X16.5	3.20X5.55	0.65X0.55	1/16	S6A0069
40X4	SLC4004A	190.0X54.0X9.5/13.5	147.0X29.5	2.78X4.89	0.50X0.55	1/16	S6A0069

GRAPHIC MODULE

FORM	MODULE P/N	OUTLINE DIMENSION W X H X D (mm)	VIEWING AREA W X H (mm)	DOT SIZE W X H (mm)	DOT PITCH W X H (mm)	DUTY	CONTROLLER
122X32	SLG12232A	84.0X44.0X9.5/13.5	64.0X17.9	0.40X0.45	0.44X0.49	1/32	SED1520
	SLG12232C	84.0X44.0X9.5/13.5	64.0X17.9	0.40X0.45	0.44X0.49	1/32	ST7920
	SLG12232D1	80.0X36.0X8.5	54.8X18.3	0.36X0.40	0.40X0.44	1/32	SED1520
128X32	SLG12832B	85.0X29.5X9.5/13.5	64.5X16.4	0.40X0.40	0.45X0.45	1/64	S6B0108
128X64	SLG12864A	93.0X70.0X9.5/13.5	72.0X40.0	0.48X0.48	0.52X0.52	1/64	S6B0108
	SLG12864B	78.0X70.0X10.0/13.0	62.0X44.0	0.40X0.56	0.44X0.60	1/64	S6B0108
	SLG12864C	93.0X70.0X9.5/13.5	72.0X40.0	0.48X0.48	0.52X0.52	1/64	ST7920
	SLG12864E	78.0X70.0X10.0/13.0	62.0X44.0	0.40X0.56	0.44X0.60	1/64	T6963C
	SLG12864H	75.0X52.7X9.5/13.0	60.0X32.5	0.39X0.39	0.43X0.43	1/64	S6B0108
128X128	SLG128128A	92.0X106.0X12.0	73.0X73.0	0.50X0.50	0.55X0.55	1/128	T6963C
160X32	SLG16032A	114.0X40.0X9.5/13.5	92.0X22.0	0.49X0.49	0.54X0.54	1/32	ST7920
	SLG16032C	122.0X44.0X13.5	99.0X24.0	0.51X0.52	0.56X0.57	1/32	ST7920
	SLG16032D	122.0X44.0X13.5	99.0X24.0	0.51X0.52	0.56X0.57	1/32	SED1521
	SLG16032F	122.0X44.0X13.5	99.0X24.0	0.51X0.52	0.56X0.57	1/32	ST7920
192X64	SLG19264A	130.0X65.0X9.5/14.0	104.0X39.0	0.458X0.458	0.508X0.508	1/64	S6B0108
	SLG19264B	120.0X62.0X9.5/14.0	104.0X39.0	0.458X0.458	0.508X0.508	1/64	S6B0108
240X64	SLG24064A	180.0X65.0X9.5/13.5	132.0X39.0	0.49X0.49	0.53X0.53	1/64	T6963C
256X64	SLG25664A	178.0X69.0X12.5	139.0X38.1	0.48X0.48	0.52X0.52	1/64	S6B0086
240X128	SLG240128A	144.0X104.0X10.0/15.0	114.0X64.0	0.40X0.40	0.45X0.45	1/128	T6963C

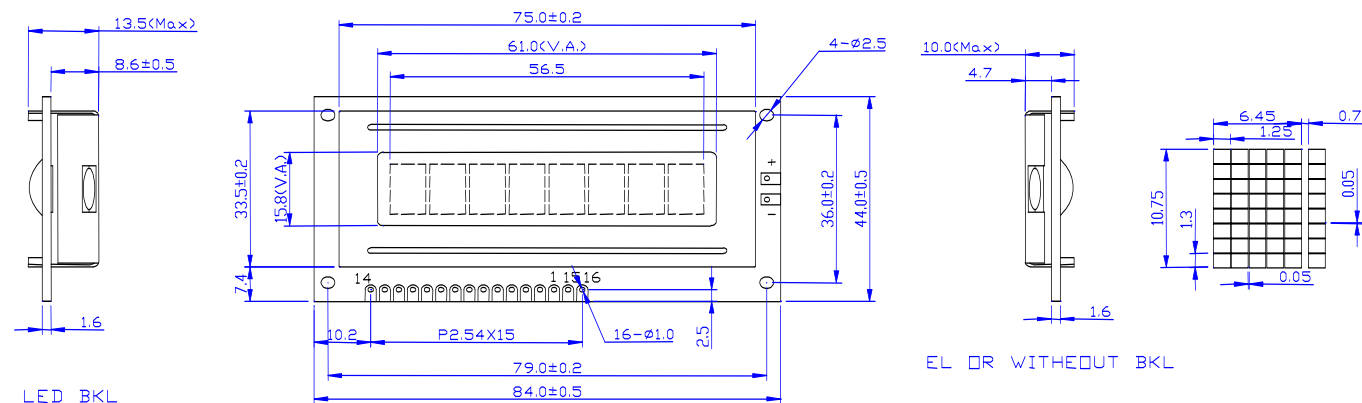
DIGITAL MODULE

MODULE P/N	OUTLINE DIMENSION W X H X D (mm)	VIEWING AREA W X H (mm)	APPLICATION (应用)	CONTROLLER
SLDM1621-804	44.0X25.0X10.0	31.0X8.0	Automotive Dash Board (汽车仪表)	HT1621
SLDM1621-806	49.0X42.5X9.0	35.0X30.0	Medical & Health Care (医疗保健)	HT1621
SLDM1621-807	52.7X25.3X7.0	48.0X20.5	Water Meter (水表)	HT1621
SLDM1621-823	94.0X30.0X8.0	65.5X18.5	Gas Meter (煤气表)	HT1621
SLDM7065-825	128.0X48.0X8.5	124.0X22.0	Gas Meter (煤气表)	KS0065
SLDM1621-831	90.0X48.0X11.7	76.0X32.0	Automotive Dash Board (汽车仪表)	HT1621
SLDM8566-841	48.8X36.1X7.0	24.13X11.43	Alarm System (报警仪表)	PCF8566
SLDM1621-868	55.0X29.0X5.5	42.0X12.0	Energy Meter (电表)	HT1621
SLDM1621-875	35.0X29.0X32.0	31.0X16.0	Gas Detector (探测仪器)	HT1621
SLDM700	66.0X19.0X42.0	52.0X15.2	Counter Meter (计数器)	W541E260
SLDM17075	66.0X19.0X42.0	52.0X15.2	Hour Meter (计时器)	W541E260
SLDM54-848	57.2X34.0X12.66	42.0X12.0	Energy Meter (电表)	W541E260

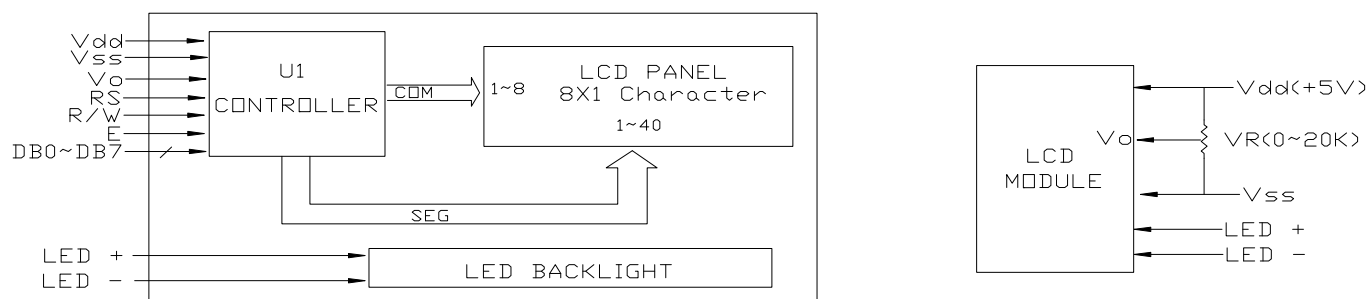
Part Number Format (型号格式): SL C 1601 A—N S (W)—B B S (U)
1 2 3 4 5 6 (7) 8 9 10 (11)

No. (序号)	Note (注释)	Code (代码)	Description (说明)
1	Company Code(公司代号)	SL	Sunland Tech
2	Module Type(模块类型)	DM	Digital Module COB type (段码 COB 模块)
		C	Character Module COB type (字符 COB 模块)
		G	Graphic Module COB type (图形 COB 模块)
		CG	Character Module COG type (字符 COG 模块)
		GG	Graphic Module COG type (图形 COG 模块)
		CT	Character Module TAB type (字符 TAB 模块)
		GT	Graphic Module TAB type (图形 TAB 模块)
3	Module Format(模块款式)	0802,1601	Character Module(字符模块): 8X2, 16X1
		12232,12864	Graphic Module (图形模块): 122X32, 128X64
4	Module Version(模块版本)	A,B,...ZZ	A through ZZ for different size, controller IC, etc. (由 A~ZZ 区别同款式模块的不同尺寸和控制 IC 等)
5	Polarizer Type(偏光类型)	R	Reflective(反射)
		F	Transflective(半透)
		M	Transmissive(全透,正显)
		N	Transmissive,Negative(全透,负显)
6	Backlight Type (背光源类型)	N	NO Backlight(无背光)
		L	LED Bottom Backlight(LED 底背光)
		S	LED Side Backlight(LED 侧背光)
		E	EL Backlight(EL 背光)
		C	CCFL Backlight(CCFL 背光)
(7)	Light Color (背光颜色) Defaulted status is Bottom LED BKL with Yellow color (仅在带背光有此项, 省略状态 为黄绿 LED 底背光)	Y	Yellow-Green(黄绿色)
		W	White(白色)
		B	Blue(蓝色)
		R	Red(红色)
		A	Amber(琥珀色)
8	Fluid Type(液晶类型)	T	TN
		H	HTN
		Y	STN,Yellow(黄模 STN)
		G	STN,Gray(灰模 STN)
		B	STN,Blue(蓝模 STN)
		F	FSTN
9	View Angle(液晶视角)	B	Bottom View(底视 6:00)
		T	Top View(顶视 12:00)
10	Temperature Range (液晶温度范围)	S	Standard Temp. Range(普通型温度)
		W	Wide Temp. Range(宽温型温度)
(11)	Character Type(字库类型) Defaulted status is English- Japanese character type (省略状态下为英 / 日字符)	J	English- Japanese(英/日文)
		R	English-Russian(英/俄文)
		U	English-European(英/欧文)
		C	English-Cyrillic(英/斯拉夫文)
		H	English-Hebrew(英/西伯莱文)

◆OUTLINE DIMENSION



◆BLOCK DIAGRAM & POWER SUPPLY



◆MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	84.0X44.0X10.0/13.5	LC Fluid	TN,STN (Yellow-green,Gray, Blue),FSTN
Viewing Area(W×H)	61.0X15.8	Polarizer	Reflective,Transflective,Transmissive
Dot Size(W×H)	1.25X1.30	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	1.30X1.35	Display Type	Positive or Negative
Character Size(W×H)	6.54X10.75	Backlight	LED(Optional)
Character Pitch(W×H)	7.15X --	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

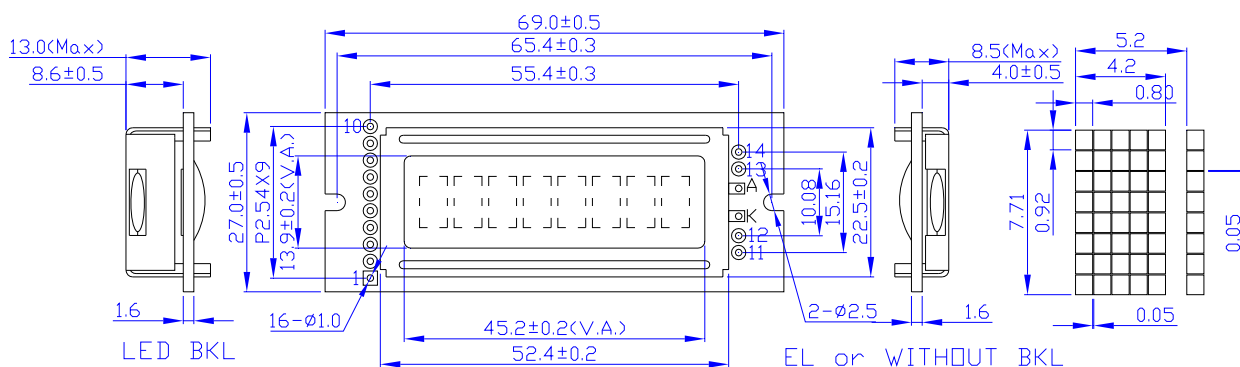
◆INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	A	BKL +
4	RS	Register selection(H:Data,L:Instruction)	16	K	BKL -
5	R/W	Read/Write selection(H: R, L: W)			

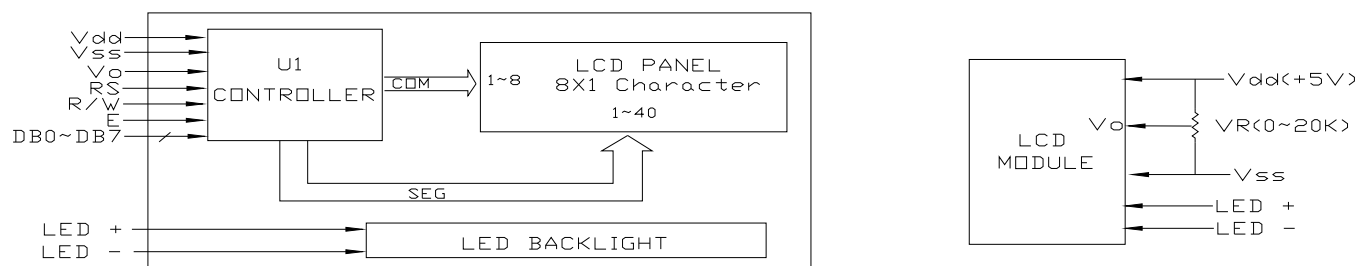
◆ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vlcd	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	120	---	mA

◆OUTLINE DIMENSION



◆BLOCK DIAGRAM & POWER SUPPLY



◆MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	69.0X27.0X8.5/13.0	LC Fluid	TN,STN (Yellow-green, Gray, Blue),FSTN
Viewing Area(W×H)	45.2X13.8	Polarizer	Reflective,Transflective,Transmissive
Dot Size(W×H)	0.80X0.92	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.85X0.97	Display Type	Positive or Negative
Character Size(W×H)	4.20X7.71	Backlight	LED (Optional)
Character Pitch(W×H)	5.2X --	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

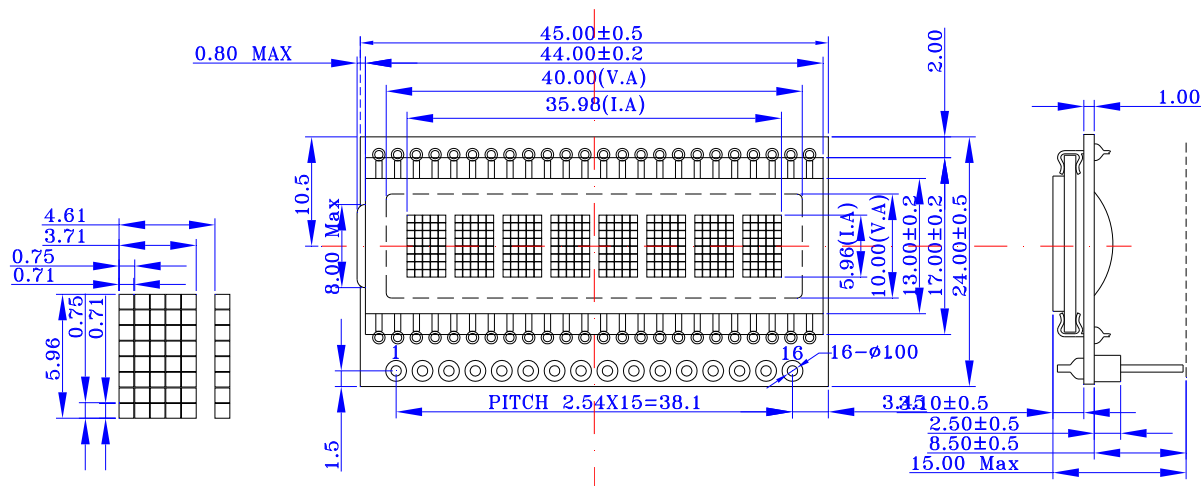
◆INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD		A	BKL +
4	RS	Register selection(H:Data,L:Instruction)		K	BKL -
5	R/W	Read/Write selection(H: R, L: W)			

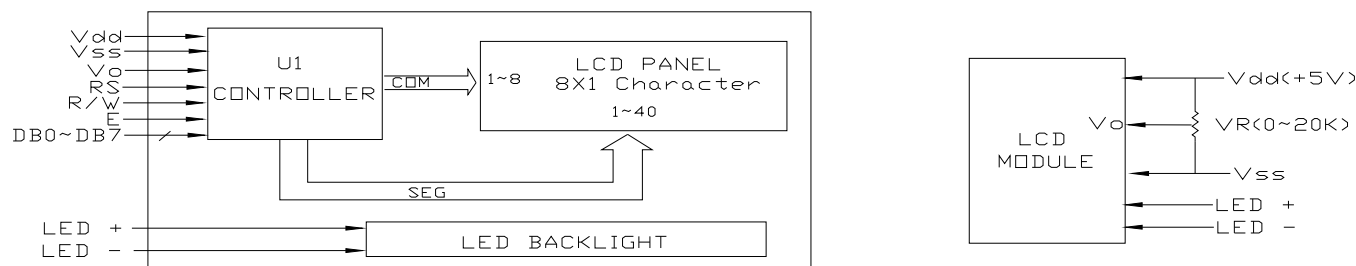
◆ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	1.5	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	80	---	mA

◆ OUTLINE DIMENSION



◆ BLOCK DIAGRAM & POWER SUPPLY



◆ MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	45.0X24.0X15.0	LC Fluid	TN,STN (Yellow-green, Gray, Blue),FSTN
Viewing Area(W×H)	40.0X10.0	Polarizer	Reflective,Transflective,Transmissive
Dot Size(W×H)	0.71X0.71	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.75X0.75	Display Type	Positive or Negative
Character Size(W×H)	3.71X5.96	Backlight	NC (Optional)
Character Pitch(W×H)	4.61X --	Operating Temp.	0℃~50℃ or -20℃~70℃
		Controller	S6A0069 or Equivalent

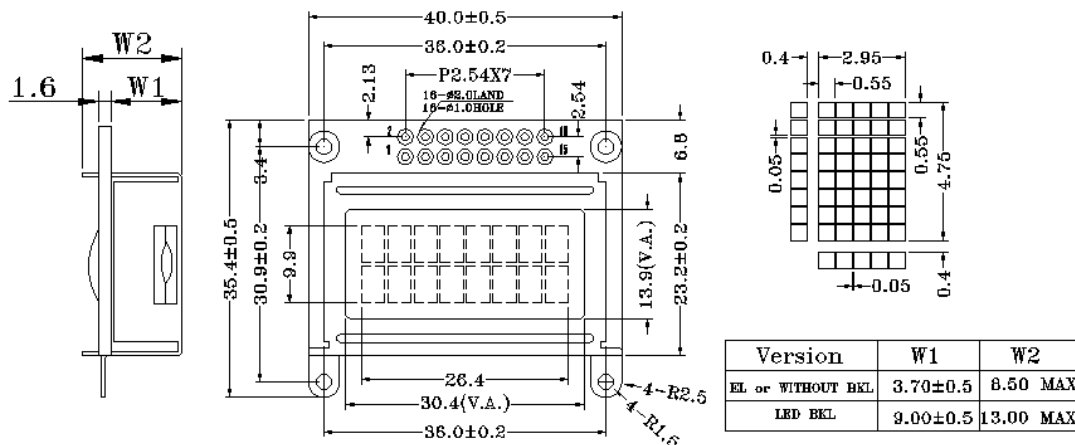
◆ INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	NC	
4	RS	Register selection(H:Data,L:Instruction)	16	NC	
5	R/W	Read/Write selection(H: R, L: W)			

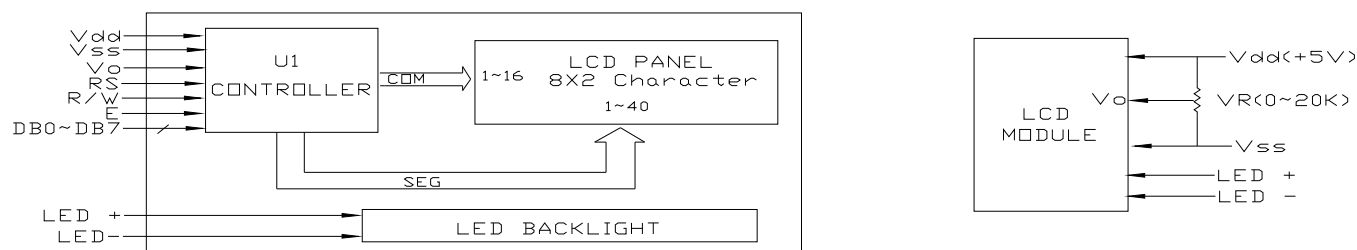
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25℃	---	5.0	---	V
Operating Voltage for LCD	Vlcd	Ta=25℃	---	4.5	---	V
Supply Current	Idd	Ta=25℃, Vdd=3.0V~5.0V	---	1.5	3.0	mA

◆ OUTLINE DIMENSION



◆ BLOCK DIAGRAM & POWER SUPPLY



◆ MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	40.0X35.4X8.5/13.0	LC Fluid	TN,STN (Yellow-green, Gray, Blue),FSTN
Viewing Area(W×H)	30.4X13.9	Polarizer	Reflective,Transflective,Transmissive
Dot Size(W×H)	0.55X0.55	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.60X0.60	Display Type	Positive or Negative
Character Size(W×H)	2.95X4.75	Backlight	LED (Optional)
Character Pitch(W×H)	3.35X5.15	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

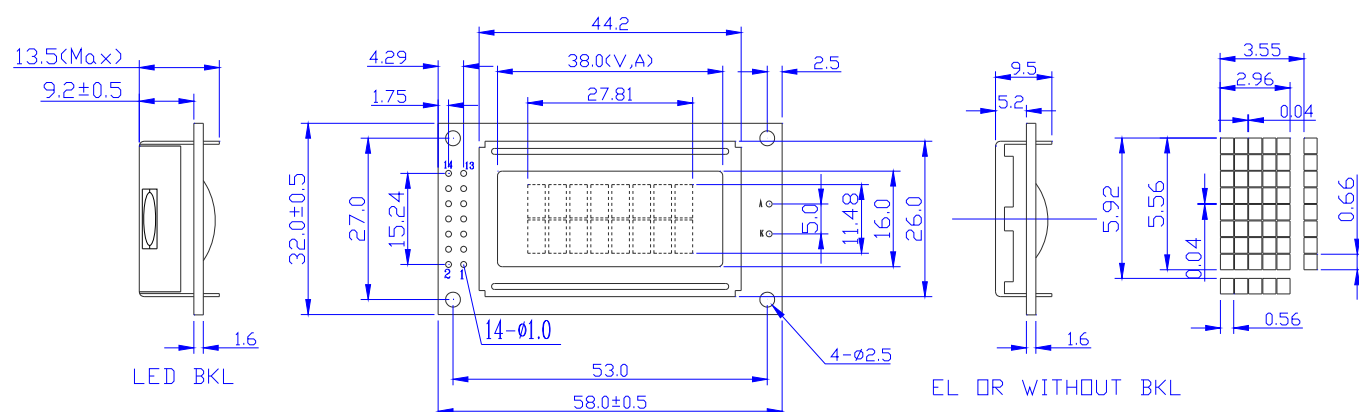
◆ INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD		A	BKL +
4	RS	Register selection(H:Data,L:Instruction)		K	BKL -
5	R/W	Read/Write selection(H: R, L: W)			

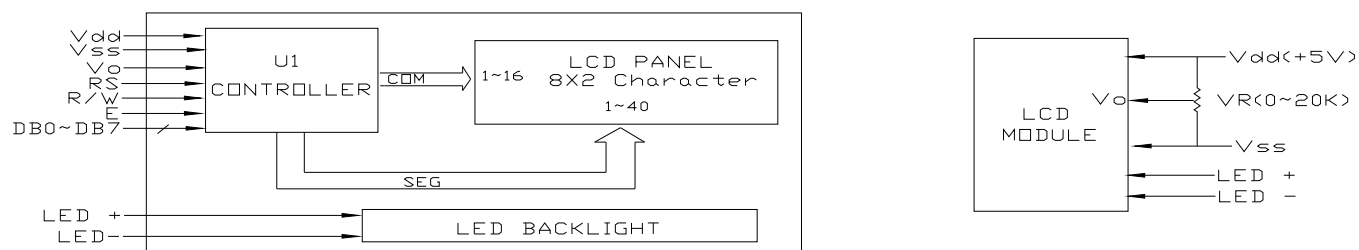
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	60	---	mA

◆OUTLINE DIMENSION



◆BLOCK DIAGRAM & POWER SUPPLY



◆MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	58.0X32.0X9.5/13.5	LC Fluid	TN,STN (Yellow-green, Gray, Blue),FSTN
Viewing Area(W×H)	38.0X16.0	Polarizer	Reflective,Transflective,Transmissive
Dot Size(W×H)	0.56X0.66	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.60X0.70	Display Type	Positive or Negative
Character Size(W×H)	2.92X5.56	Backlight	LED (Optional)
Character Pitch(W×H)	3.55X5.92	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

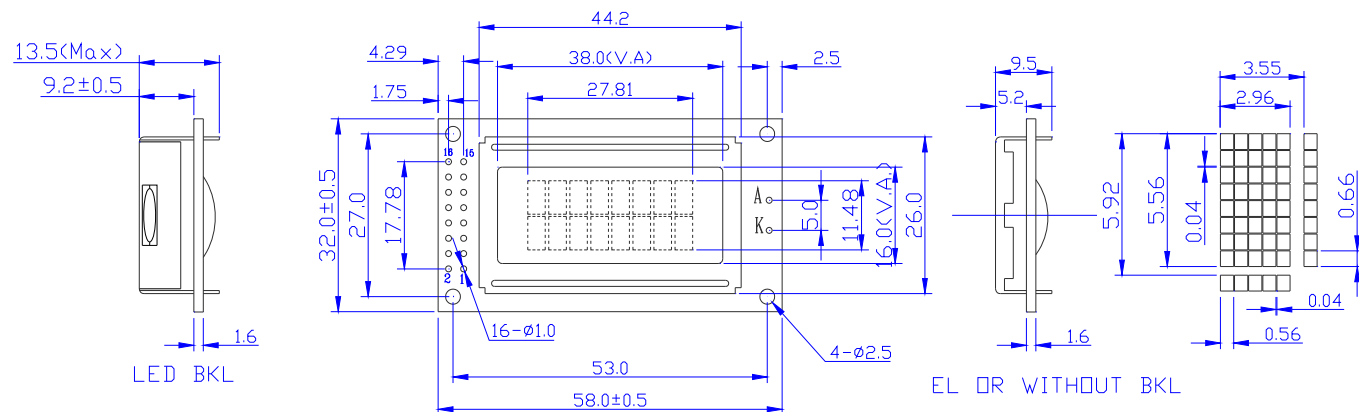
◆INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD		A	BKL +
4	RS	Register selection(H:Data,L:Instruction)		K	BKL -
5	R/W	Read/Write selection(H: R, L: W)			

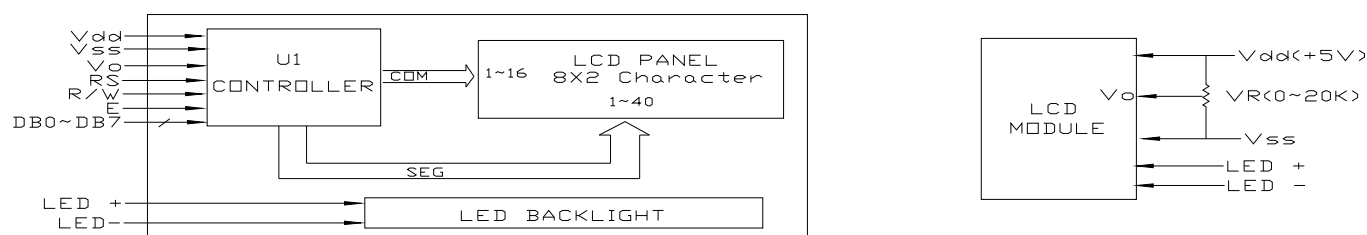
◆ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	60	---	mA

◆OUTLINE DIMENSION



◆BLOCK DIAGRAM & POWER SUPPLY



◆MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	58.0X32.0X9.5/13.5	LC Fluid	TN,STN (Yellow-green, Gray, Blue),FSTN
Viewing Area(W×H)	38.0X16.0	Polarizer	Reflective,Transflective,Transmissive
Dot Size(W×H)	0.56X0.66	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.60X0.70	Display Type	Positive or Negative
Character Size(W×H)	2.92X5.56	Backlight	LED (Optional)
Character Pitch(W×H)	3.55X5.92	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

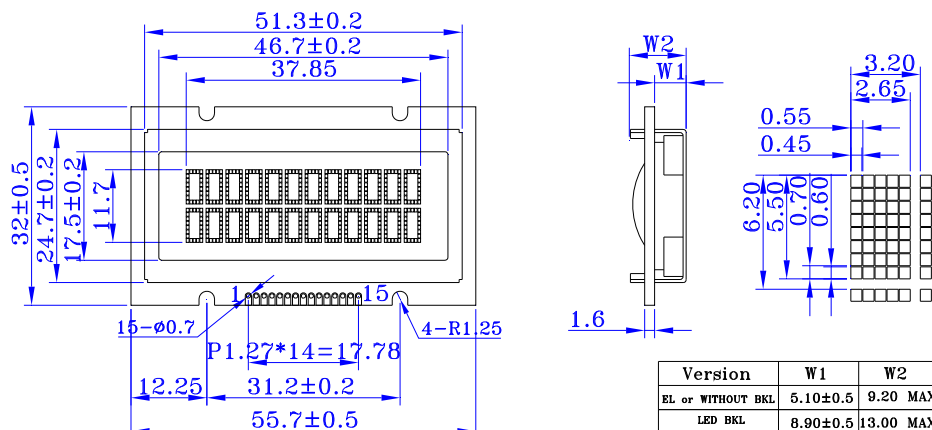
◆INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	A	BKL +
4	RS	Register selection(H:Data,L:Instruction)	16	K	BKL -
5	R/W	Read/Write selection(H: R, L: W)			

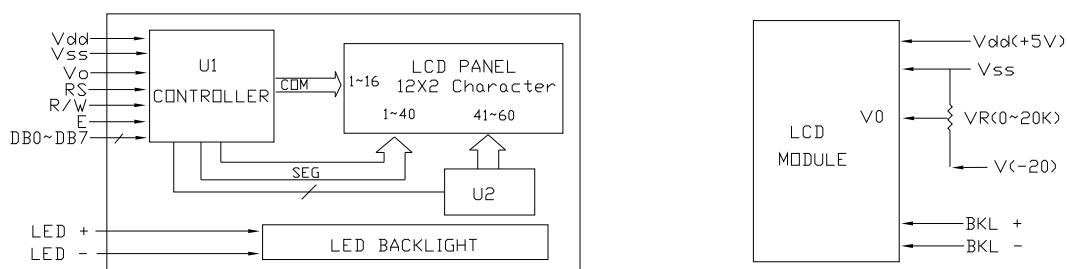
◆ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	60	---	mA

◆ OUTLINE DIMENSION



◆ BLOCK DIAGRAM & POWER SUPPLY



◆ MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	55.7X32.0X9.2/13.0	LC Fluid	TN,STN (Yellow-green, Gray, Blue),FSTN
Viewing Area(W×H)	46.7X17.5	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.45X0.60	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.55X0.70	Display Type	Positive or Negative
Character Size(W×H)	2.65X5.50	Backlight	LED (Optional)
Character Pitch(W×H)	3.20X6.20	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

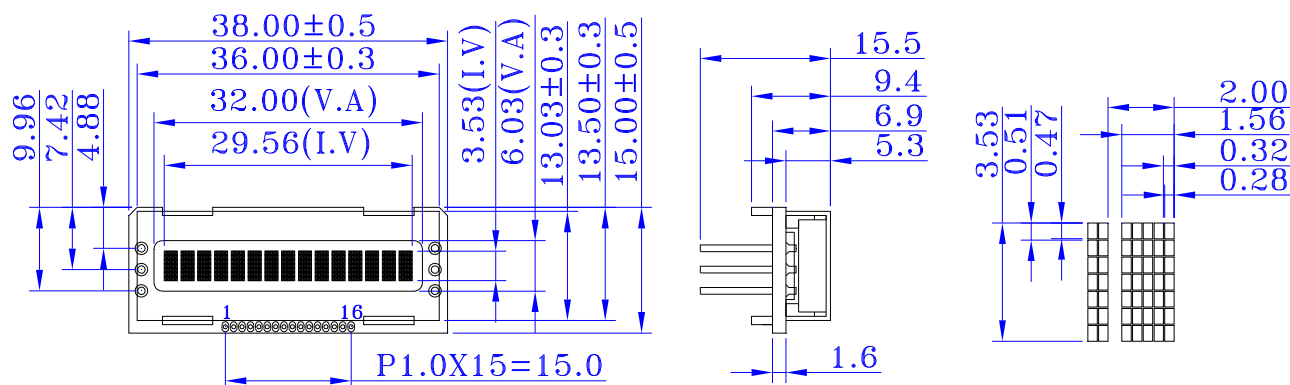
◆ INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss/K	Ground for logic / LED BKL(-)	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	A	BKL +
4	RS	Register selection (H:Data, L:Instruction)			
5	R/W	Read/Write selection (H: R, L: W)			

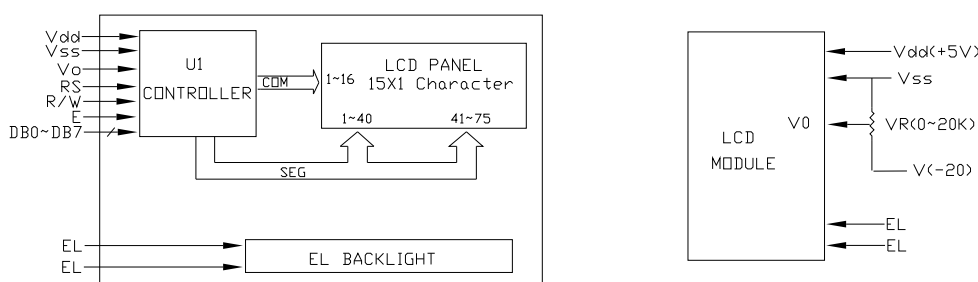
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	80	---	mA

◆OUTLINE DIMENSION



◆BLOCK DIAGRAM & POWER SUPPLY



◆MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	38.0X15.0X15.5	LC Fluid	TN,STN (Yellow-green, Gray, Blue),FSTN
Viewing Area(W×H)	32.0X6.03	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.28X0.47	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.32X0.51	Display Type	Positive or Negative
Character Size(W×H)	1.56X3.53	Backlight	EL (Optional)
Character Pitch(W×H)	2.00X --	Operating Temp.	0℃~50℃ or -20℃~70℃
		Controller	S6A0069 or Equivalent

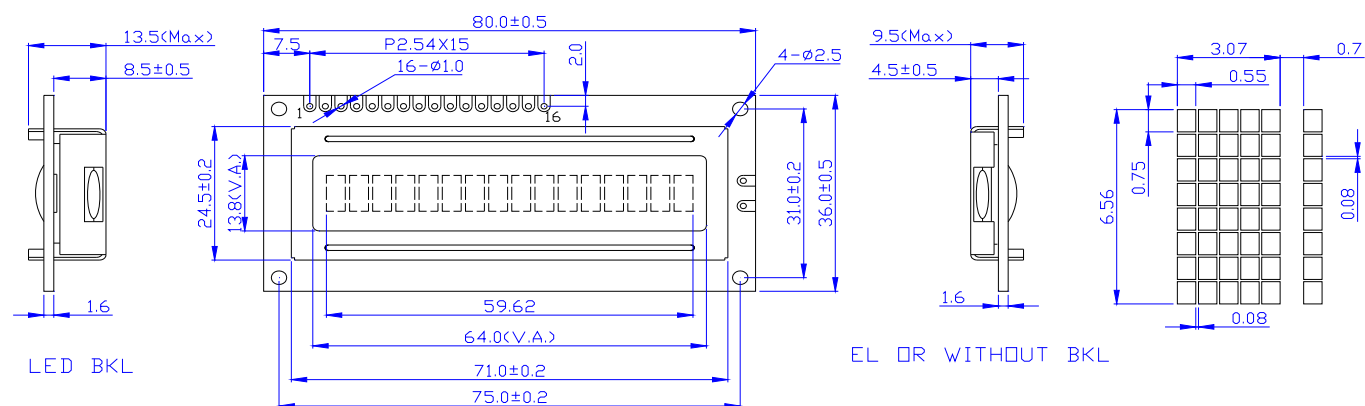
◆INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1~8	DB7~DB0	Data bus lines	13	Vdd	Power supply for logic
9	E	Enable signal	14	Vss	Ground for logic
10	R/W	Read/Write selection (H: R, L: W)	15	AC	EL
11	RS	Register selection (H:Data, L:Instruction)	16	AC	EL
12	Vo	Power supply for LCD			

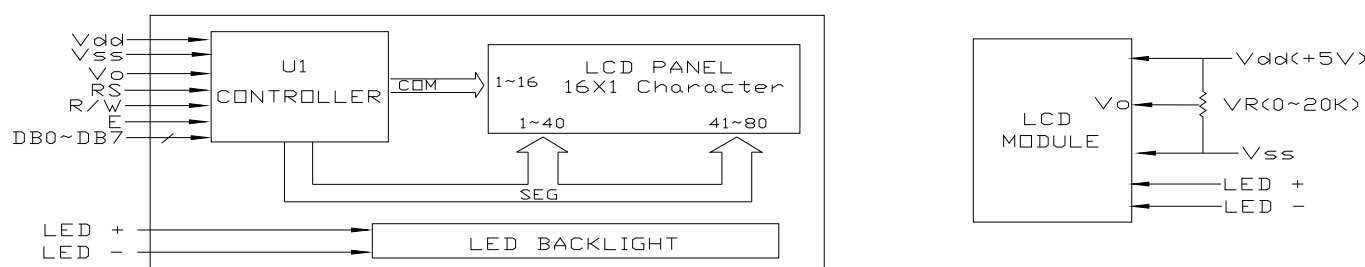
◆ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25℃	---	5.0	---	V
Operating Voltage for LCD	Vlcd	Ta=25℃	---	4.5	---	V
Supply Current	Idd	Ta=25℃, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for EL	Vf	Ta=25℃,	---	110	---	V

◆ OUTLINE DIMENSION



◆ BLOCK DIAGRAM & POWER SUPPLY



◆ MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	80.0X36.0X9.5/13.5	LC Fluid	TN,STN (Yellow-green, Gray, Blue),FSTN
Viewing Area(W×H)	64.0X13.8	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.55X0.75	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.63X0.83	Display Type	Positive or Negative
Character Size(W×H)	3.07X6.56	Backlight	LED (Optional)
Character Pitch(W×H)	3.77X --	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

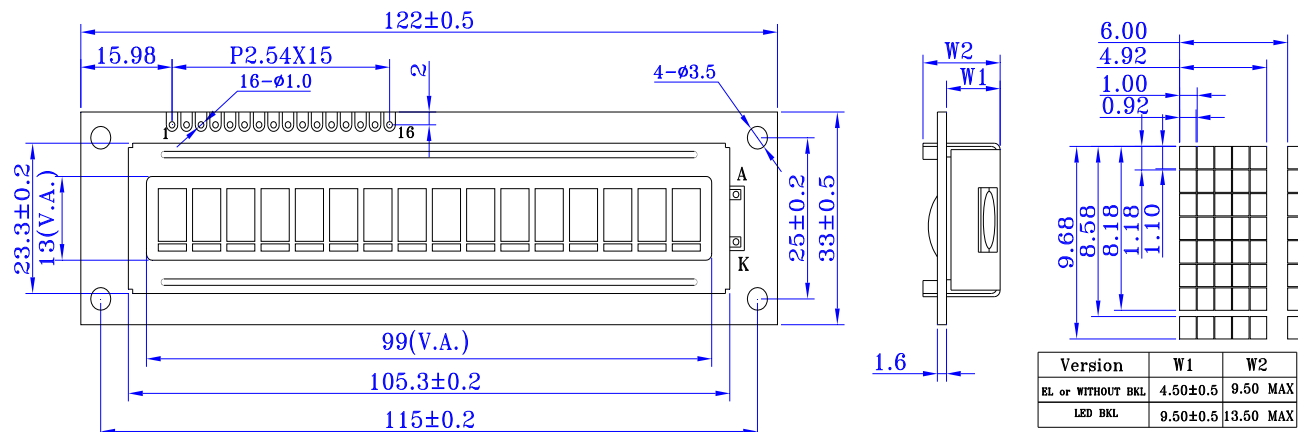
◆ INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	A	BKL +
4	RS	Register selection (H:Data, L:Instruction)	16	K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

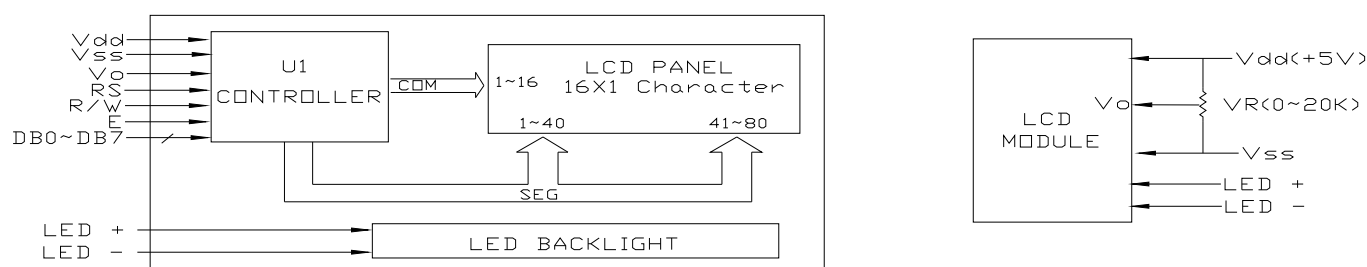
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	110	---	mA

◆ OUTLINE DIMENSION



◆ BLOCK DIAGRAM & POWER SUPPLY



◆ MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	122.0X33.0X9.5/13.5	LC Fluid	TN,STN (Yellow-green, Gray, Blue),FSTN
Viewing Area(W×H)	99.0X13.0	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.92X1.10	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	1.00X1.18	Display Type	Positive or Negative
Character Size(W×H)	4.92X9.68	Backlight	LED (Optional)
Character Pitch(W×H)	6.0X --	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

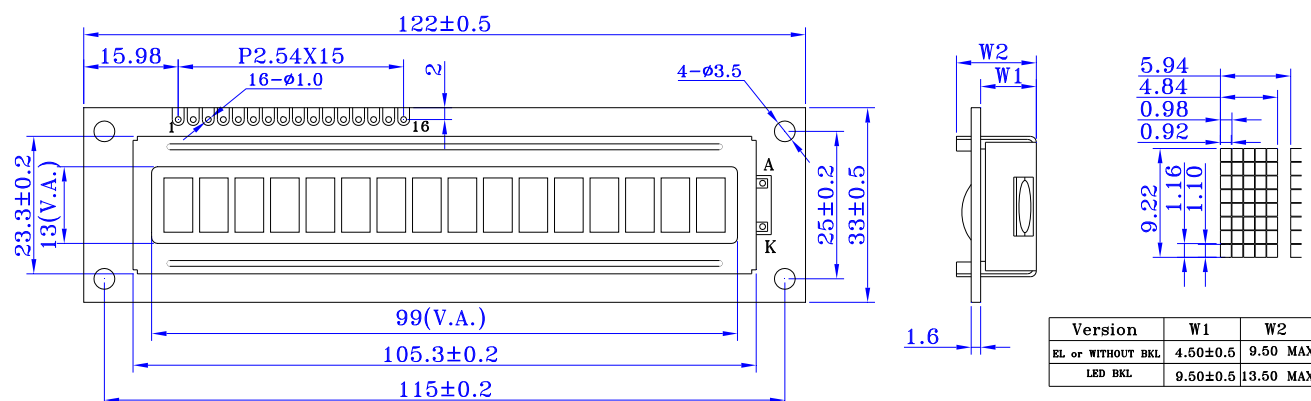
◆ INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	A	BKL +
4	RS	Register selection (H:Data, L:Instruction)	16	K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

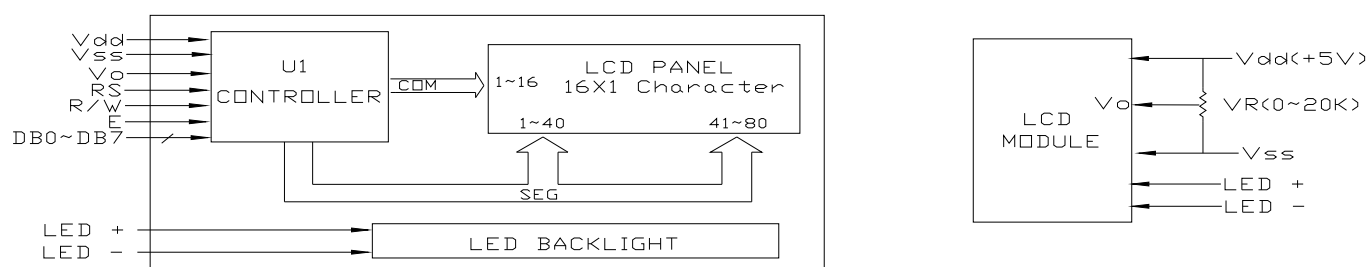
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	180	---	mA

◆OUTLINE DIMENSION



◆BLOCK DIAGRAM & POWER SUPPLY



◆MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	122.0X33.0X9.5/13.5	LC Fluid	TN,STN (Yellow-green, Gray, Blue),FSTN
Viewing Area(W×H)	99.0X13.0	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.92X1.10	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.98X1.16	Display Type	Positive or Negative
Character Size(W×H)	4.84X9.22	Backlight	LED (Optional)
Character Pitch(W×H)	5.94X --	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

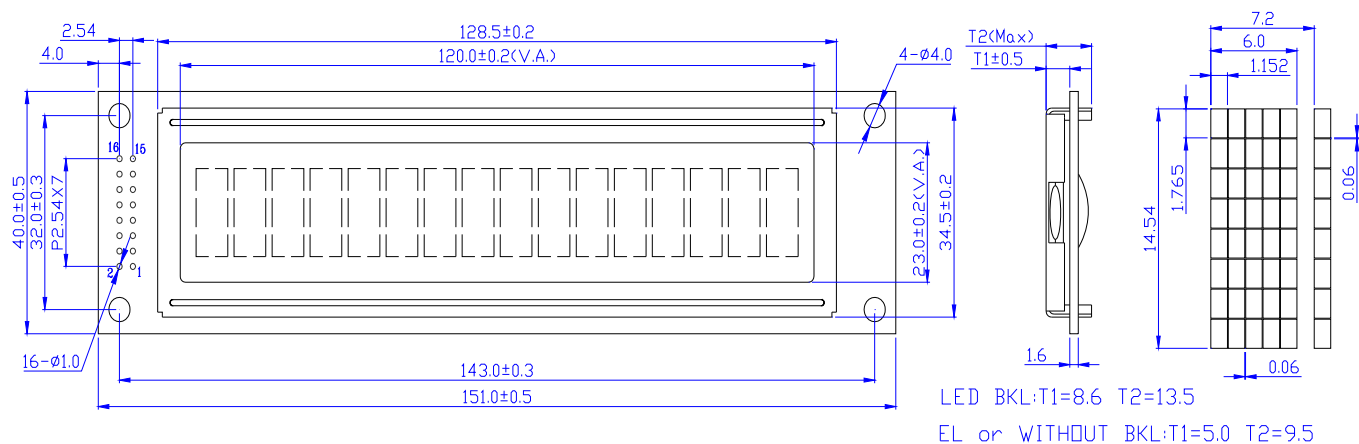
◆INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	V _{ss}	Ground for logic	6	E	Enable signal
2	V _{dd}	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	V _o	Power supply for LCD	15	A	BKL +
4	RS	Register selection (H:Data, L:Instruction)	16	K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

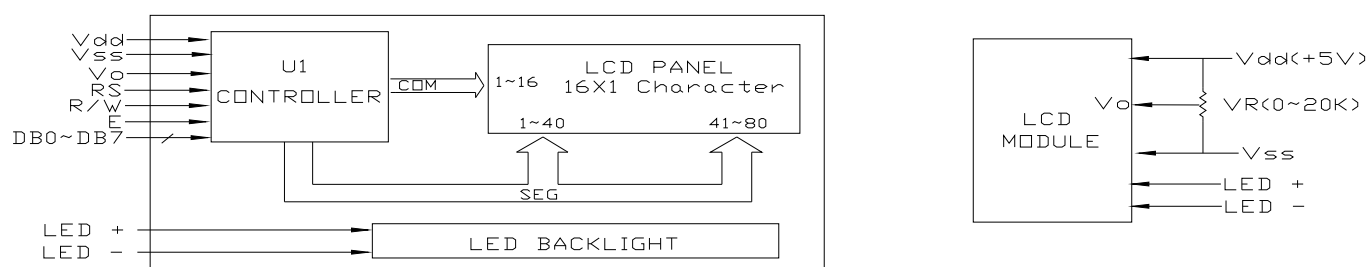
◆ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	V _{dd}	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	V _{led}	Ta=25°C	---	4.5	---	V
Supply Current	I _{dd}	Ta=25°C, V _{dd} =5.0V	---	2.0	3.0	mA
Supply Voltage for LED	V _f	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	I _f	Ta=25°C, V _f =4.2V	---	180	---	mA

◆ OUTLINE DIMENSION



◆ BLOCK DIAGRAM & POWER SUPPLY



◆ MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	143.0X40.0X9.5/13.5	LC Fluid	TN,STN (Yellow-green, Gray, Blue),FSTN
Viewing Area(W×H)	120.0X23.0	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	1.152X1.765	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	1.212X1.825	Display Type	Positive or Negative
Character Size(W×H)	6.00X14.54	Backlight	LED (Optional)
Character Pitch(W×H)	7.2X --	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

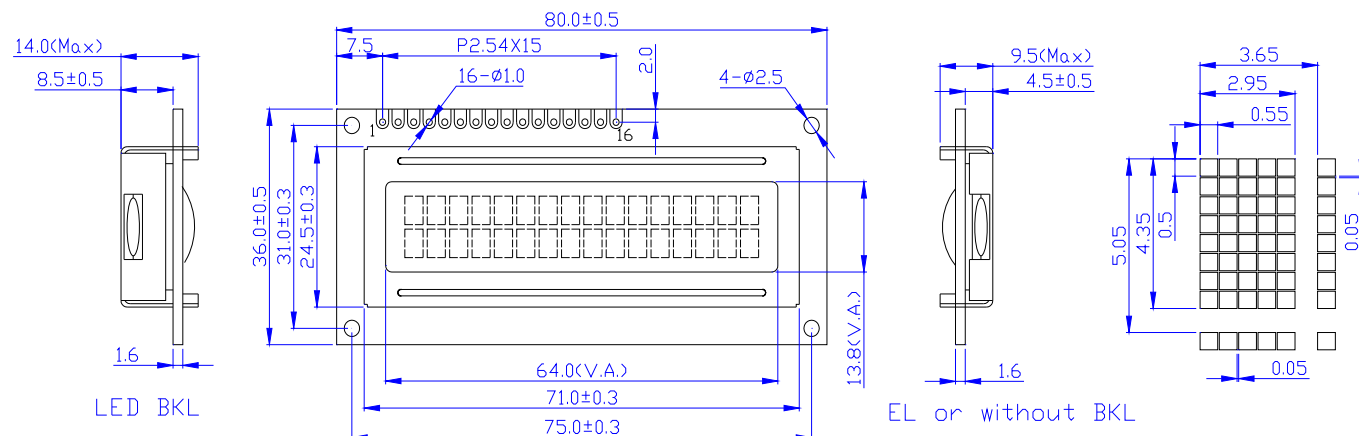
◆ INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	A	BKL +
4	RS	Register selection (H:Data, L:Instruction)	16	K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

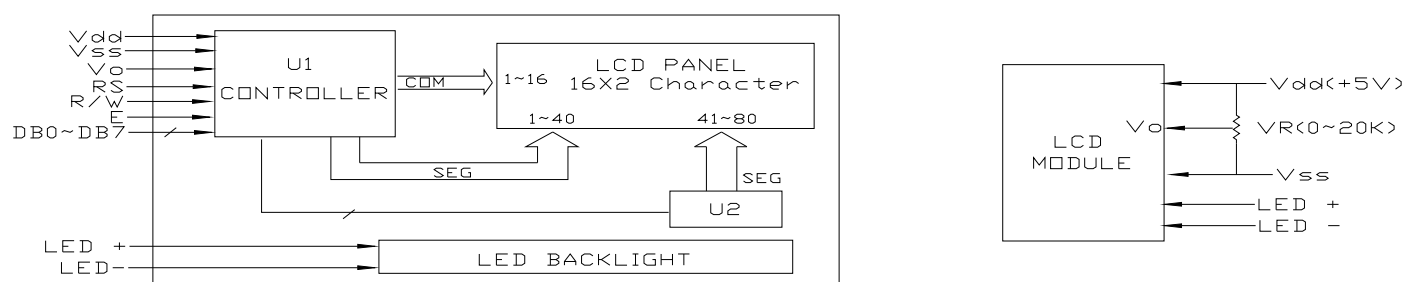
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	300	---	mA

◆ OUTLINE DIMENSION



◆ BLOCK DIAGRAM & POWER SUPPLY



◆ MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	80.0X36.0X9.5/14.0	LC Fluid	TN, STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	64.0X13.8	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.55X0.50	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.60X0.55	Display Type	Positive or Negative
Character Size(W×H)	2.95X4.35	Backlight	LED (Optional)
Character Pitch(W×H)	3.65×5.05	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

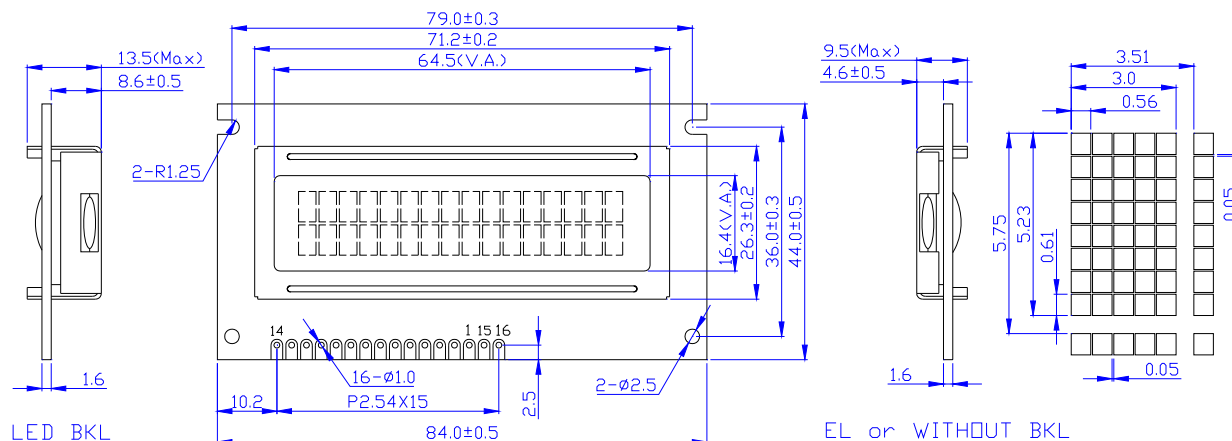
◆ INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	A	BKL +
4	RS	Register selection (H:Data, L:Instruction)	16	K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

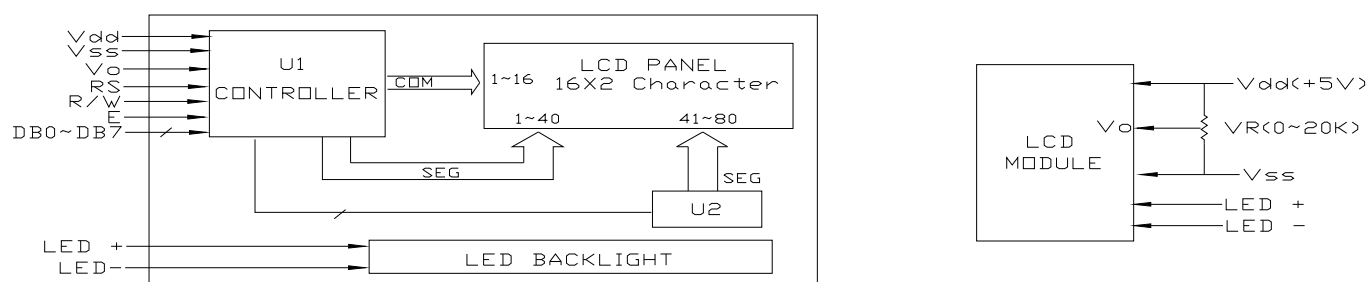
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	110	---	mA

◆ OUTLINE DIMENSION



◆ BLOCK DIAGRAM & POWER SUPPLY



◆ MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	84.0X44.0X9.5/13.5	LC Fluid	TN, STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	64.5X16.4	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.56X0.61	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.61X0.66	Display Type	Positive or Negative
Character Size(W×H)	3.00X5.23	Backlight	LED (Optional)
Character Pitch(W×H)	3.51×5.75	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

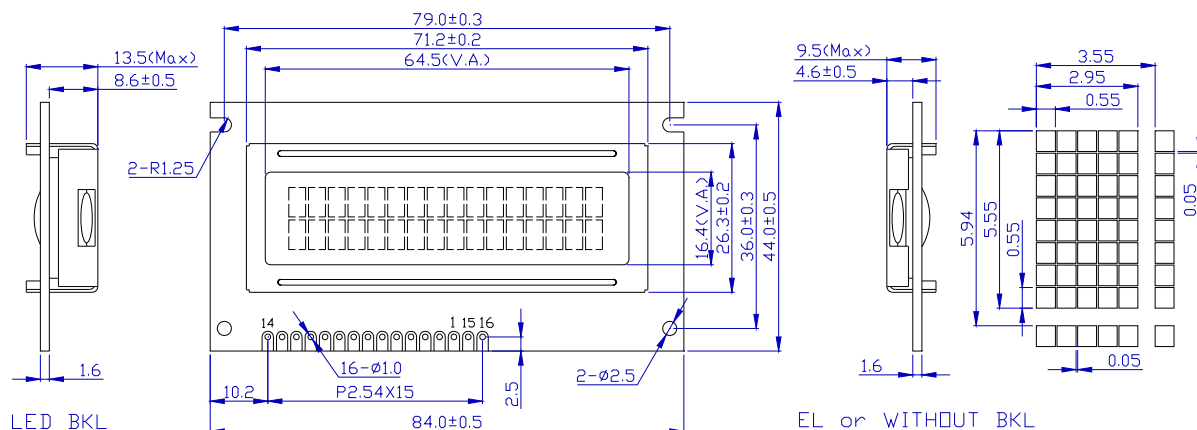
◆ INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	A	BKL +
4	RS	Register selection (H:Data, L:Instruction)	16	K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

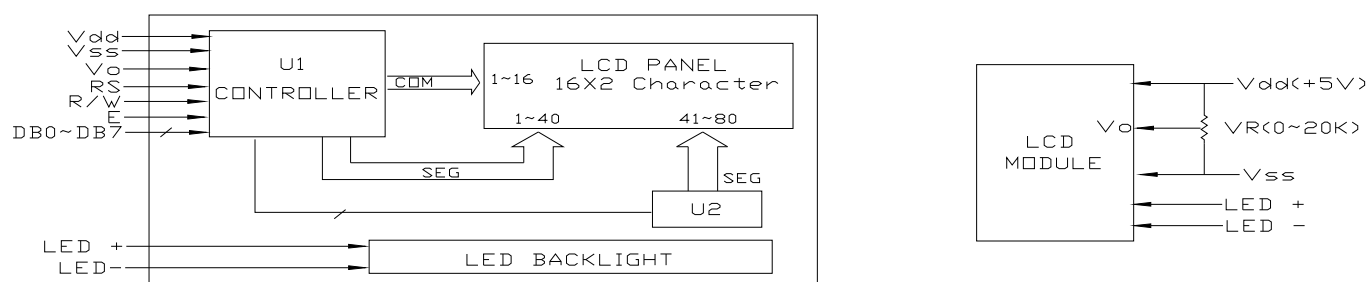
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	120	---	mA

◆ OUTLINE DIMENSION



◆ BLOCK DIAGRAM & POWER SUPPLY



◆ MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	84.0X44.0X9.5/13.5	LC Fluid	TN, STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	64.5X16.4	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.55X0.55	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.60X0.60	Display Type	Positive or Negative
Character Size(W×H)	2.95X5.55	Backlight	LED (Optional)
Character Pitch(W×H)	3.55×5.94	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

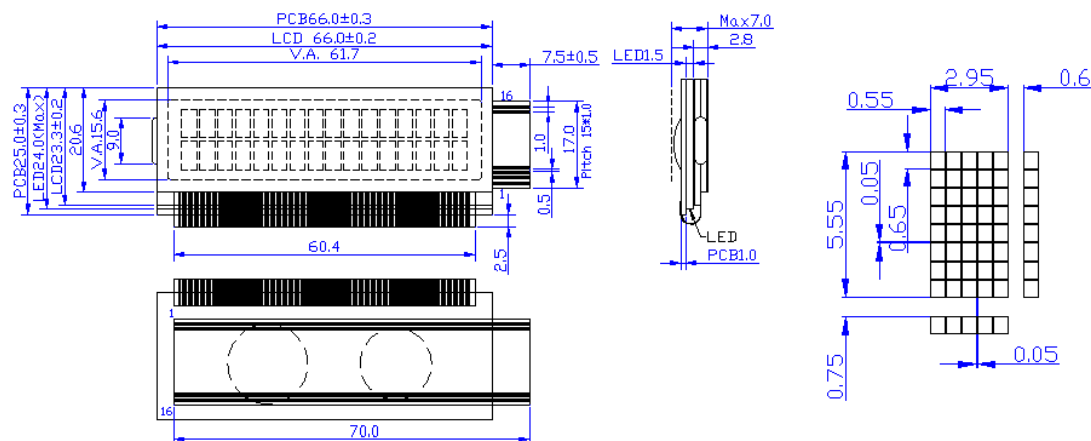
◆ INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	A	BKL +
4	RS	Register selection (H:Data, L:Instruction)	16	K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

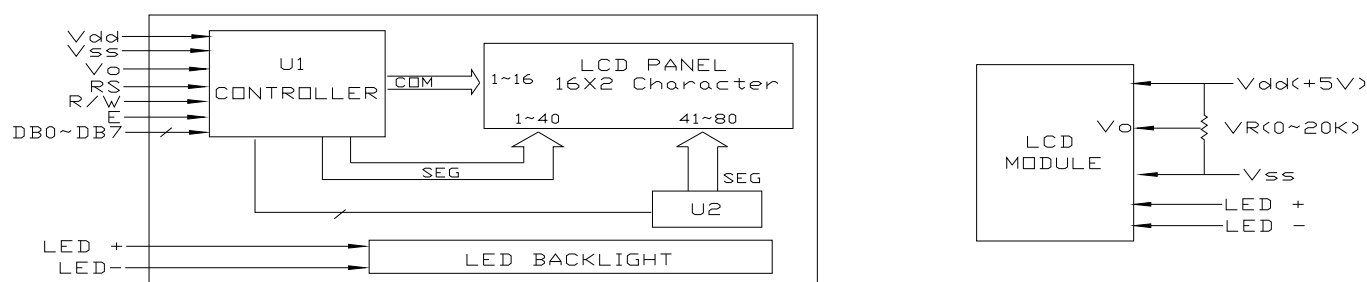
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	120	---	mA

◆ OUTLINE DIMENSION



◆BLOCK DIAGRAM & POWER SUPPLY



◆MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	66.0X25.0X7.0	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	61.7X15.6	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.55X0.65	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.60X0.70	Display Type	Positive or Negative
Character Size(W×H)	2.95X5.55	Backlight	LED (Optional)
Character Pitch(W×H)	3.55X6.30	Operating Temp.	0℃~50℃ or -20℃~70℃
		Controller	S6A0069 or Equivalent

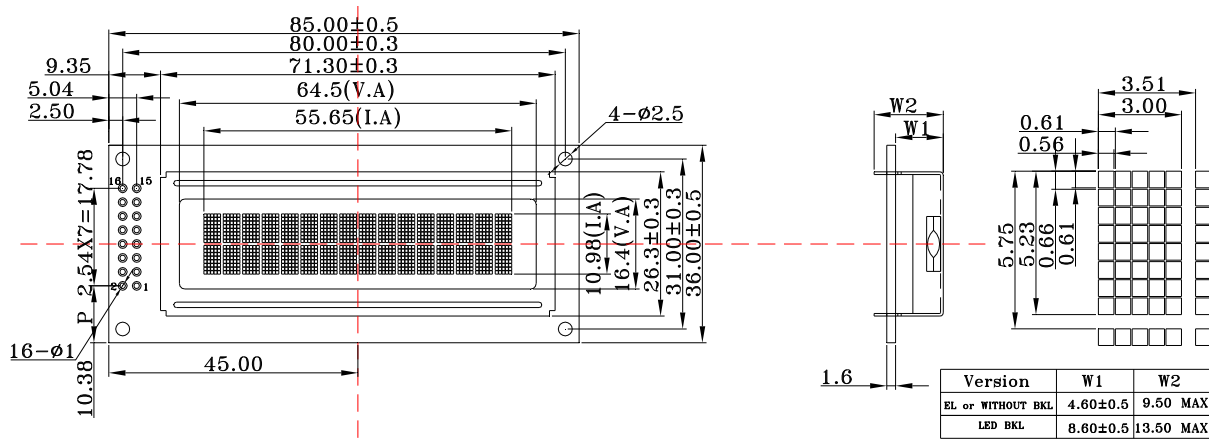
◆INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	A	BKL +
4	RS	Register selection (H:Data, L:Instruction)	16	K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

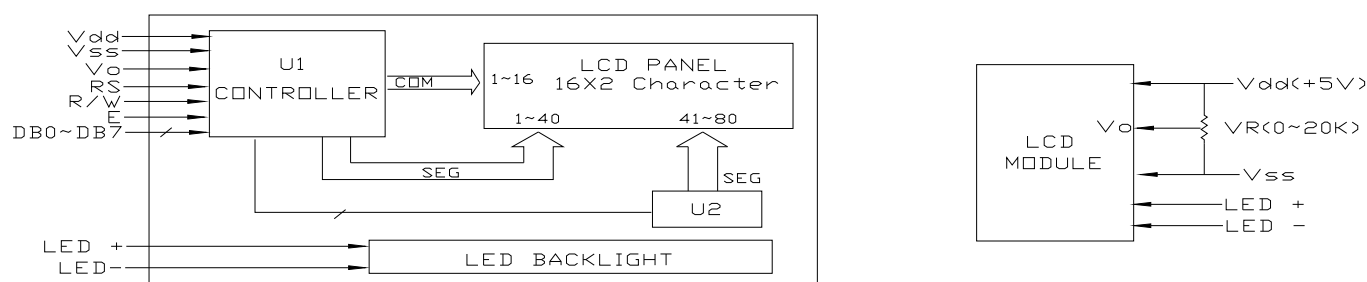
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25℃	---	5.0	---	V
Operating Voltage for LCD	Vlcd	Ta=25℃	---	4.5	---	V
Supply Current	Idd	Ta=25℃, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25℃, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25℃, Vf=3.2V	---	40	---	mA

◆ OUTLINE DIMENSION



◆ BLOCK DIAGRAM & POWER SUPPLY



◆ MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	85.0X36.0X9.5/13.5	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	64.5X16.4	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.56X0.61	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.61X0.66	Display Type	Positive or Negative
Character Size(W×H)	3.0X5.23	Backlight	LED (Optional)
Character Pitch(W×H)	3.51X5.75	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

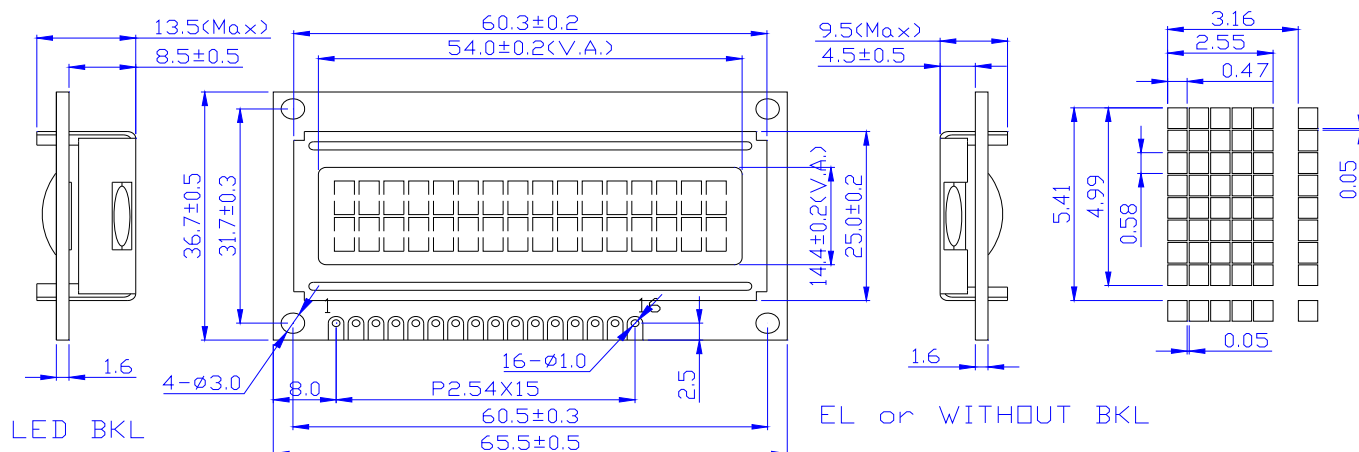
◆ INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	A	BKL +
4	RS	Register selection (H:Data, L:Instruction)	16	K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

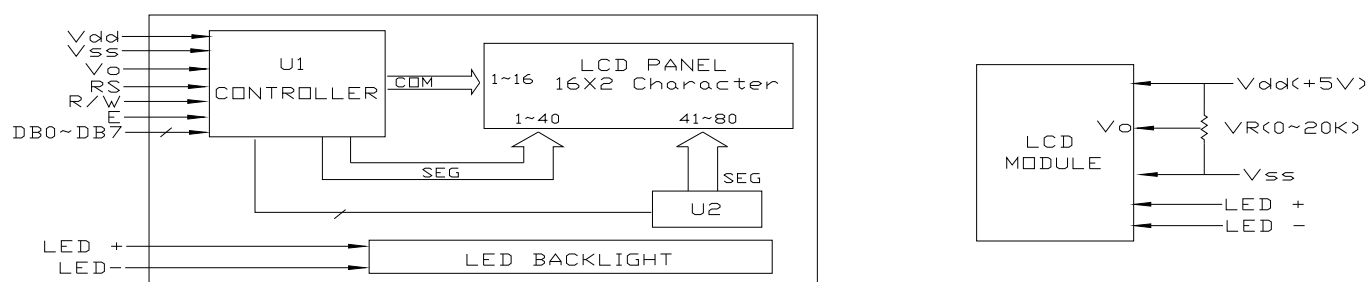
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	120	---	mA

◆OUTLINE DIMENSION



◆BLOCK DIAGRAM & POWER SUPPLY



◆MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	65.5X36.7X9.5/13.5	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	54.0X14.4	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.47X0.58	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.52X0.63	Display Type	Positive or Negative
Character Size(W×H)	2.55X4.99	Backlight	LED (Optional)
Character Pitch(W×H)	3.16X5.41	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

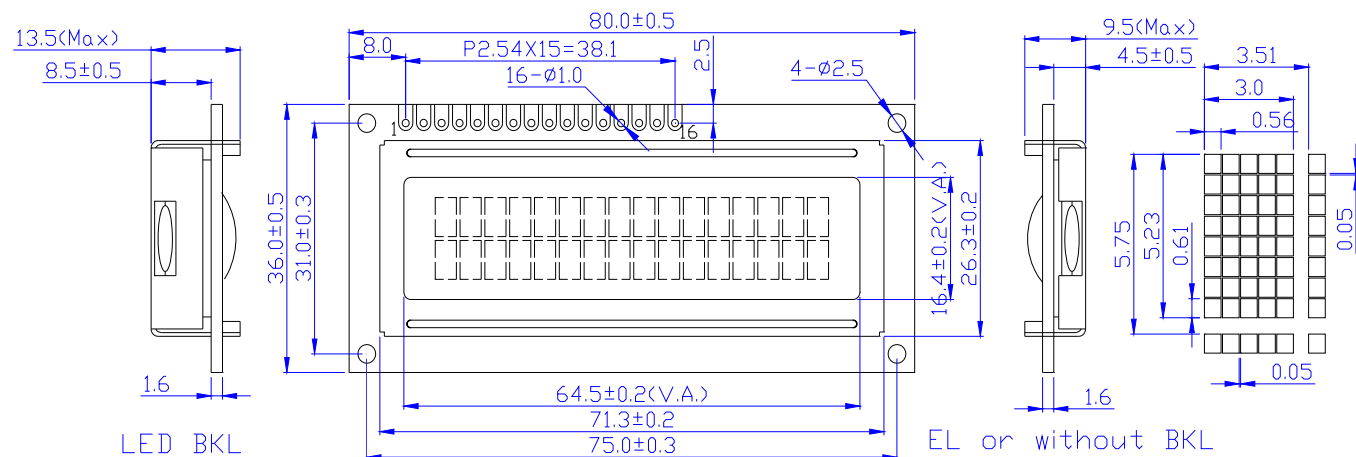
◆INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	A	BKL +
4	RS	Register selection (H:Data, L:Instruction)	16	K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

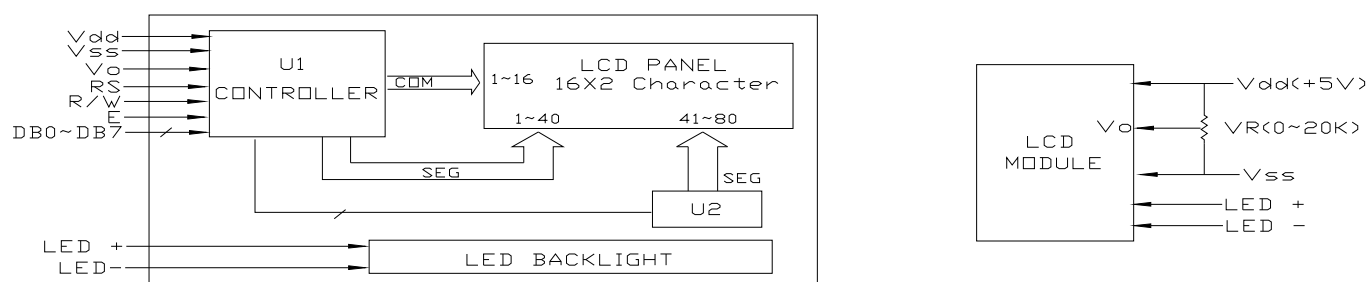
◆ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	100	---	mA

◆OUTLINE DIMENSION



◆BLOCK DIAGRAM & POWER SUPPLY



◆MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	80.0X36.0X9.5/13.5	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	64.5X16.4	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.56X0.61	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.61X0.66	Display Type	Positive or Negative
Character Size(W×H)	3.0X5.23	Backlight	LED (Optional)
Character Pitch(W×H)	3.51X5.75	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

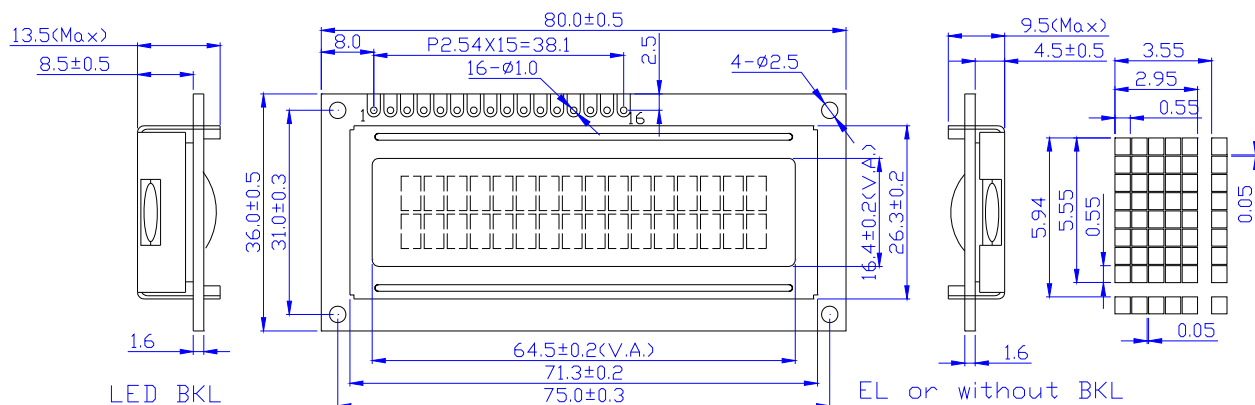
◆INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	V _{SS}	Ground for logic	6	E	Enable signal
2	V _{DD}	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	V ₀	Power supply for LCD	15	A	BKL +
4	RS	Register selection (H:Data, L:Instruction)	16	K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

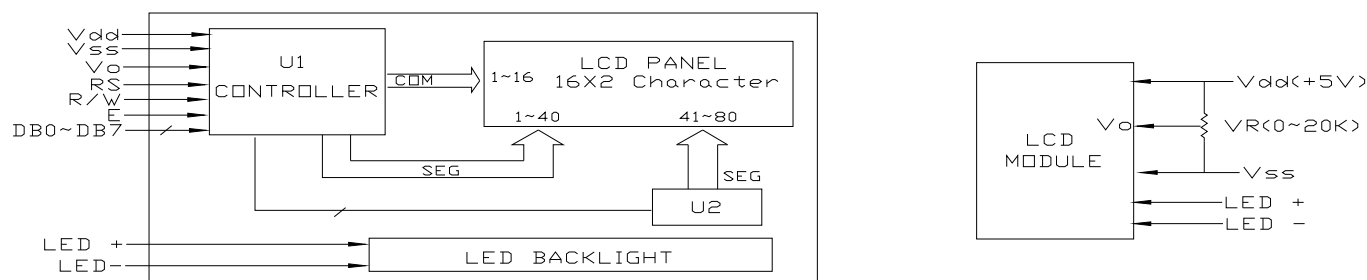
◆ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	V _{DD}	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	V _{Lcd}	Ta=25°C	---	4.5	---	V
Supply Current	I _{DD}	Ta=25°C, V _{DD} =5.0V	---	2.0	3.0	mA
Supply Voltage for LED	V _f	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	I _f	Ta=25°C, V _f =4.2V	---	120	---	mA

◆OUTLINE DIMENSION



◆BLOCK DIAGRAM & POWER SUPPLY



◆MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	80.0X36.0X9.5/13.5	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	64.5X16.4	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.55X0.55	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.60X0.60	Display Type	Positive or Negative
Character Size(W×H)	2.95X5.55	Backlight	LED (Optional)
Character Pitch(W×H)	3.55X5.94	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

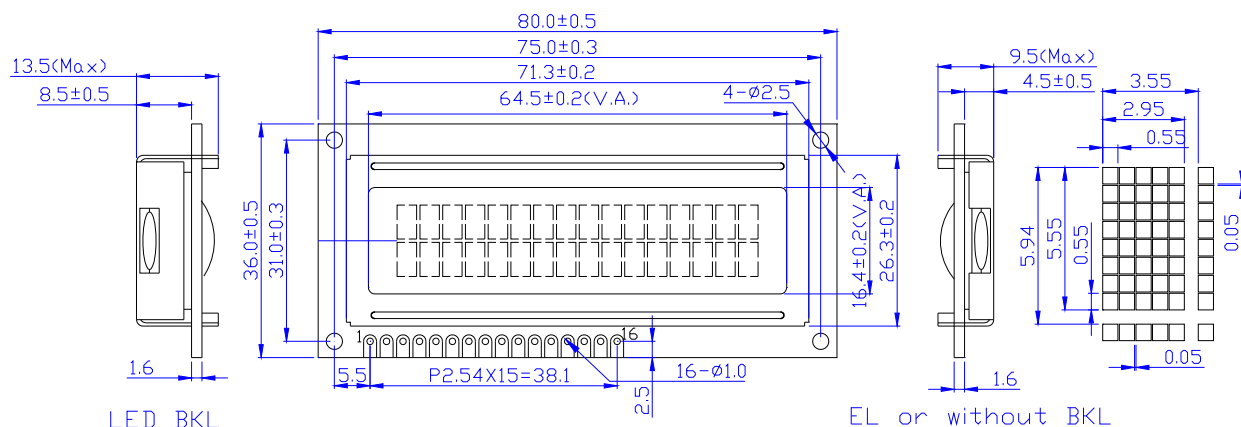
◆INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	A	BKL +
4	RS	Register selection (H:Data, L:Instruction)	16	K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

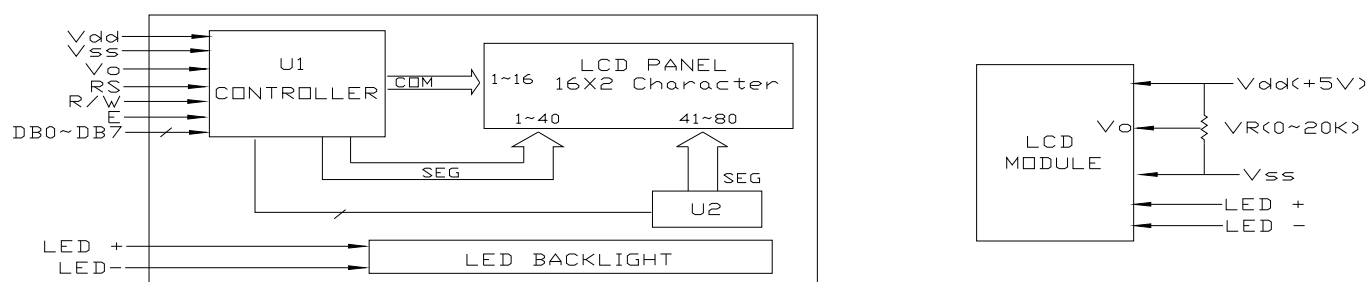
◆ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	120	---	mA

◆OUTLINE DIMENSION



◆BLOCK DIAGRAM & POWER SUPPLY



◆MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	80.0X36.0X9.5/13.5	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	64.5X16.4	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.55X0.55	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.60X0.60	Display Type	Positive or Negative
Character Size(W×H)	2.95X5.55	Backlight	LED (Optional)
Character Pitch(W×H)	3.55X5.94	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

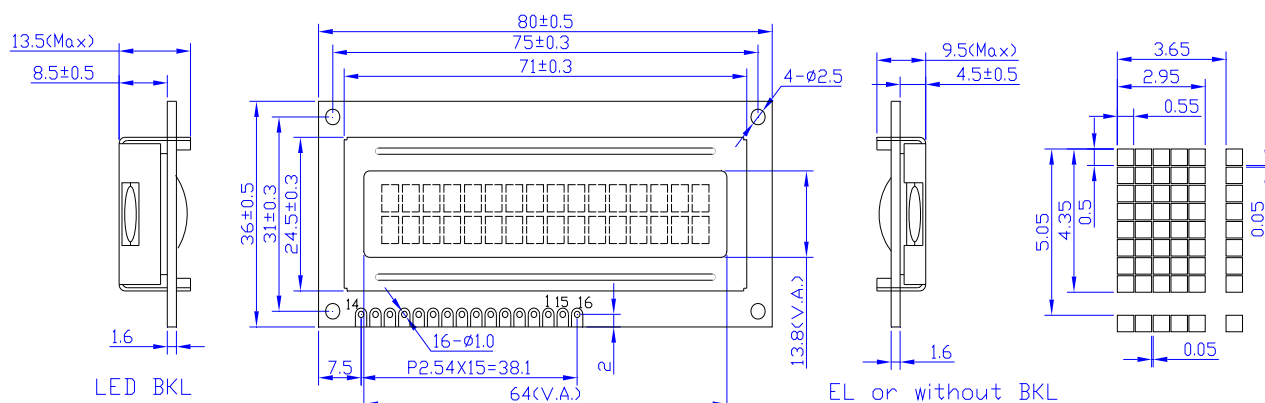
◆INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	K	BKL -
4	RS	Register selection (H:Data, L:Instruction)	16	A	BKL +
5	R/W	Read/Write selection (H: R, L: W)			

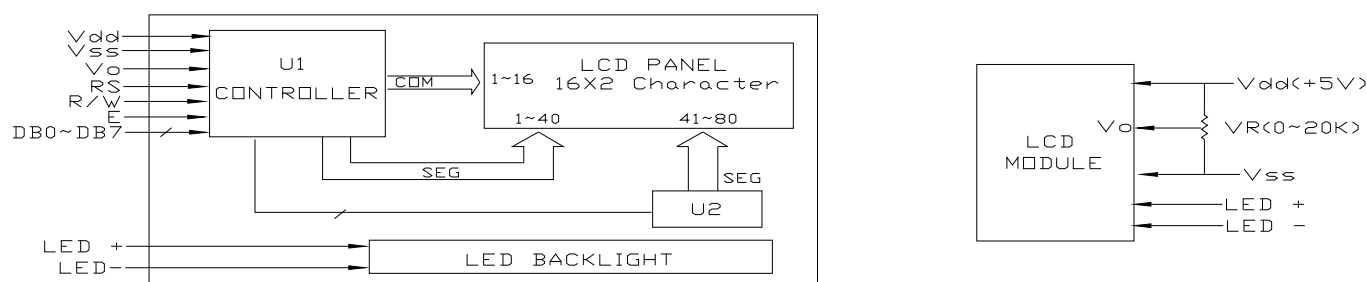
◆ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	120	---	mA

◆ OUTLINE DIMENSION



◆ BLOCK DIAGRAM & POWER SUPPLY



◆ MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	80.0X36.0X9.5/14	LC Fluid	TN, STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	64.0X13.8	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.55X0.50	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.60X0.55	Display Type	Positive or Negative
Character Size(W×H)	2.95X4.35	Backlight	LED (Optional)
Character Pitch(W×H)	3.65×5.05	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

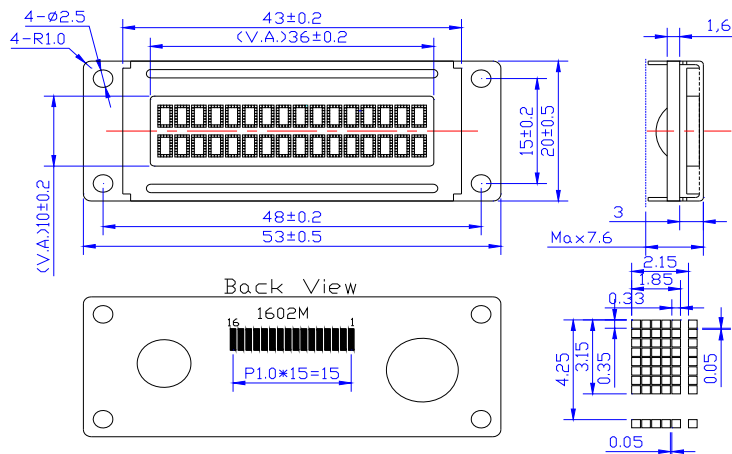
◆ INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	A	BKL +
4	RS	Register selection (H:Data, L:Instruction)	16	K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

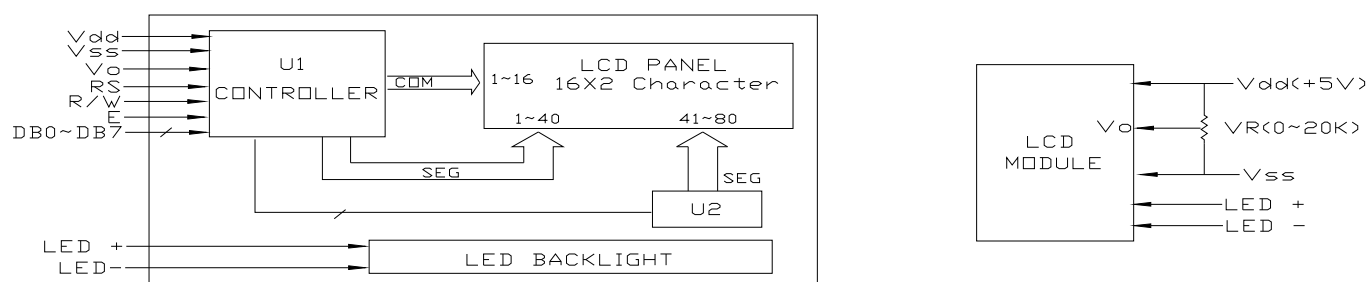
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	110	---	mA

◆ OUTLINE DIMENSION



◆ BLOCK DIAGRAM & POWER SUPPLY



◆ MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	53.0X20.0X7.6	LC Fluid	TN, STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	36X10	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.33X0.35	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.38X0.40	Display Type	Positive or Negative
Character Size(W×H)	1.85X3.15	Backlight	LED (Optional)
Character Pitch(W×H)	2.15×4.25	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

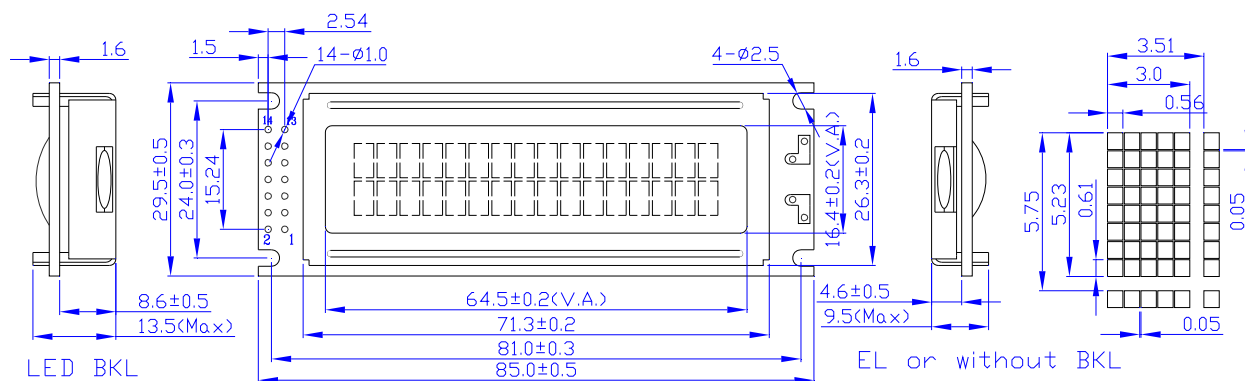
◆ INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	A	BKL +
4	RS	Register selection (H:Data, L:Instruction)	16	K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

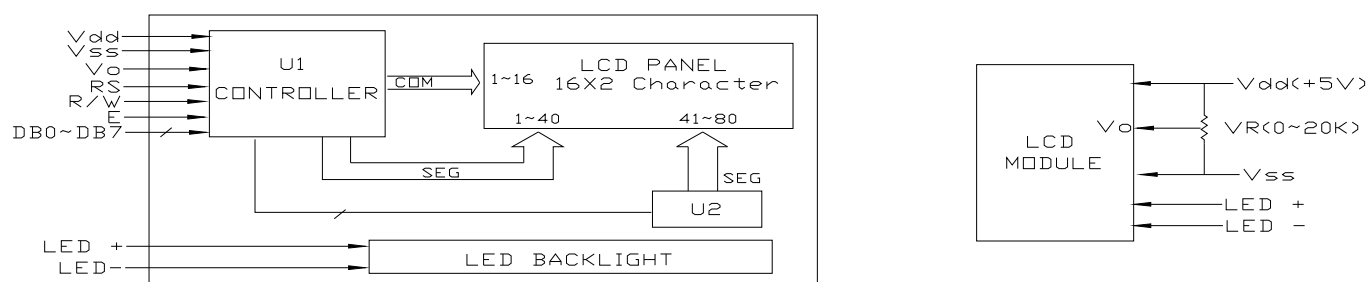
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	60	---	mA

◆OUTLINE DIMENSION



◆BLOCK DIAGRAM & POWER SUPPLY



◆MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	85.0X29.5X9.5/13.5	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	64.5X16.4	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.56X0.61	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.61X0.66	Display Type	Positive or Negative
Character Size(W×H)	3.0X5.23	Backlight	LED (A,K can be reversed)
Character Pitch(W×H)	3.51X5.75	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

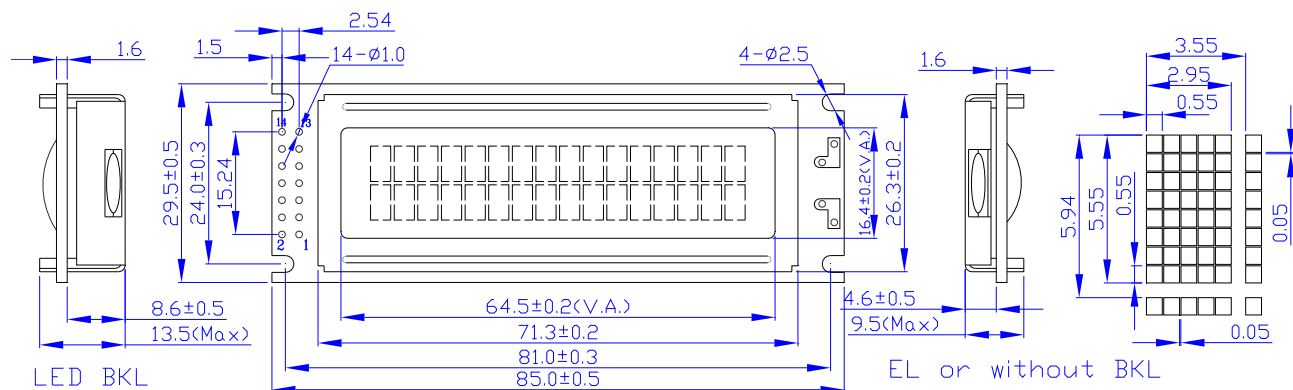
◆INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vdd	Power supply for logic	6	E	Enable signal
2	Vss	Ground for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD		A	BKL +
4	RS	Register selection (H:Data, L:Instruction)		K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

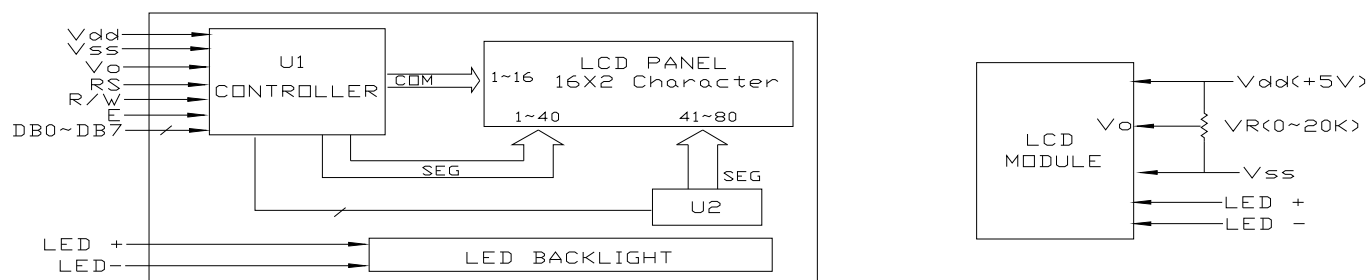
◆ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	120	---	mA

◆OUTLINE DIMENSION



◆BLOCK DIAGRAM & POWER SUPPLY



◆MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	85.0X29.5X9.5/13.5	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	64.5X16.4	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.55X0.55	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.60X0.60	Display Type	Positive or Negative
Character Size(W×H)	2.95X5.55	Backlight	LED (A,K can be reversed)
Character Pitch(W×H)	3.55X5.94	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

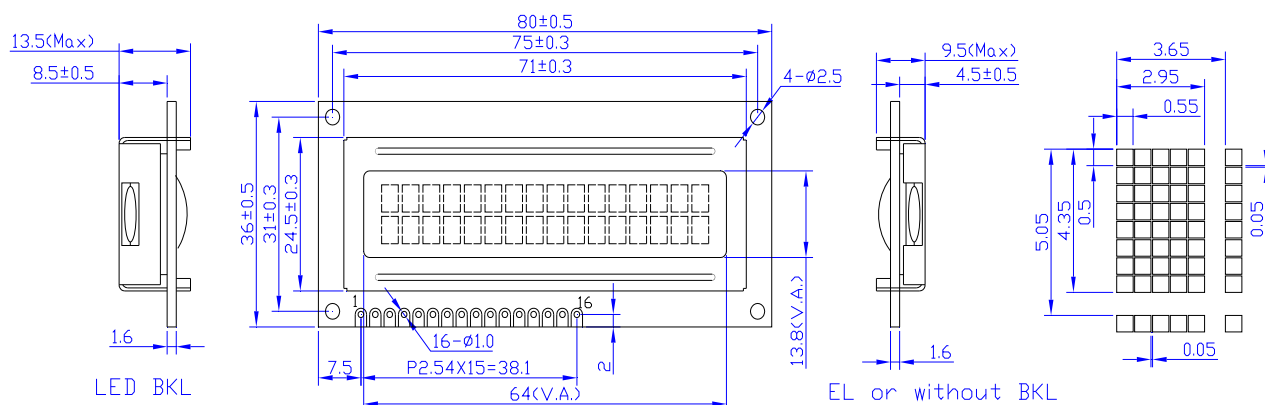
◆INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vdd	Power supply for logic	6	E	Enable signal
2	Vss	Ground for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD		A	BKL +
4	RS	Register selection (H:Data, L:Instruction)		K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

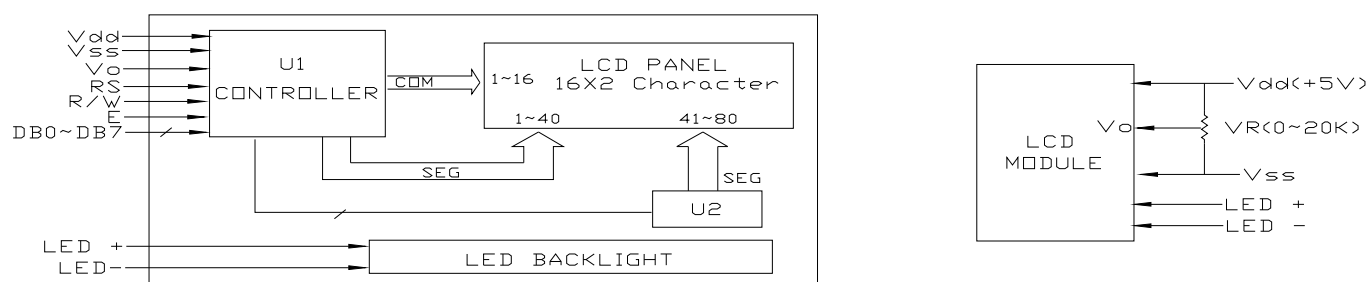
◆ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	120	---	mA

◆ OUTLINE DIMENSION



◆ BLOCK DIAGRAM & POWER SUPPLY



◆ MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	80.0X36.0X9.5/13.5	LC Fluid	TN, STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	64.0X13.8	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.55X0.50	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.60X0.55	Display Type	Positive or Negative
Character Size(W×H)	2.95X4.35	Backlight	LED (Optional)
Character Pitch(W×H)	3.65×5.05	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

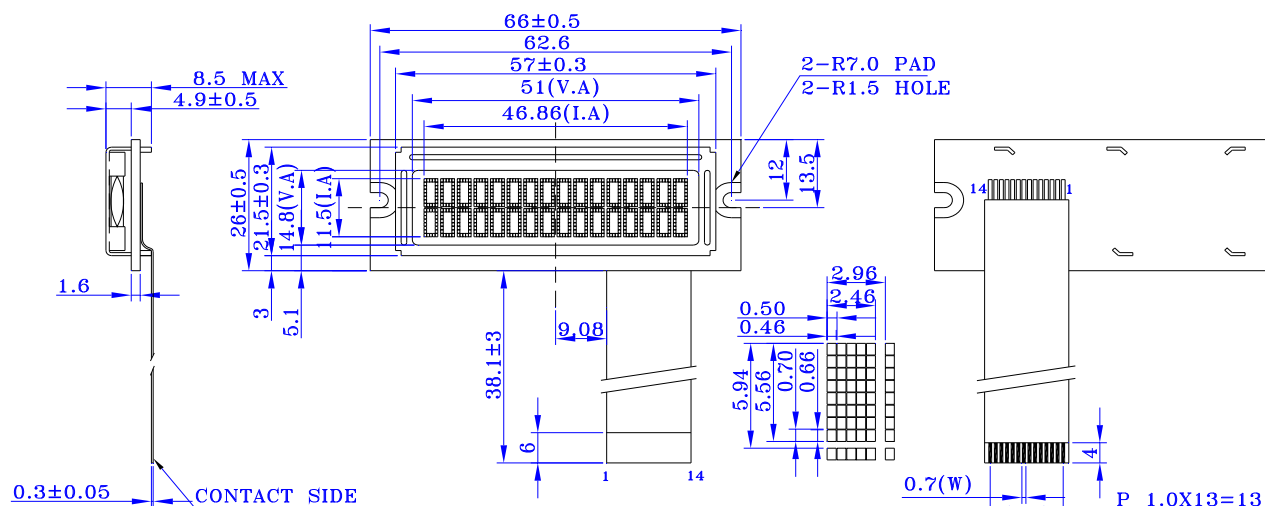
◆ INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	A	BKL +
4	RS	Register selection (H:Data, L:Instruction)	16	K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

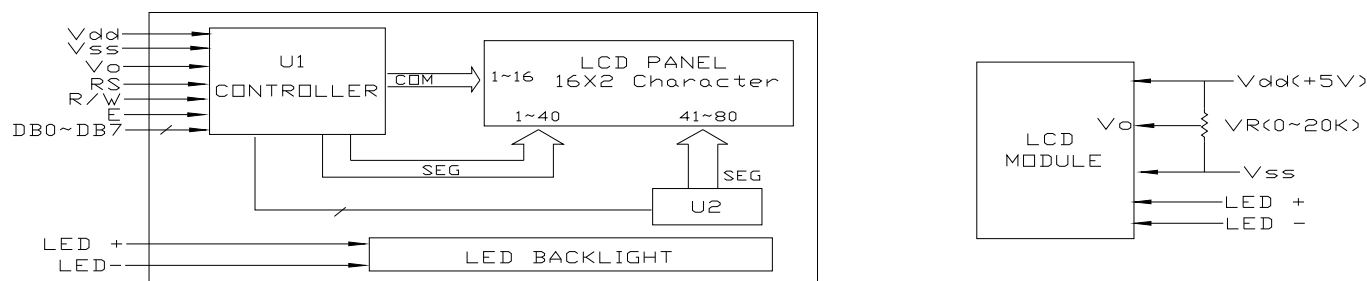
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	110	---	mA

◆ OUTLINE DIMENSION



◆ BLOCK DIAGRAM & POWER SUPPLY



◆ MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	66.0X26.0X8.5	LC Fluid	TN, STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	51.2X14.8	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.46X0.66	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.50X0.70	Display Type	Positive or Negative
Character Size(W×H)	2.46X5.56	Backlight	NC (Optional)
Character Pitch(W×H)	2.96×5.94	Operating Temp.	0℃~50℃ or -20℃~70℃
		Controller	S6A0069 or Equivalent

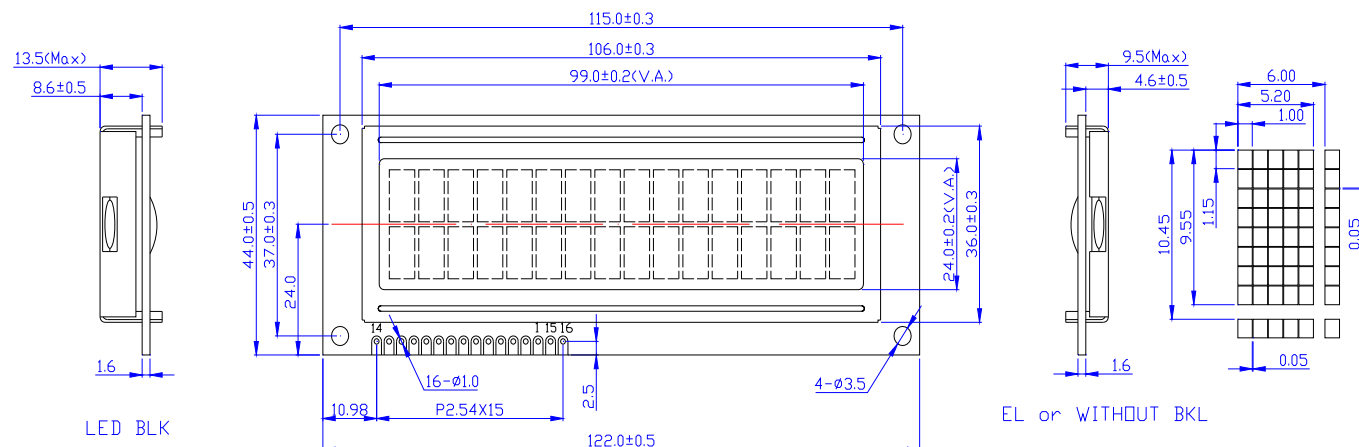
◆ INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vo	Power supply for LCD	12	E	Enable signal
2	Vdd	Power supply for logic	13	R/W	Read/Write selection (H: R, L: W)
3	Vss	Ground for logic	14	RS	Register selection (H:Data, L:Instruction)
4~11	DB0~DB7	Data bus lines			

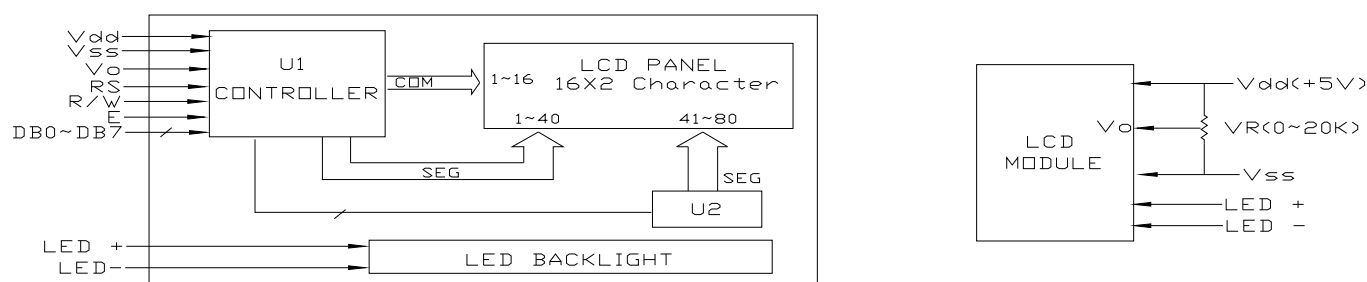
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25℃	---	5.0	---	V
Operating Voltage for LCD	Vlcd	Ta=25℃	---	4.5	---	V
Supply Current	Idd	Ta=25℃, Vdd=5.0V	---	2.0	3.0	mA

◆ OUTLINE DIMENSION



◆ BLOCK DIAGRAM & POWER SUPPLY



◆ MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	122.0X44.0X9.5/13.5	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	99.0X24.0	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	1.00X1.15	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	1.05X1.20	Display Type	Positive or Negative
Character Size(W×H)	5.20X9.55	Backlight	LED (Optional)
Character Pitch(W×H)	6.0×10.45	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

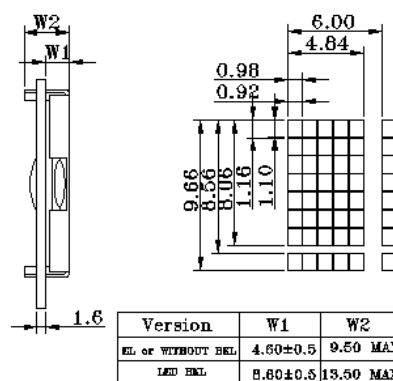
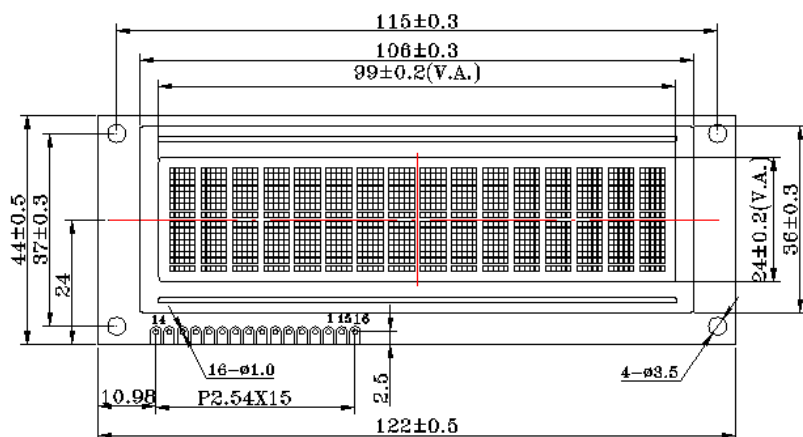
◆ INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic (Available for 3V,5V)	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	A	BKL +
4	RS	Register selection (H:Data, L:Instruction)	16	K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

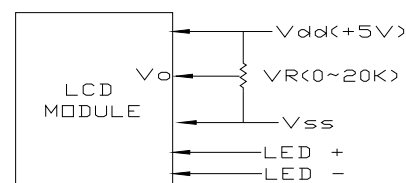
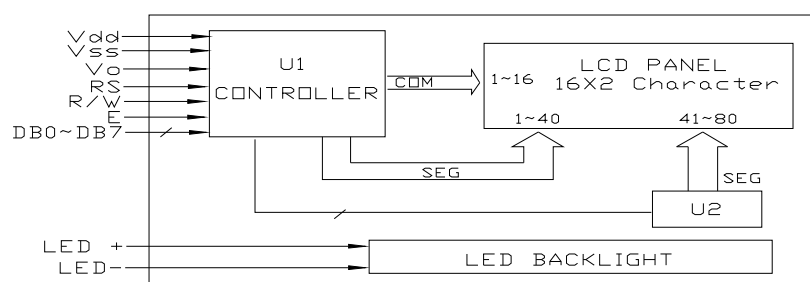
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	240	---	mA

◆ OUTLINE DIMENSION



◆ BLOCK DIAGRAM & POWER SUPPLY



◆ MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	122.0X44.0X9.5/13.5	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	99.0X24.0	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.92X1.10	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.98X1.16	Display Type	Positive or Negative
Character Size(W×H)	4.84X9.66	Backlight	LED (Optional)
Character Pitch(W×H)	6.0×10.34	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

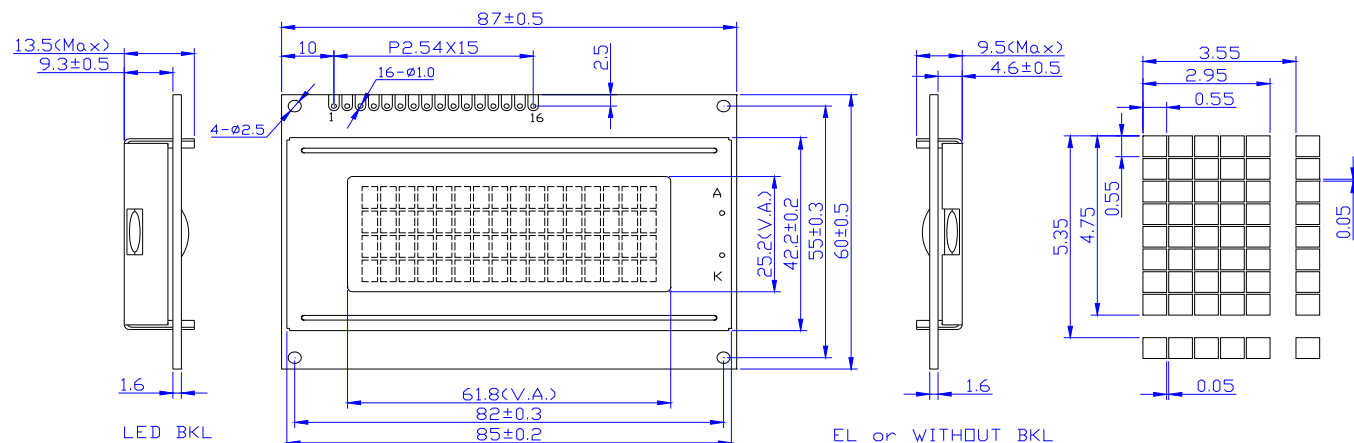
◆ INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	A	BKL +
4	RS	Register selection (H:Data, L:Instruction)	16	K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

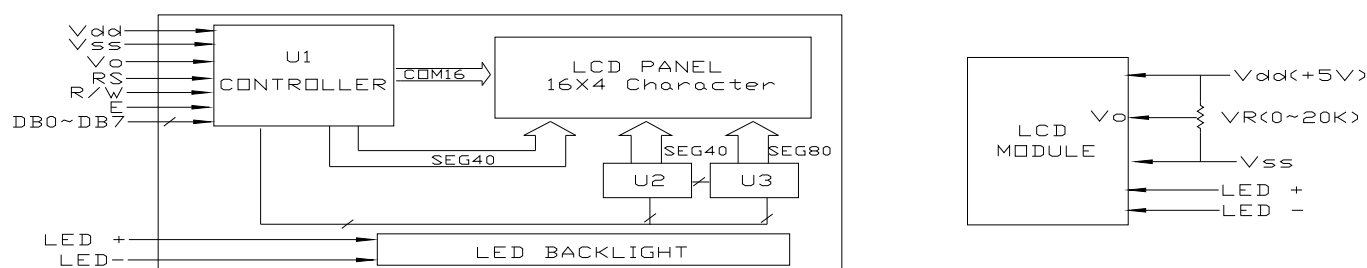
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	120	---	mA

◆OUTLINE DIMENSION



◆BLOCK DIAGRAM & POWER SUPPLY



◆MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	87.0X60.0X9.5/13.5	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	61.8X25.2	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.55X0.55	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.60X0.60	Display Type	Positive or Negative
Character Size(W×H)	2.95X4.75	Backlight	LED (Optional)
Character Pitch(W×H)	3.55×5.35	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

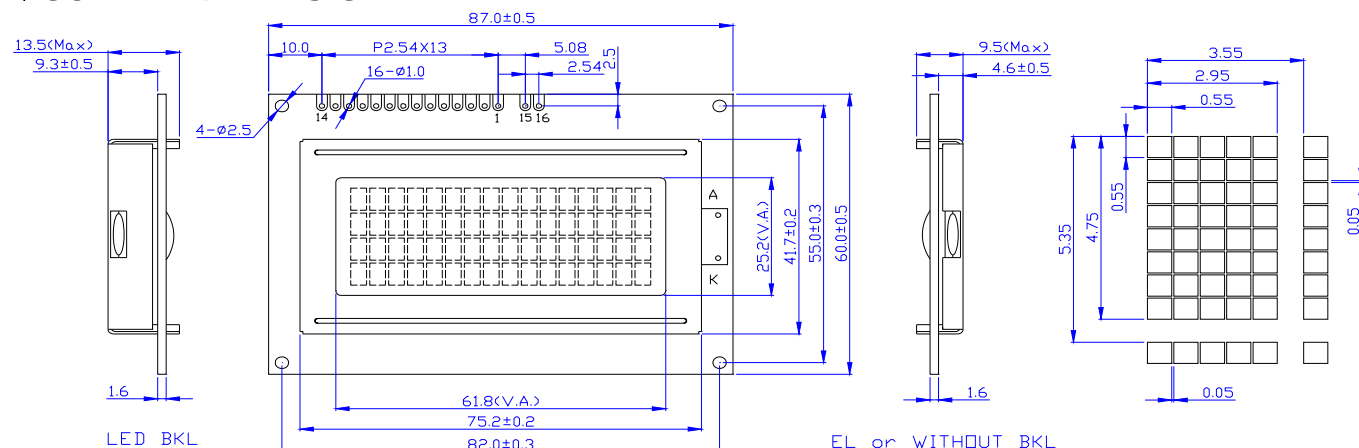
◆INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	A	BKL +
4	RS	Register selection (H:Data, L:Instruction)	16	K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

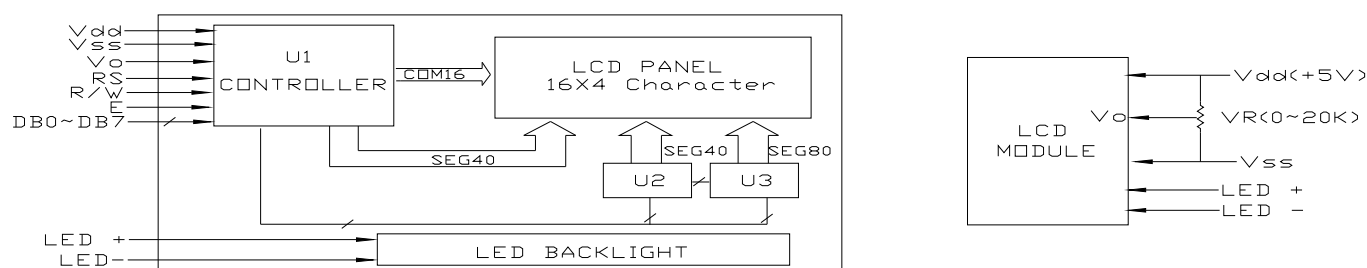
◆ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	220	---	mA

◆ OUTLINE DIMENSION



◆ BLOCK DIAGRAM & POWER SUPPLY



◆ MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	87.0X60.0X9.5/13.5	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	61.8X25.2	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.55X0.55	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.60X0.60	Display Type	Positive or Negative
Character Size(W×H)	2.95X4.75	Backlight	LED (Optional)
Character Pitch(W×H)	3.55×5.35	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

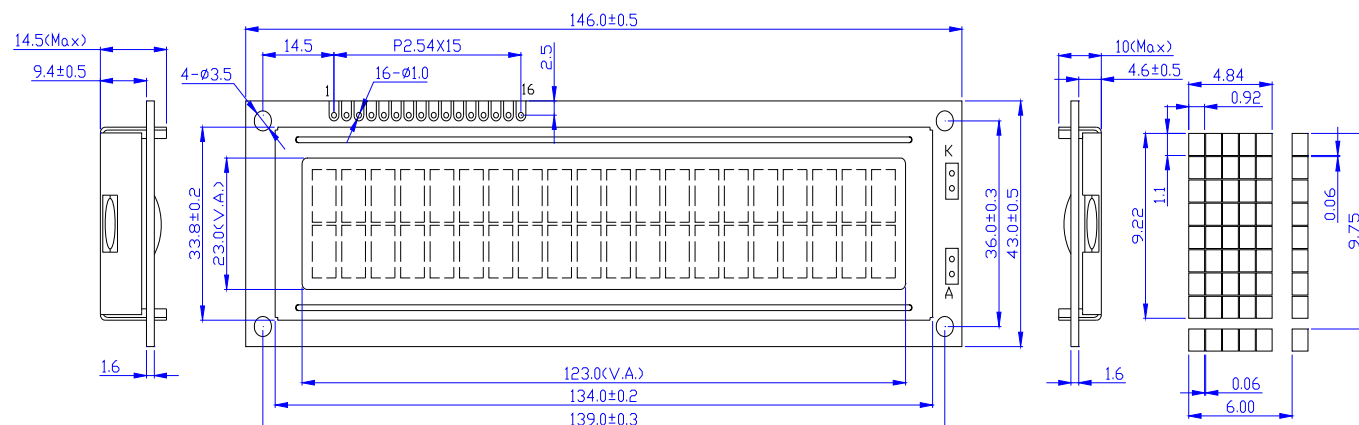
◆ INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	A	BKL +
4	RS	Register selection (H:Data, L:Instruction)	16	K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

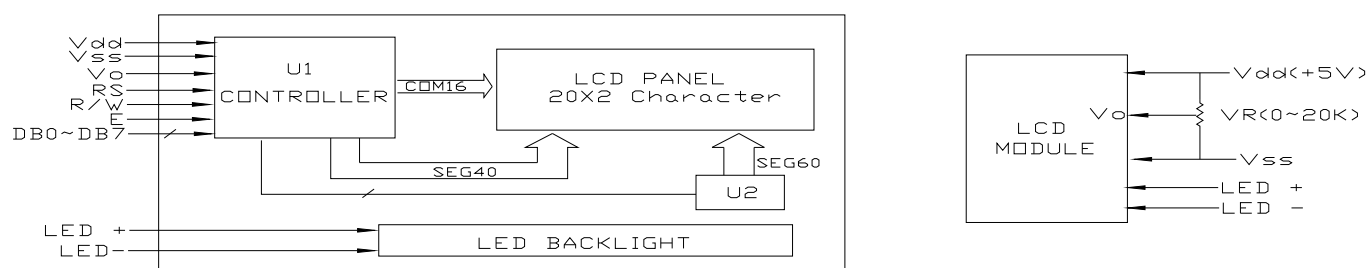
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	220	---	mA

◆ OUTLINE DIMENSION



◆ BLOCK DIAGRAM & POWER SUPPLY



◆ MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	146.0X43.0X10/14.5	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	123.0X23.0	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.92X1.10	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.98X1.16	Display Type	Positive or Negative
Character Size(W×H)	4.84X9.22	Backlight	LED (Optional)
Character Pitch(W×H)	6.0×9.75	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

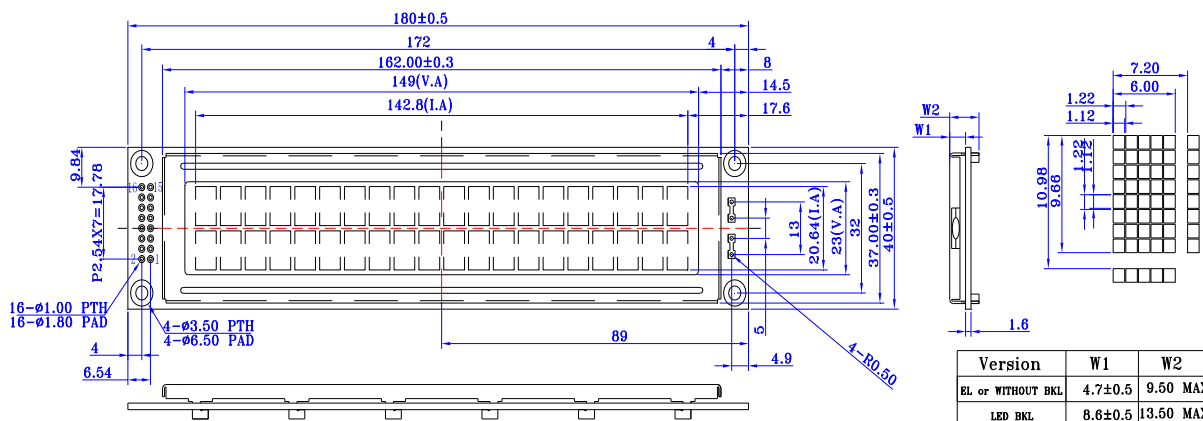
◆ INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	A	BKL +
4	RS	Register selection (H:Data, L:Instruction)	16	K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

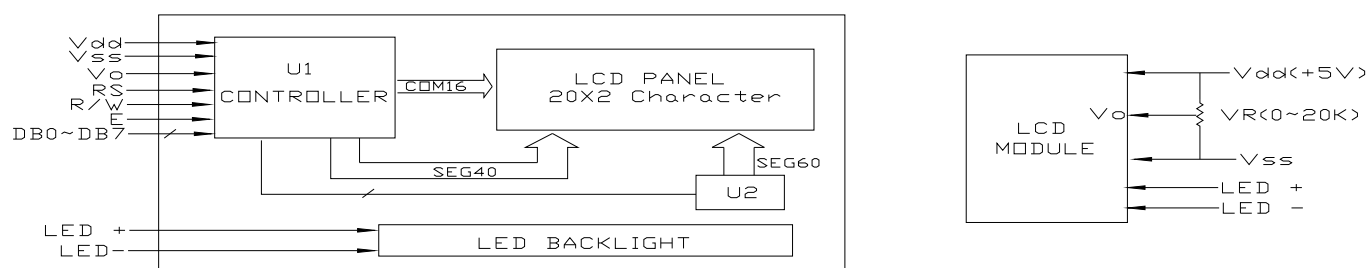
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	250	---	mA

◆OUTLINE DIMENSION



◆BLOCK DIAGRAM & POWER SUPPLY



◆MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	180.0X40.0X9.5/13.5	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	149.0X23.0	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	1.12X1.12	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	1.22X1.22	Display Type	Positive or Negative
Character Size(W×H)	6.00X9.66	Backlight	LED (Optional)
Character Pitch(W×H)	7.20×10.98	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

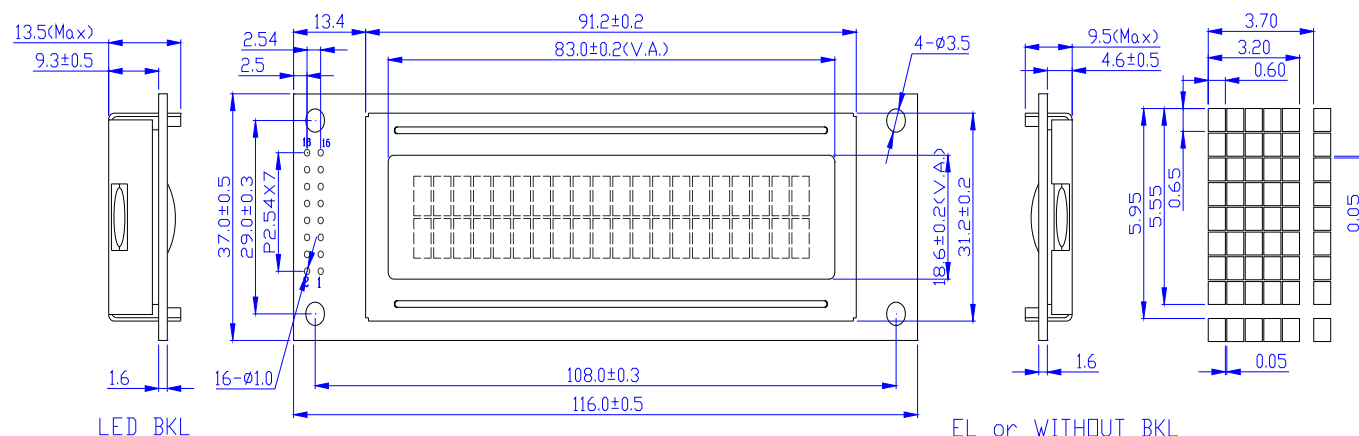
◆INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	A	BKL +
4	RS	Register selection (H:Data, L:Instruction)	16	K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

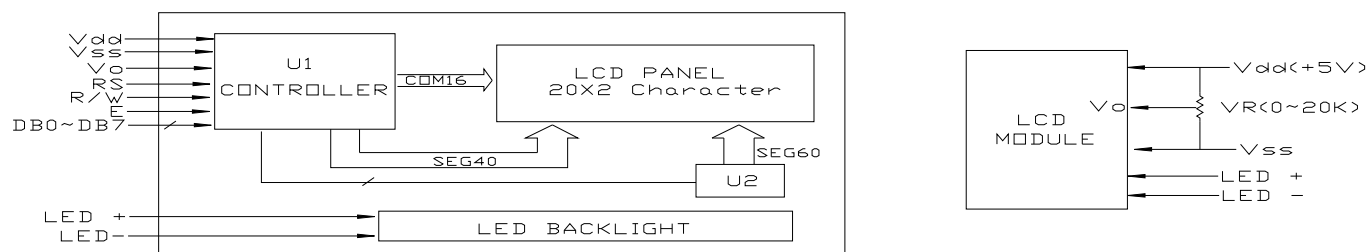
◆ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	V _{dd}	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	V _{led}	Ta=25°C	---	4.5	---	V
Supply Current	I _{dd}	Ta=25°C, V _{dd} =5.0V	---	2.0	3.0	mA
Supply Voltage for LED	V _f	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	I _f	Ta=25°C, V _f =4.2V	---	500	---	mA

◆OUTLINE DIMENSION



◆BLOCK DIAGRAM & POWER SUPPLY



◆MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	116.0X37.0X9.5/13.5	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	83.0X18.6	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.60X0.65	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.65X0.70	Display Type	Positive or Negative
Character Size(W×H)	3.2X5.55	Backlight	LED (Optional)
Character Pitch(W×H)	3.7×5.95	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

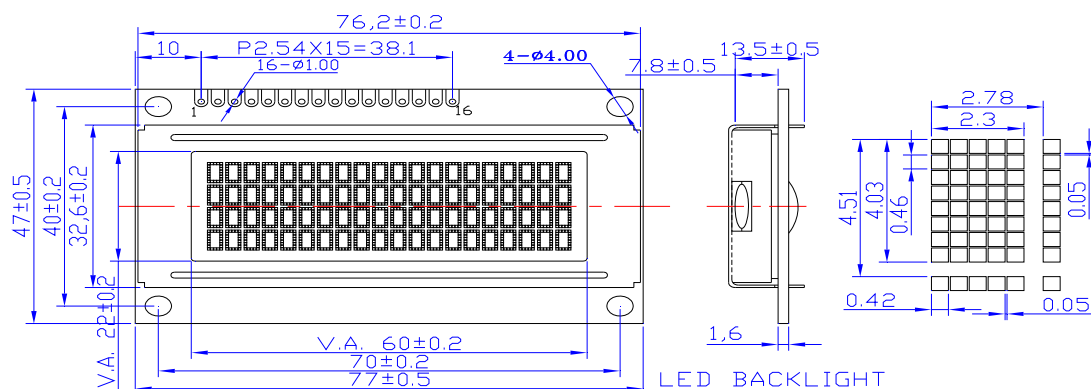
◆INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	A	BKL +
4	RS	Register selection (H:Data, L:Instruction)	16	K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

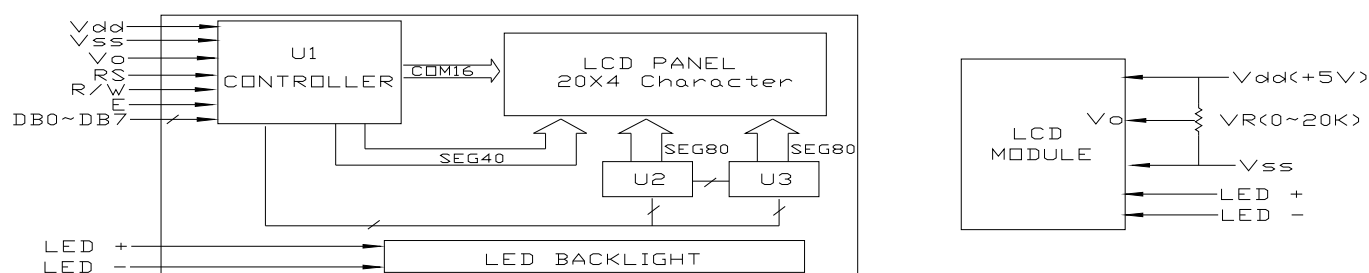
◆ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	200	---	mA

◆ OUTLINE DIMENSION



◆ BLOCK DIAGRAM & POWER SUPPLY



◆ MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	77.0X47.0X13.5	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	60.0X22.0	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.42X0.46	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.47X0.51	Display Type	Positive or Negative
Character Size(W×H)	2.3X4.03	Backlight	LED (Optional)
Character Pitch(W×H)	2.78×4.51	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

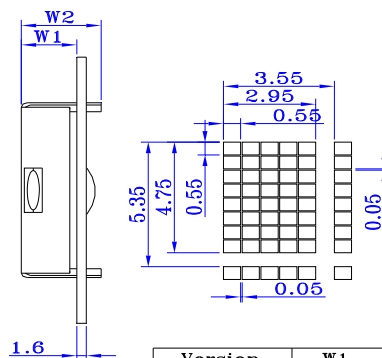
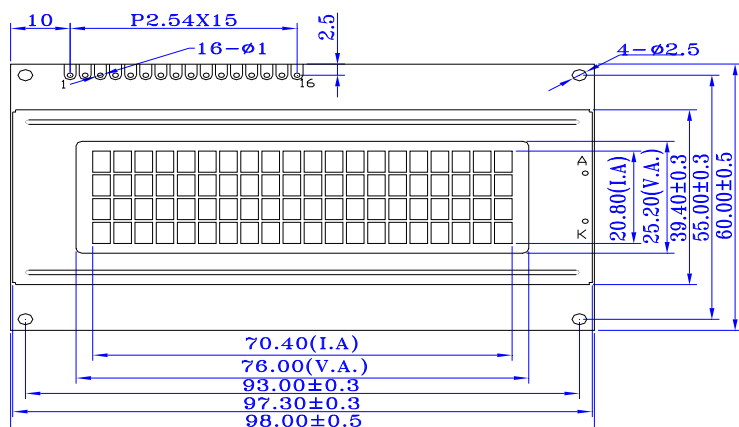
◆ INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	A	BKL +
4	RS	Register selection (H:Data, L:Instruction)	16	K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

◆ ELECTRICAL CHARACTERISTICS

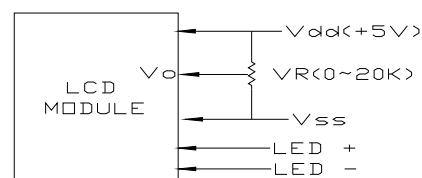
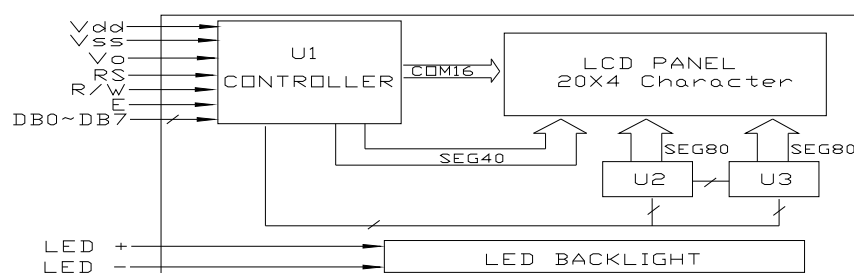
Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	240	---	mA

◆ OUTLINE DIMENSION



Version	W1	W2
EL or WITHOUT BKL	4.6±0.5	9.5 MAX
LED BKL	9.3±0.5	14.0 MAX

◆ BLOCK DIAGRAM & POWER SUPPLY



◆ MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	98.0X60.0X9.5/14.0	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	76.0X25.2	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.55X0.55	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.60X0.60	Display Type	Positive or Negative
Character Size(W×H)	2.95X4.75	Backlight	LED (Optional)
Character Pitch(W×H)	3.55×5.35	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

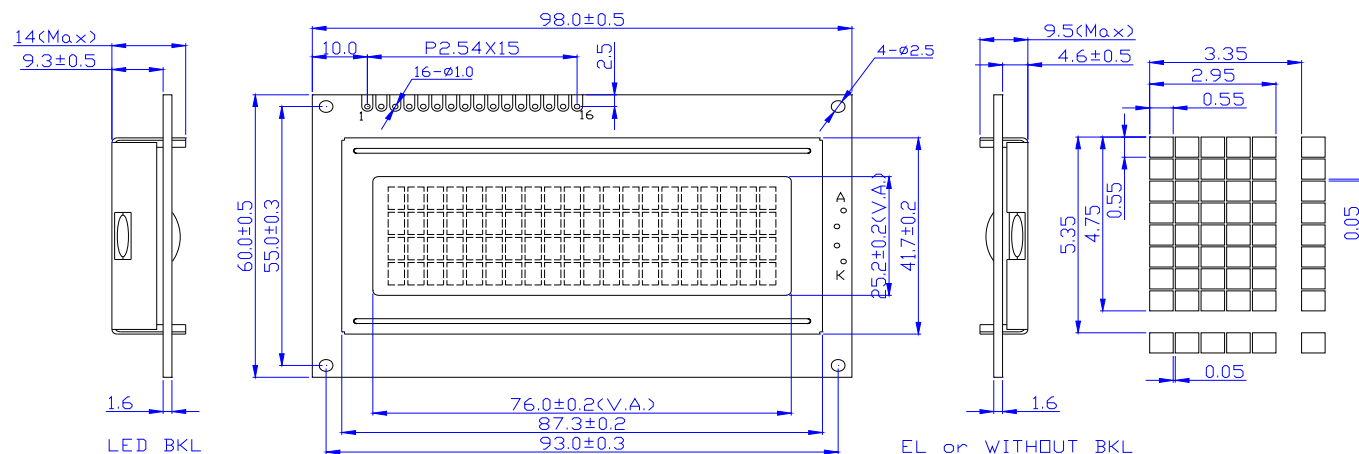
◆ INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	A	BKL +
4	RS	Register selection (H:Data, L:Instruction)	16	K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

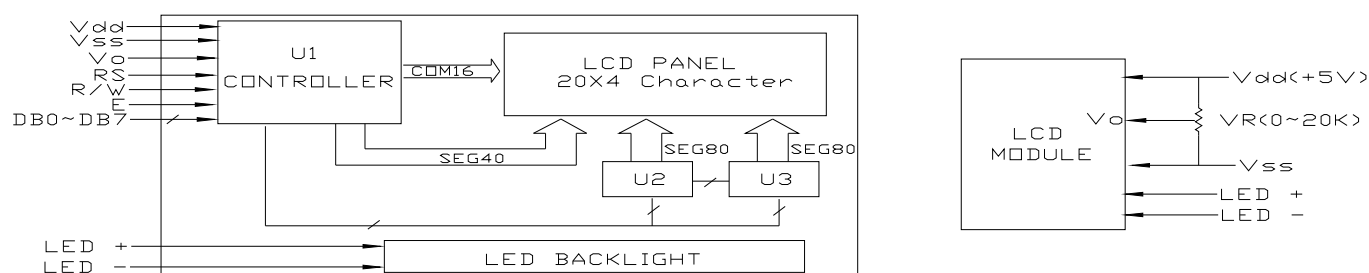
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	240	---	mA

◆OUTLINE DIMENSION



◆BLOCK DIAGRAM & POWER SUPPLY



◆MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	98.0X60.0X9.5/14.0	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	78.0X25.2	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.55X0.55	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.60X0.60	Display Type	Positive or Negative
Character Size(W×H)	2.95X4.75	Backlight	LED (Optional)
Character Pitch(W×H)	3.35×5.35	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

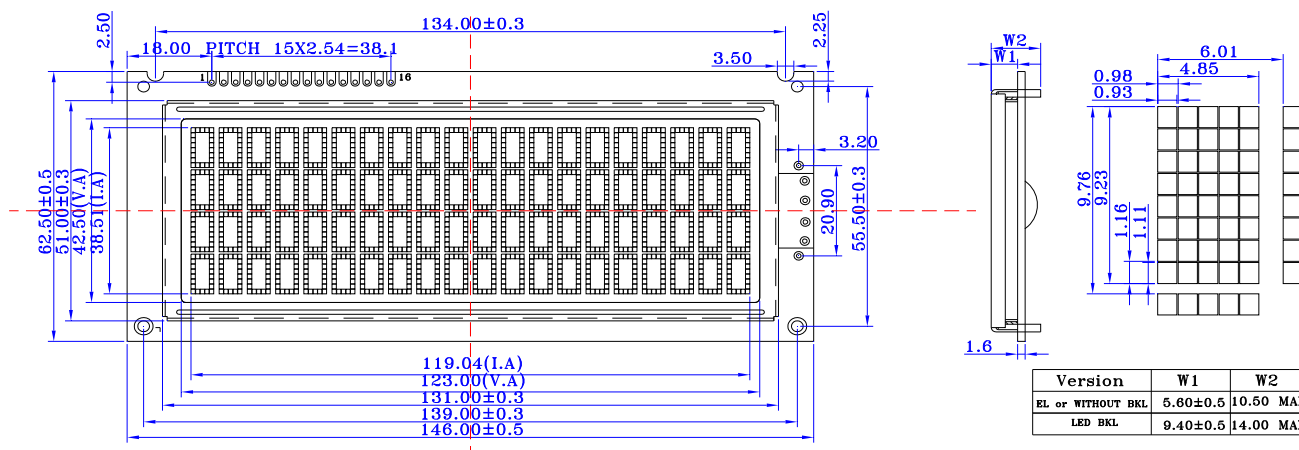
◆INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	A	BKL +
4	RS	Register selection (H:Data, L:Instruction)	16	K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

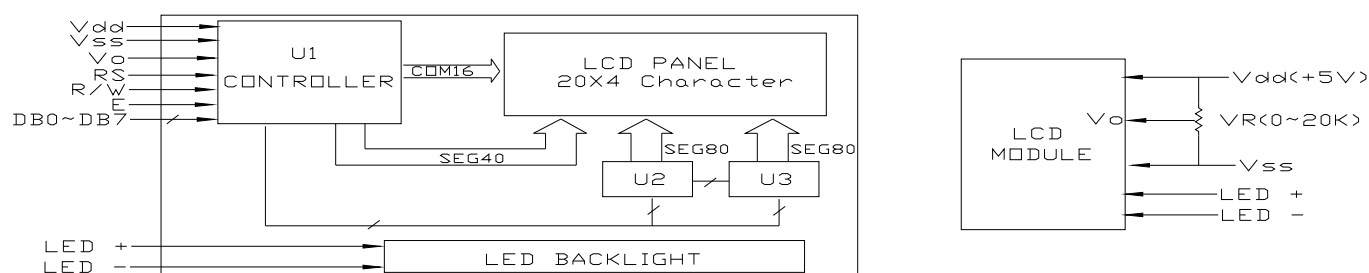
◆ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	240	---	mA

◆ OUTLINE DIMENSION



◆ BLOCK DIAGRAM & POWER SUPPLY



◆ MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	146.0X62.5X10.5/14.0	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	123.0X42.5	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.93X1.11	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.98X1.16	Display Type	Positive or Negative
Character Size(W×H)	4.85×9.23	Backlight	LED (Optional)
Character Pitch(W×H)	6.01×9.76	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

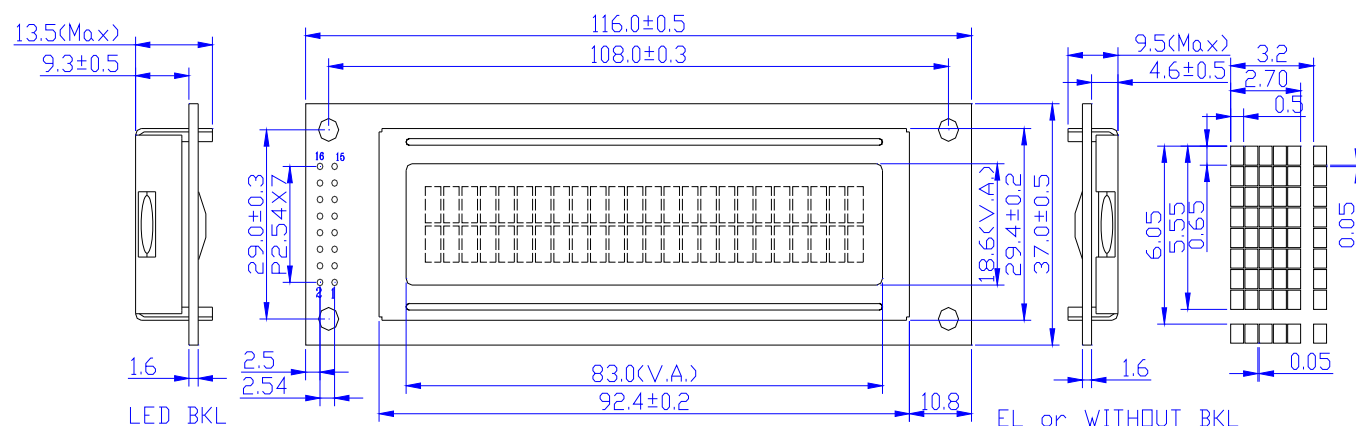
◆ INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	A	BKL +
4	RS	Register selection (H:Data, L:Instruction)	16	K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

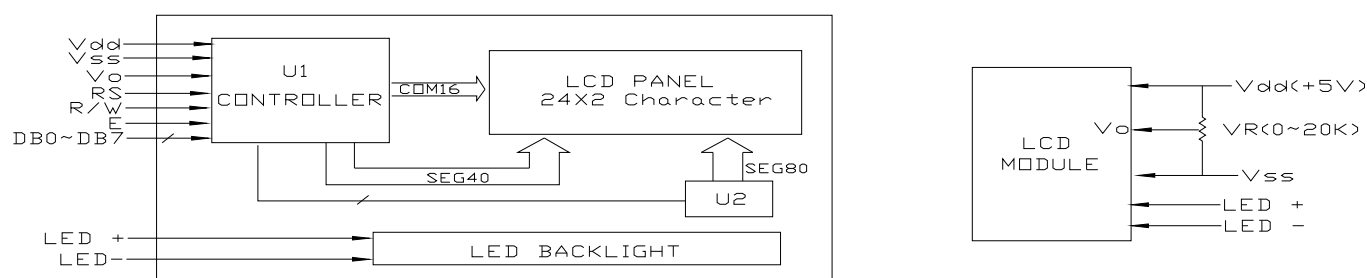
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=3.6 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	530	---	mA

◆ OUTLINE DIMENSION



◆BLOCK DIAGRAM & POWER SUPPLY



◆MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	116.0X37.0X9.5/14.0	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	83.0X18.6	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.50X0.65	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.55X0.70	Display Type	Positive or Negative
Character Size(W×H)	2.70×5.55	Backlight	LED (Optional)
Character Pitch(W×H)	3.2×6.05	Operating Temp.	0℃~50℃ or -20℃~70℃
		Controller	S6A0069 or Equivalent

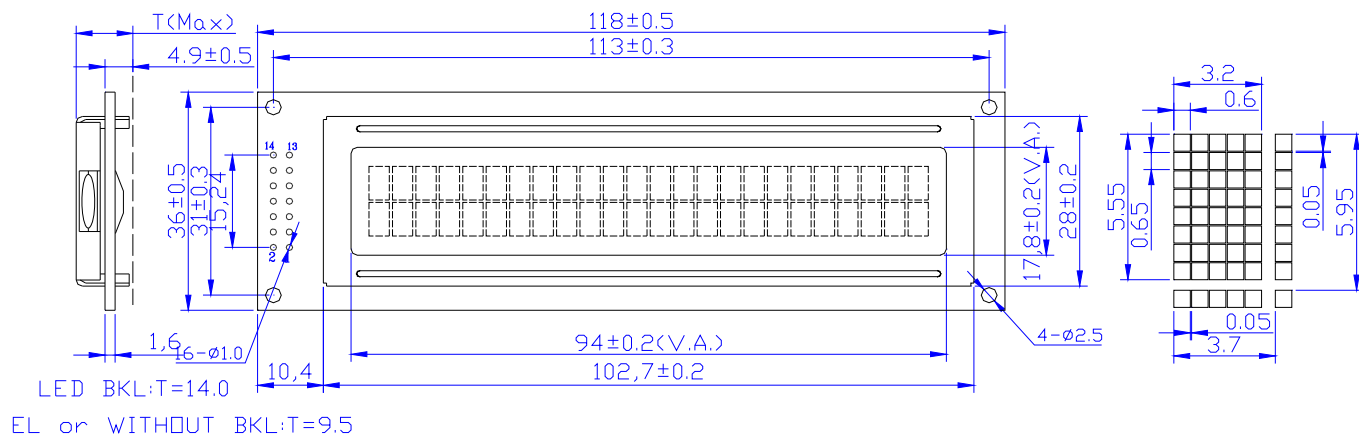
◆INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	A	BKL +
4	RS	Register selection (H:Data, L:Instruction)	16	K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

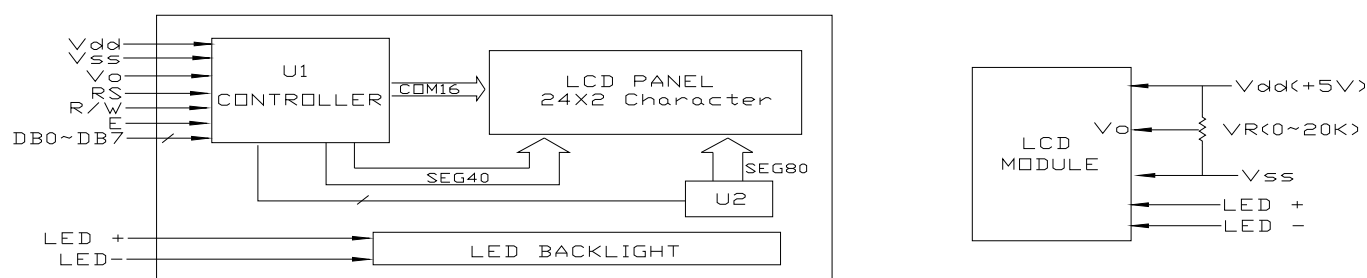
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25℃	---	5.0	---	V
Operating Voltage for LCD	Vlcd	Ta=25℃	---	4.5	---	V
Supply Current	Idd	Ta=25℃, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25℃, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25℃, Vf=4.2V	---	200	---	mA

◆OUTLINE DIMENSION



◆BLOCK DIAGRAM & POWER SUPPLY



◆MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	118.0X36.0X9.5/14.0	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	94X17.8	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.60X0.65	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.65X0.70	Display Type	Positive or Negative
Character Size(W×H)	3.20×5.55	Backlight	LED (Optional)
Character Pitch(W×H)	3.7×5.95	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

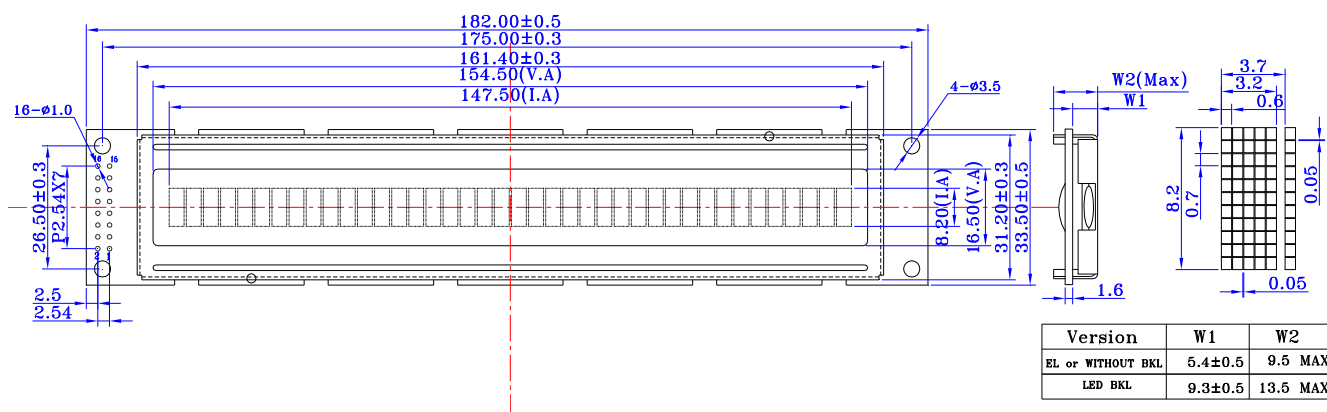
◆INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD		A	BKL +
4	RS	Register selection (H:Data, L:Instruction)		K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

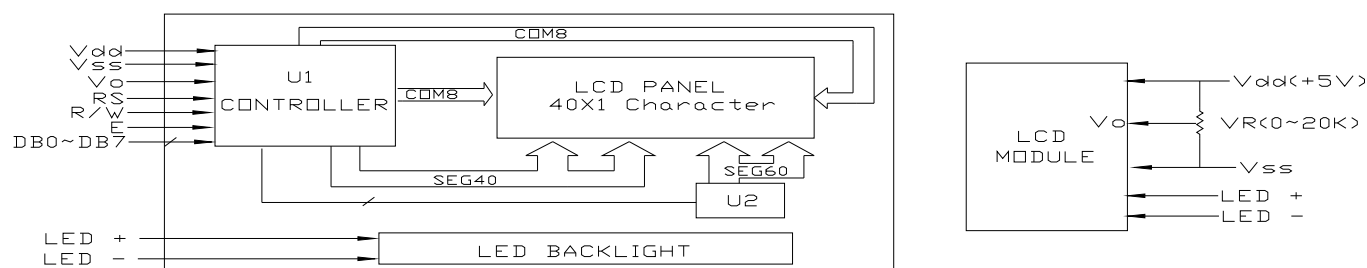
◆ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	200	---	mA

◆ OUTLINE DIMENSION



◆ BLOCK DIAGRAM & POWER SUPPLY



◆ MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	182.0X33.5×9.5/13.5	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	154.5X16.5	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.60X0.70	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.70X0.75	Display Type	Positive or Negative
Character Size(W×H)	3.20×8.2	Backlight	LED (Optional)
Character Pitch(W×H)	3.7×---	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

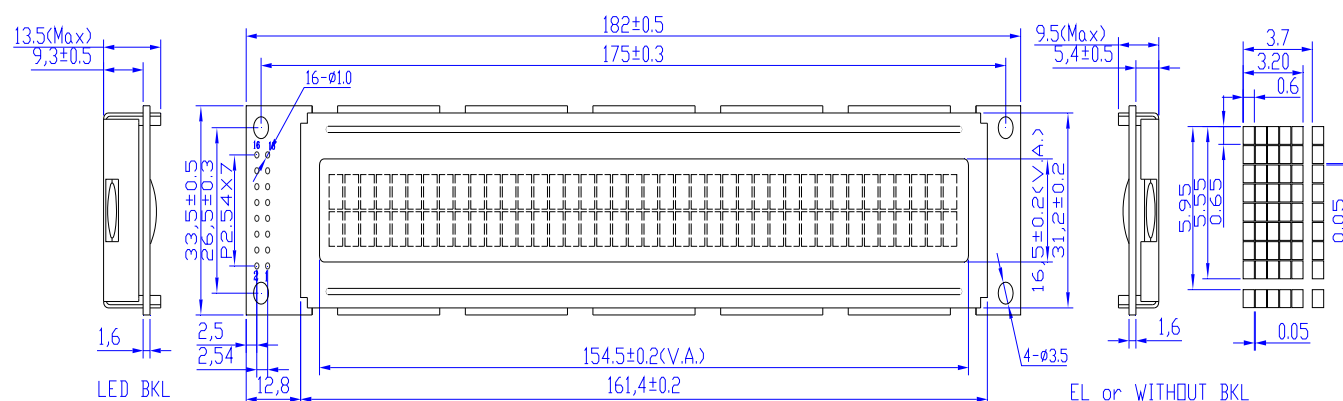
◆ INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	A	BKL +
4	RS	Register selection (H:Data, L:Instruction)	16	K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

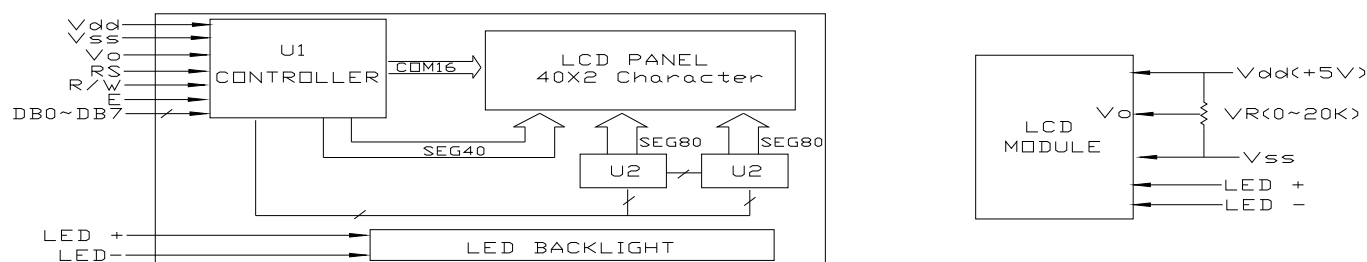
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	320	---	mA

◆OUTLINE DIMENSION



◆BLOCK DIAGRAM & POWER SUPPLY



◆MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	182.0X33.5×9.5/13.5	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	154.5X16.5	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.60X0.65	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.65X0.70	Display Type	Positive or Negative
Character Size(W×H)	3.20×5.55	Backlight	LED (Optional)
Character Pitch(W×H)	3.7×5.95	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

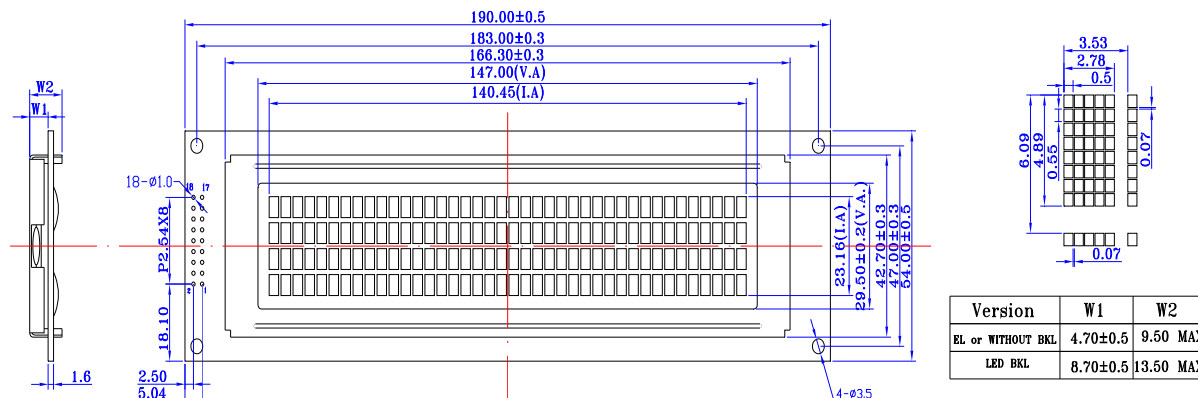
◆INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	A	BKL +
4	RS	Register selection (H:Data, L:Instruction)	16	K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

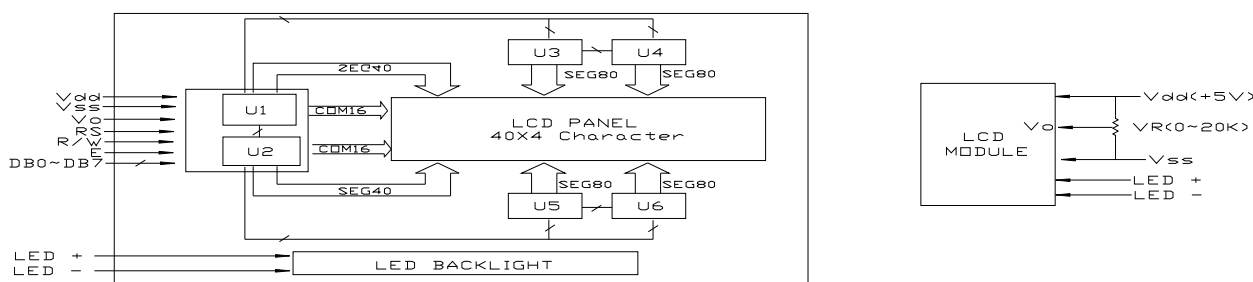
◆ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	280	---	mA

◆ OUTLINE DIMENSION



◆ BLOCK DIAGRAM & POWER SUPPLY



◆ MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	190.0X54.0×9.5/13.5	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	147.0X29.5	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.50X0.55	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.57X0.62	Display Type	Positive or Negative
Character Size(W×H)	2.78×4.89	Backlight	LED (Optional)
Character Pitch(W×H)	3.53×6.09	Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6A0069 or Equivalent

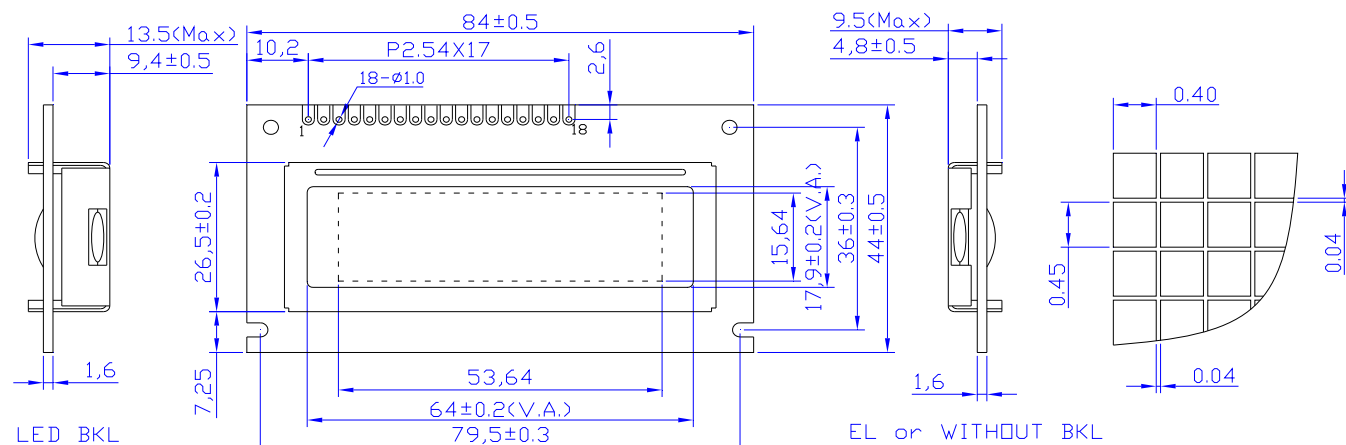
◆ INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	7	E2	E2 Enable signal
2	Vdd	Power supply for logic	8~15	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	16	VEE	Negative voltage output
4	RS	Register selection (H:Data, L:Instruction)	17	A	BKL +
5	R/W	Read/Write selection (H: R, L: W)	18	K	BKL -
6	E1	E1 Enable signal			

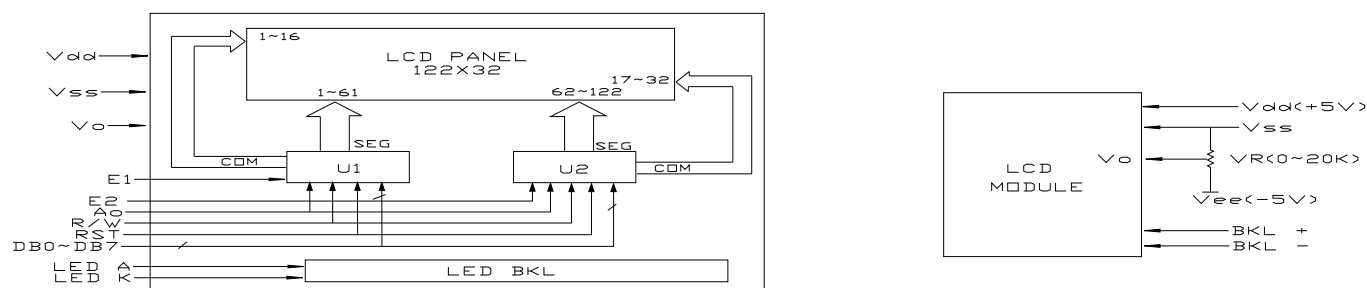
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vled	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	3.5	5.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	500	---	mA

◆OUTLINE DIMENSION



◆BLOCK DIAGRAM & POWER SUPPLY



◆MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	84.0×44.0×9.5/13.5	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	64.0X17.9	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.40X0.45	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.44X0.49	Display Type	Positive or Negative
Dots×Dots	122×32	Backlight	LED (Optional)
		Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	SED1520 or Equivalent

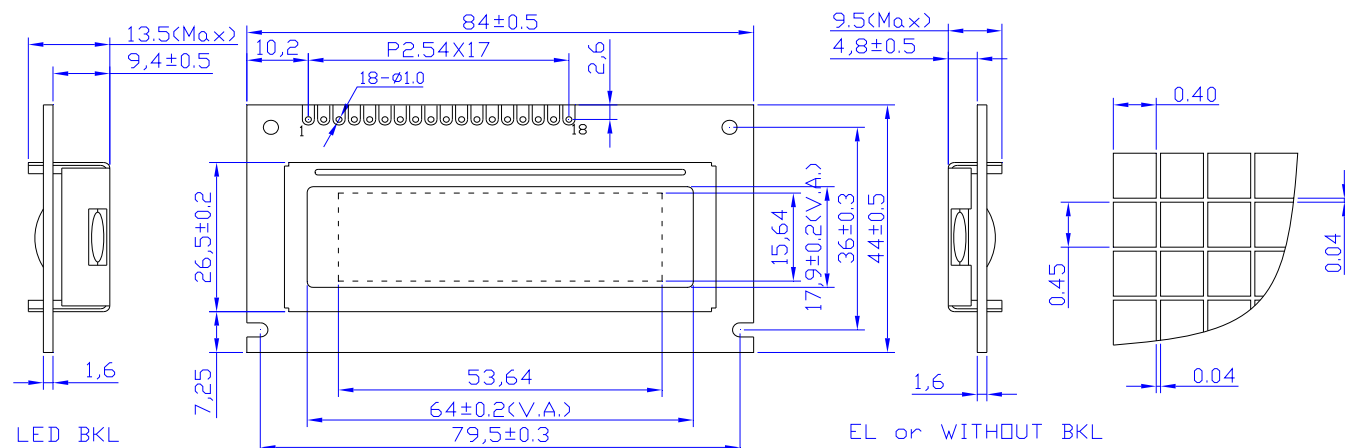
◆INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	7	R/W	Read/Write selection (H: R, L: W)
2	Vdd	Power supply for logic	8	Ao	Register selection (H:Data, L:Instruction)
3	Vo	Power supply for LCD	9~16	DB0~DB7	Data bus lines
4	/RST	Reset signal	17	A	BKL +
5	E1	Enable signal for IC1	18	K	BKL -
6	E2	Enable signal for IC2			

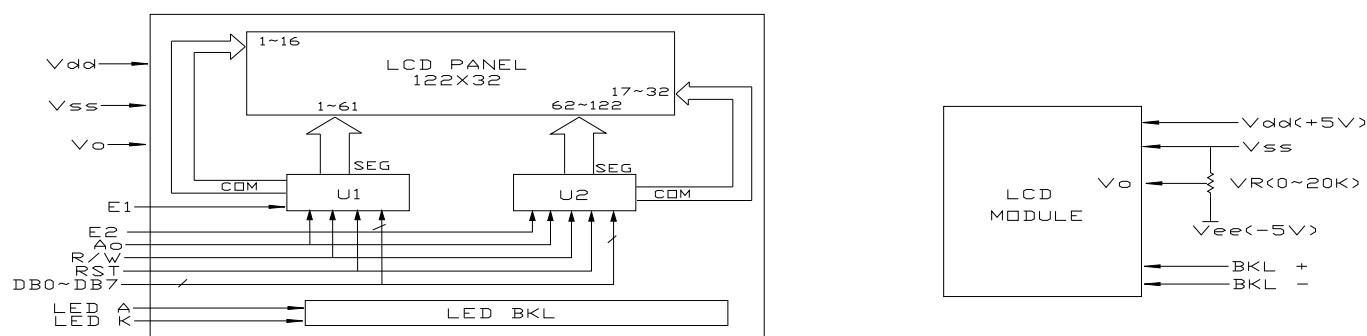
◆ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vlcd	Ta=25°C	---	6.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.5	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	120	---	mA

◆OUTLINE DIMENSION



◆BLOCK DIAGRAM & POWER SUPPLY



◆MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	84.0×44.0×9.5/13.5	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	64.0X17.9	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.40X0.45	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.44X0.49	Display Type	Positive or Negative
Dots×Dots	122×32	Backlight	LED (Optional)
		Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	ST7920 or Equivalent

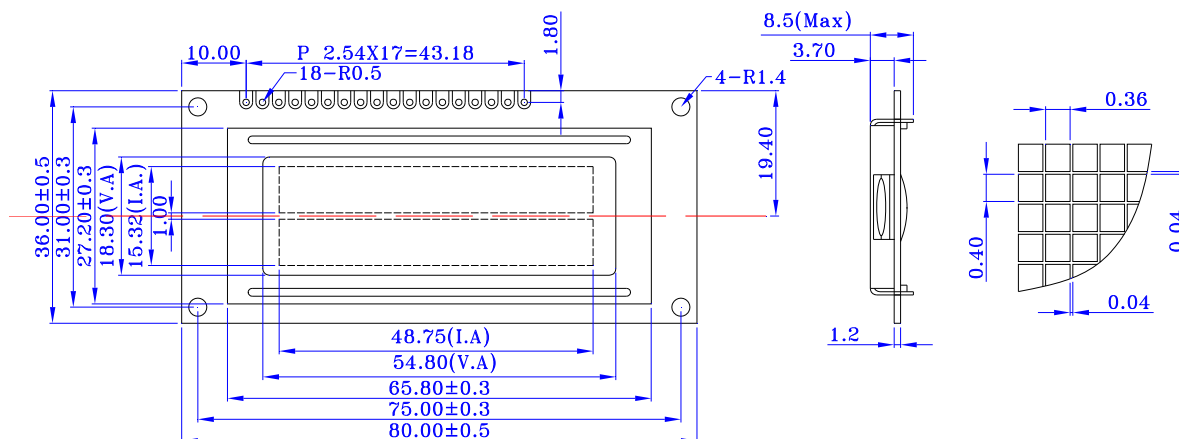
◆INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	A	BKL +
4	RS	Register selection (H:Data, L:Instruction)	16	K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

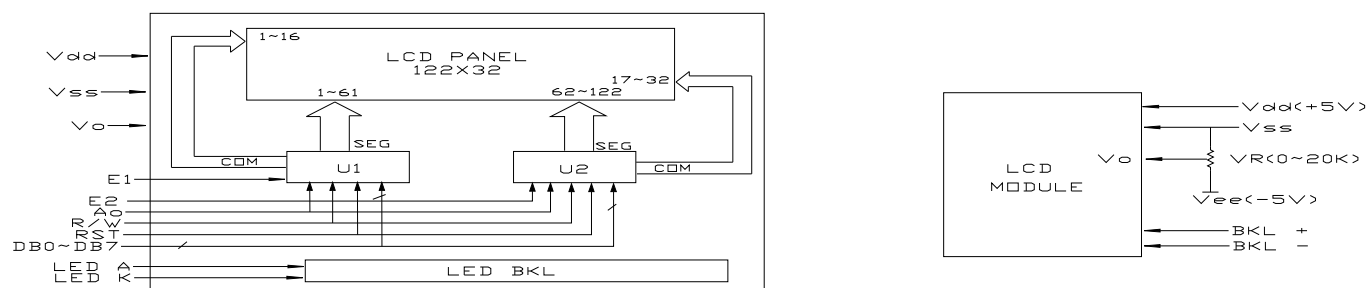
◆ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vlcd	Ta=25°C	---	6.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.5	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	120	---	mA

◆ OUTLINE DIMENSION



◆ BLOCK DIAGRAM & POWER SUPPLY



◆ MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	80×36×8.5	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	54.8X18.3	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.36X0.40	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.40X0.44	Display Type	Positive or Negative
Dots×Dots	122×32	Backlight	EL (Optional)
		Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	SED1520 or Equivalent

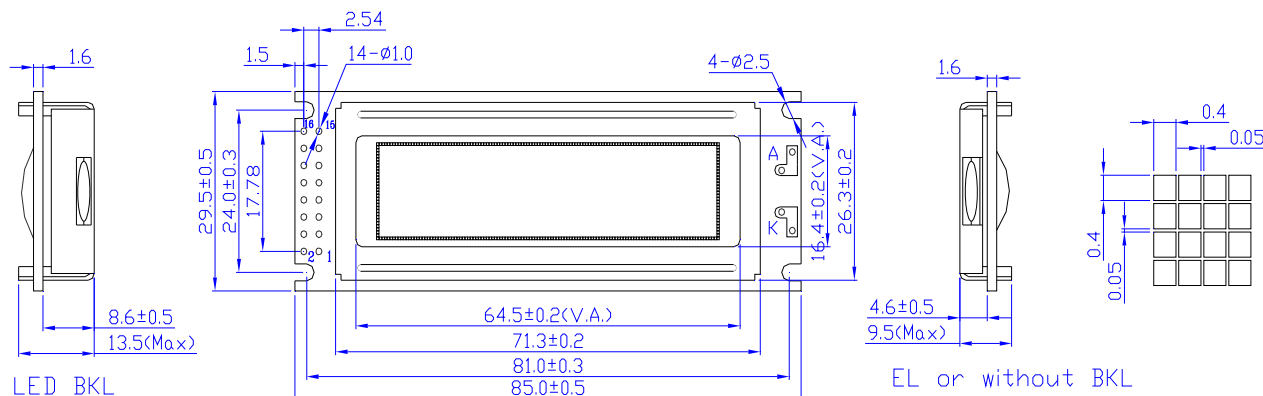
◆ INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vdd	Power supply for logic	7	R/W	Read/Write selection (H: R, L: W)
2	Vss	Ground for logic	8~15	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	16	Ao	Register selection (H:Data, L:Instruction)
4	/RST	Reset signal	17	A	BKL +
5	E1	Enable signal for IC1	18	K	BKL -
6	E2	Enable signal for IC2			

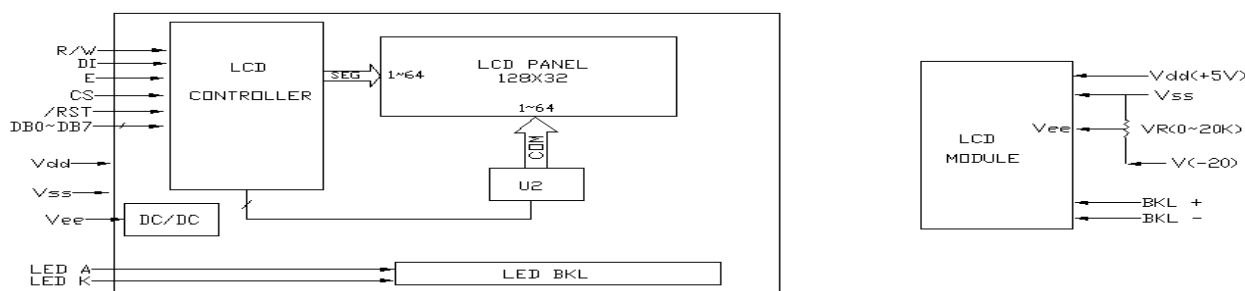
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vlcd	Ta=25°C	---	4.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.5	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, f=400Hz	---	110	---	Vpp
Supply Current for LED	If	Ta=25°C, Vpp=110V	---	70	---	mA

◆ OUTLINE DIMENSION



◆BLOCK DIAGRAM & POWER SUPPLY



◆MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	85.0×29.5×9.5/13.5	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	64.5X16.4	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.40X0.40	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.45X0.45	Display Type	Positive or Negative
Dots×Dots	128×32	Backlight	LED (Optional)
		Operating Temp.	0℃~50℃ or -20℃~70℃
		Controller	S6B0108 or Equivalent

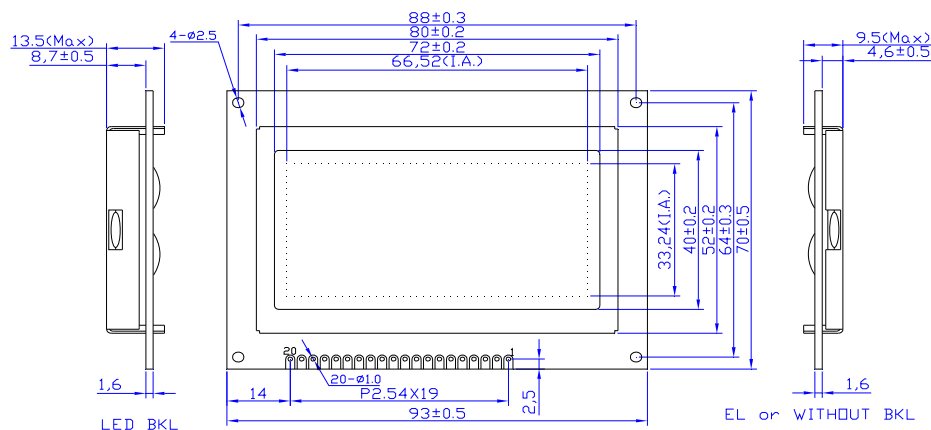
◆INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	7	CS	Enable signal for chip
2	Vdd	Power supply for logic	8~15	DB0~DB7	Data bus lines
3	Vee	Negative voltage output	16	RST	Reset signal
4	D/I	H/L Reagister select signal		A	BKL +
5	R/W	Read/Write selection (H: R, L: W)		K	BKL -
6	E	Enable signal			

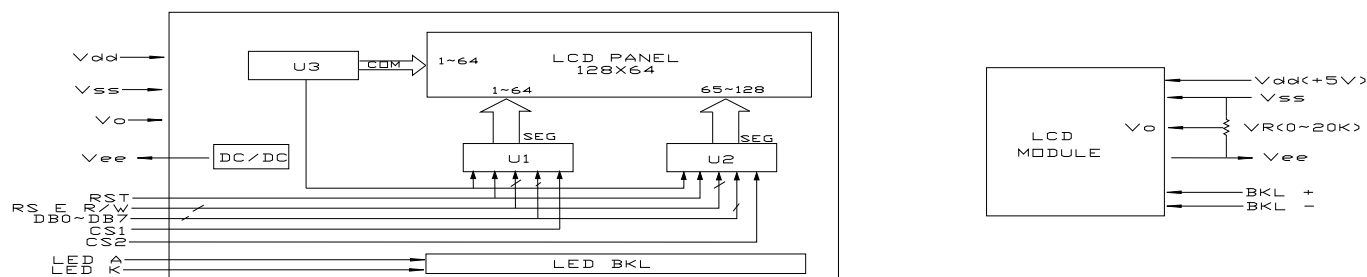
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25℃	---	5.0	---	V
Operating Voltage for LCD	Vlcd	Ta=25℃	---	10.5	---	V
Supply Current	Idd	Ta=25℃, Vdd=5.0V	---	2.5	3.0	mA
Supply Voltage for LED	Vf	Ta=25℃, R=6.8 Ω	---	4.2	---	Vpp
Supply Current for LED	If	Ta=25℃, Vf=4.2V	---	120	---	mA

◆ OUTLINE DIMENSION



◆ BLOCK DIAGRAM & POWER SUPPLY



◆ MECHANICAL SPEC. & FEATURES

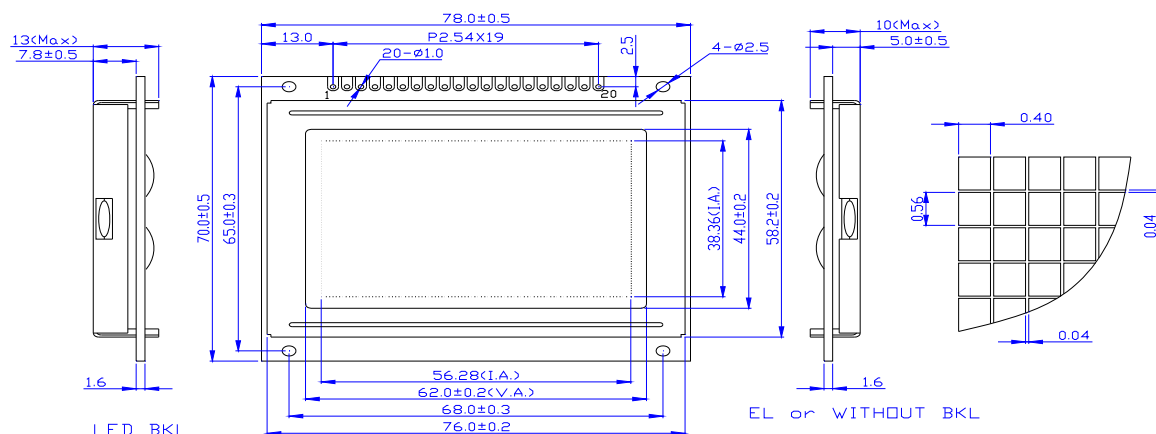
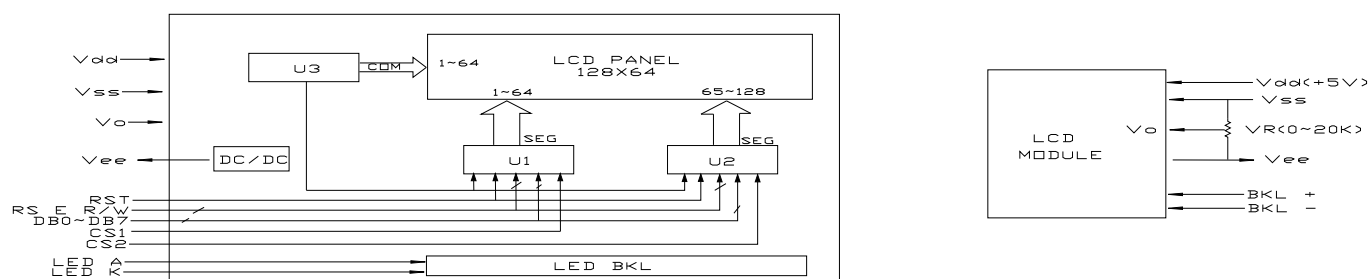
Item	Dimension(mm)	Features	
Module Size(W×H×T)	93.0×70.0×9.5/13.5	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	72.0X40.0	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.48X0.48	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.52X0.52	Display Type	Positive or Negative
Dots×Dots	128×64	Backlight	LED (Optional)
		Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6B0108 or Equivalent

◆ INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	15	CS1	Enable signal for IC1
2	Vdd	Power supply for logic	16	CS2	Enable signal for IC2
3	Vo	Power supply for LCD	17	RST	Reset signal
4	RS	Register selection (H:Data, L:Instruction)	18	Vee	Negative voltage output
5	R/W	Read/Write selection (H: R, L: W)	19	A	BKL +
6	E	Enable signal	20	K	BKL -
7~14	DB0~DB7	Data bus lines			

◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vlcd	Ta=25°C	---	10.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.5	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8Ω	---	4.2	---	Vpp
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	300	---	mA

◆ OUTLINE DIMENSION

◆ BLOCK DIAGRAM & POWER SUPPLY

◆ MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	78.0×70.0×10.0/13.0	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	62.0X44.0	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.40X0.56	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.44X0.60	Display Type	Positive or Negative
Dots×Dots	128×64	Backlight	LED (Optional)
		Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6B0108 or Equivalent

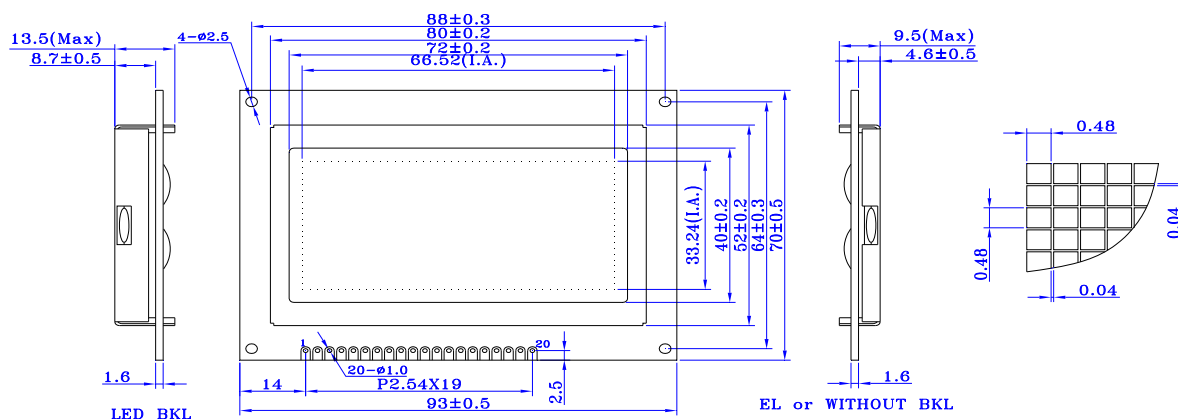
◆ INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	/CS1	Enable signal for IC1	8	E	Enable signal
2	/CS2	Enable signal for IC2	9~16	DB0~DB7	Data bus lines
3	Vss	Ground for logic	17	RST	Reset signal
4	Vdd	Power supply for logic	18	Vee	Negative voltage output
5	V0	Power supply for LCD	19	A	BKL +
6	D/I	Register selection (H:Data, L:Instruction)	20	K	BKL -
7	R/W	Read/Write selection (H: R, L: W)			

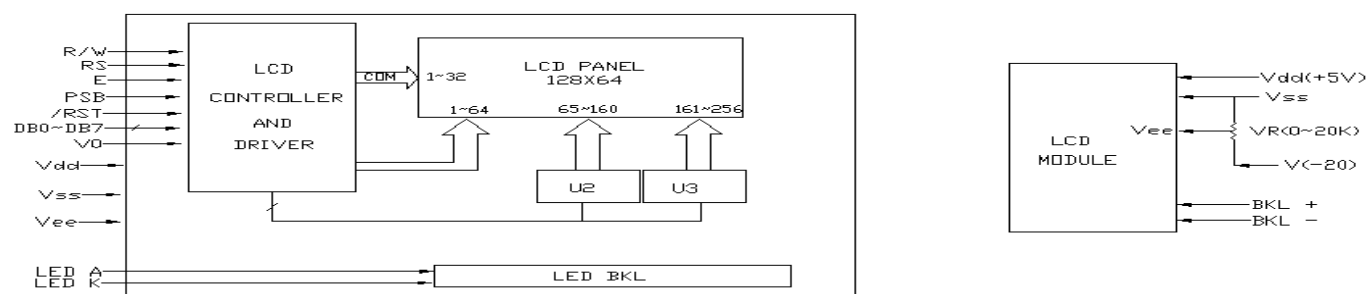
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vlcd	Ta=25°C	---	10.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.5	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	300	---	mA

◆ OUTLINE DIMENSION



◆ BLOCK DIAGRAM & POWER SUPPLY



◆ MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	93.0×70.0×9.5/13.5	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	72.0X40.0	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.48X0.48	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.52X0.52	Display Type	Positive or Negative
Dots×Dots	128×64	Backlight	LED (Optional)
		Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	ST7920 or Equivalent

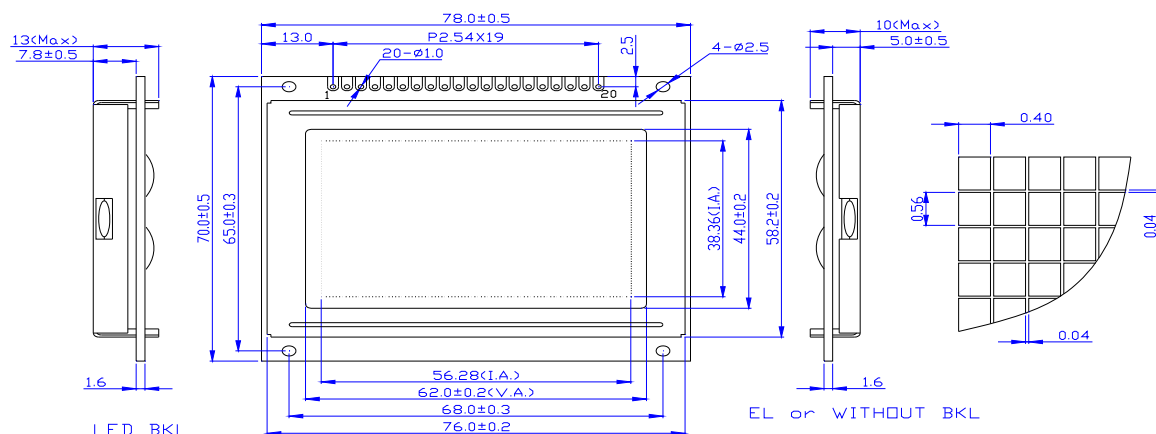
◆ INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	15	PSB	Interface selection
2	Vdd	Power supply for logic	16	NC	
3	Vo	Power supply for LCD	17	/RST	Reset signal
4	RS	Register selection (H:Data, L:Instruction)	18	Vee	Negative voltage output
5	R/W	Read/Write selection (H: R, L: W)	19	A	BKL +
6	E	Enable signal	20	K	BKL -
7~14	DB0~DB7	Data bus lines			

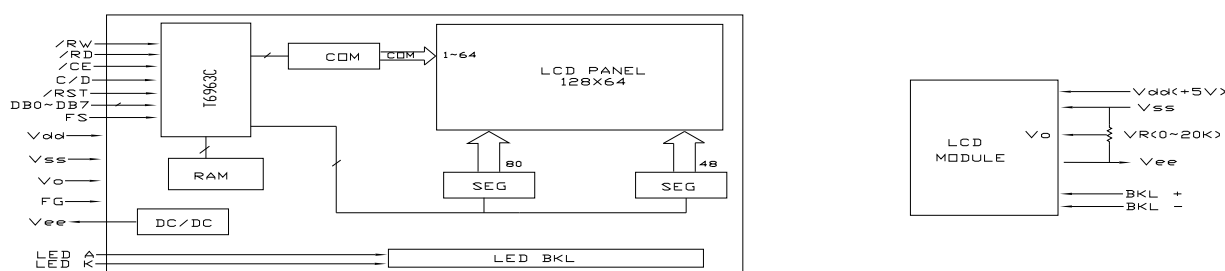
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vlcd	Ta=25°C	---	10.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.5	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	300	---	mA

◆OUTLINE DIMENSION



◆BLOCK DIAGRAM & POWER SUPPLY



◆MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	78.0×70.0×10.0/13.0	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	62.0X44.0	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.40X0.56	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.44X0.60	Display Type	Positive or Negative
Dots×Dots	128×64	Backlight	LED (Optional)
		Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	T6963C or Equivalent

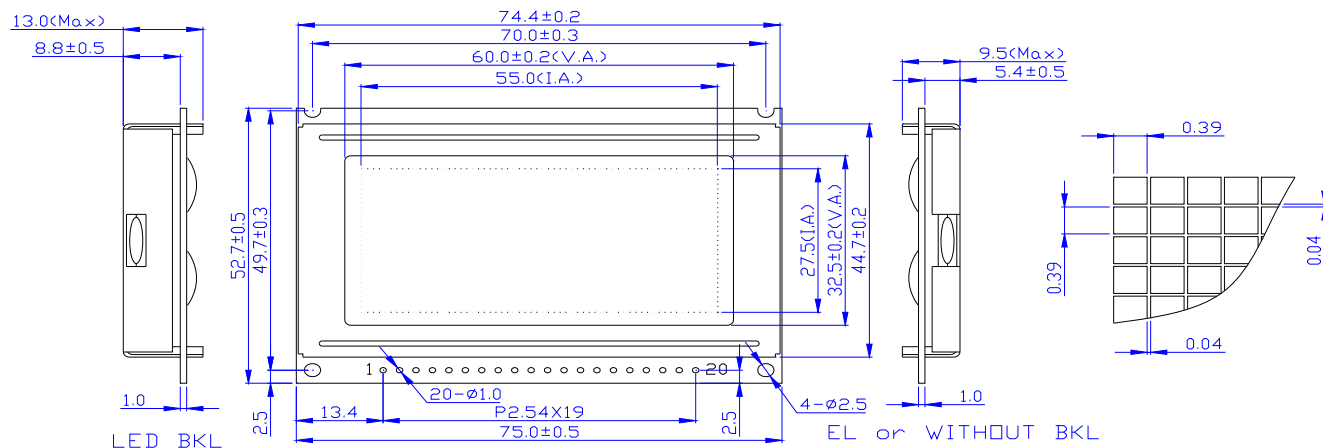
◆INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	FG	Frame ground	8	C/D	Register selection (H:Data,
2	Vss	Ground for logic	9	/RST	Reset signal
3	Vdd	Power supply for logic	10~17	DB0~DB7	Data bus lines
4	Vee	Power supply for LCD	18	FS	Font selection
5	/WR	Write enable	19	A	BKL +
6	/RD	Read enable	20	K	BKL -
7	/CE	Enable signal for IC			

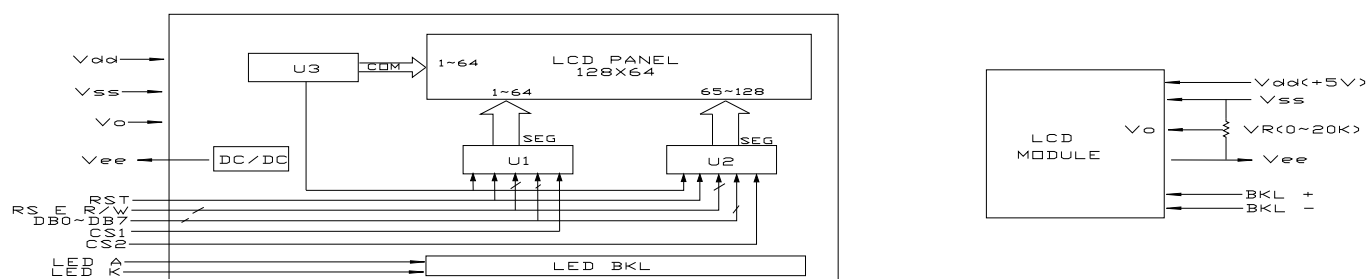
◆ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vlcd	Ta=25°C	---	10.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.5	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	300	---	mA

◆ OUTLINE DIMENSION



◆ BLOCK DIAGRAM & POWER SUPPLY



◆ MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	75.0×52.7×9.5/13.0	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	60.0X32.5	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.39X0.39	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.43X0.43	Display Type	Positive or Negative
Dots×Dots	128×64	Backlight	LED (Optional)
		Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	S6B0108 or Equivalent

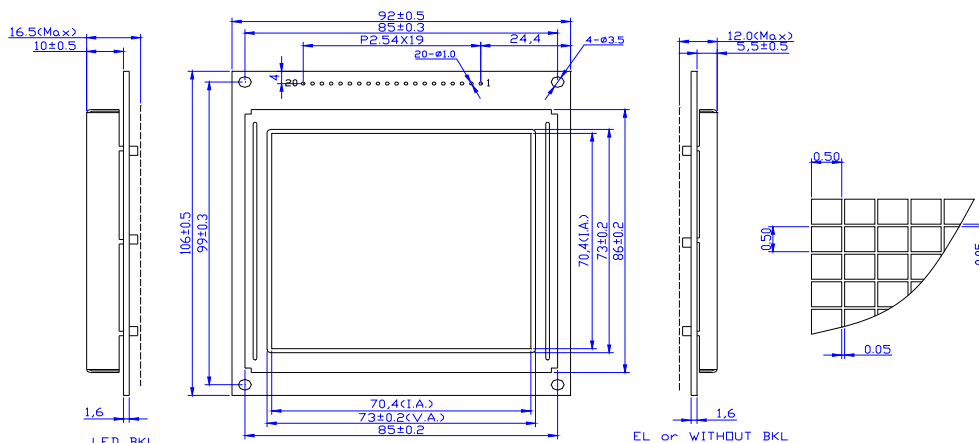
◆ INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vdd	Power supply for logic	15	R/W	Read/Write selection (H: R, L: W)
2	Vss	Ground for logic	16	D/I	Register selection (H:Data, L:Instruction)
3	Vo	Power supply for LCD	17	E	Enable signal
4~11	DB0~DB7	Data bus lines	18	Vee	Negative voltage output
12	/CS1	Enable signal for IC1	19	A	BKL +
13	/CS2	Enable signal for IC2	20	K	BKL -
14	RST	Reset signal			

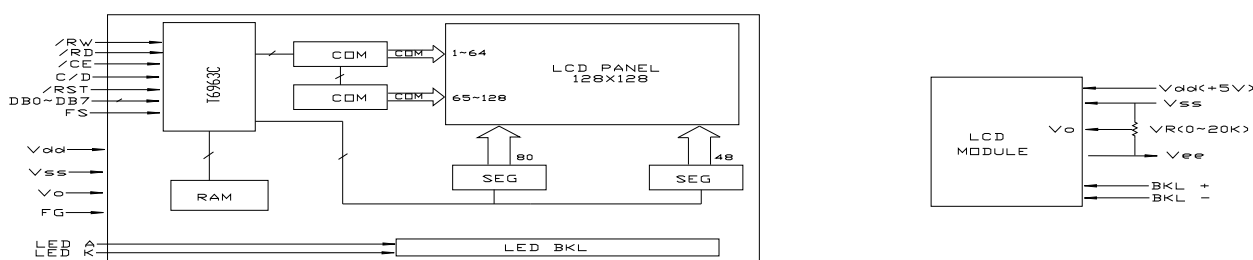
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vlcd	Ta=25°C	---	10.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.5	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	240	---	mA

◆OUTLINE DIMENSION



◆BLOCK DIAGRAM & POWER SUPPLY



◆MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	92.0×106.0×12/16.5	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	73.0X73.0	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.50X0.50	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.55X0.55	Display Type	Positive or Negative
Dots×Dots	128×128	Backlight	LED (Optional)
		Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	T6963C or Equivalent

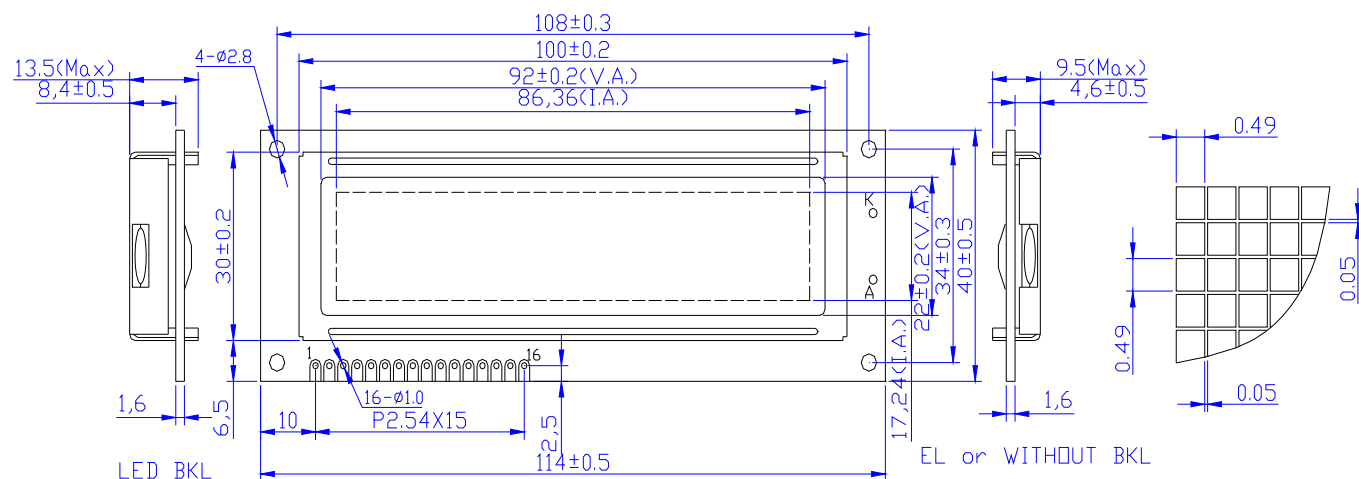
◆INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	FG	Frame ground	8	C/D	Register selection (H:Data, L:Instruction)
2	Vss	Ground for logic	9	/RST	Reset signal
3	Vdd	Power supply for logic	10~17	DB0~DB7	Data bus lines
4	Vee	Power supply for LCD	18	FS	Font selection
5	/WR	Write enable	19	A	BKL +
6	/RD	Read enable	20	K	BKL -
7	/CE	Enable signal for IC			

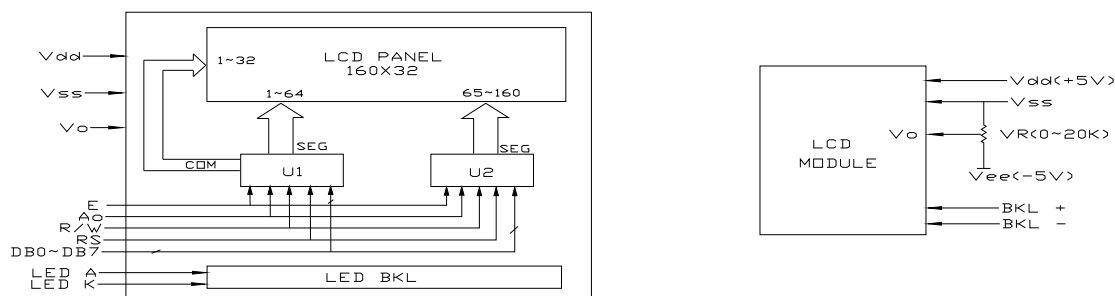
◆ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vlcd	Ta=25°C	---	12.0	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.5	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	350	---	mA

◆ OUTLINE DIMENSION



◆ BLOCK DIAGRAM & POWER SUPPLY



◆ MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	114.0X40.0×9.5/13.5	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	92.0X22.0	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.49X0.49	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.54X0.54	Display Type	Positive or Negative
Dots×Dots	160×32	Backlight	LED (Optional)
		Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	ST7920 or Equivalent

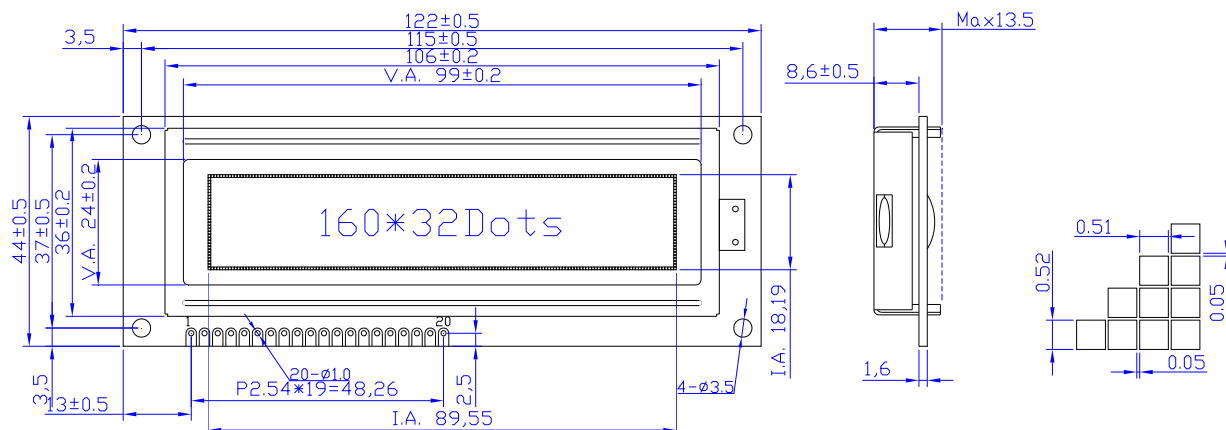
◆ INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	6	E	Enable signal
2	Vdd	Power supply for logic	7~14	DB0~DB7	Data bus lines
3	Vo	Power supply for LCD	15	A	BKL +
4	RS	Register selection (H:Data, L:Instruction)	16	K	BKL -
5	R/W	Read/Write selection (H: R, L: W)			

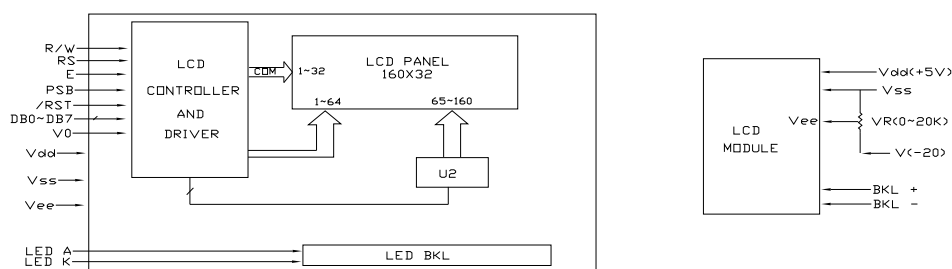
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	---	5.0	---	V
Operating Voltage for LCD	Vlcd	Ta=25°C	---	6.5	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25°C, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25°C, Vf=4.2V	---	240	---	mA

◆OUTLINE DIMENSION



◆BLOCK DIAGRAM & POWER SUPPLY



◆MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	122.0X44.0×13.5	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	99.0X24.0	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.51X0.52	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.56X0.57	Display Type	Positive or Negative
Dots×Dots	160×32	Backlight	LED (Optional)
		Operating Temp.	0℃~50℃ or -20℃~70℃
		Controller	ST7920 or Equivalent

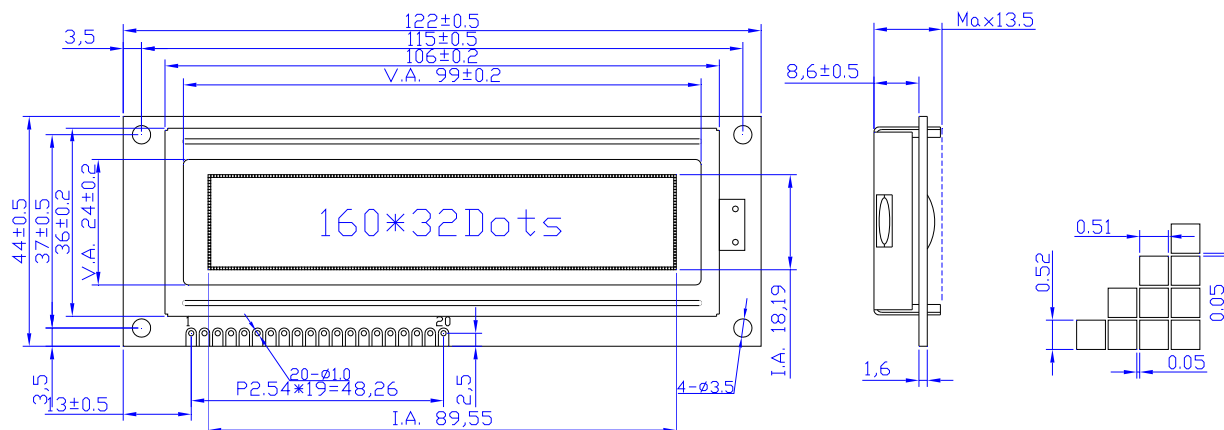
◆INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	K	BKL -	15	Vdd	Power supply for logic
2	A	BKL +	16	Vss	Ground for logic
3~10	DB7~DB0	Data bus lines	17	PSB	Interface selection
11	E	Enable signal	18	RES	Reset signal
12	R/W	Read/Write selection (H: R, L: W)	19	NC	
13	RS	Register selection (H:Data, L:Instruction)	20	VEE	Negative voltage output
14	Vo	Power supply for LCD			

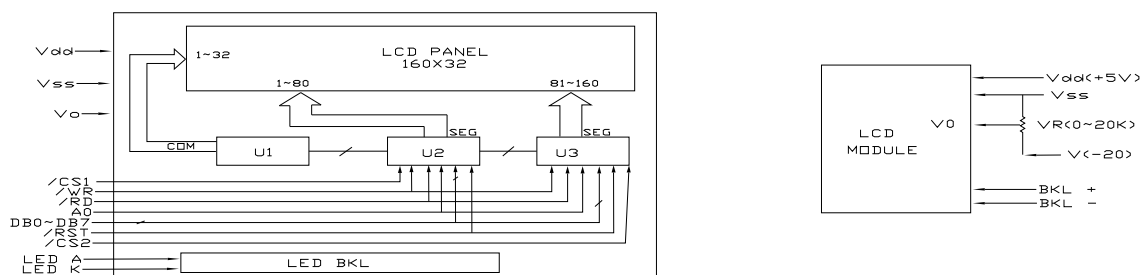
◆ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25℃	---	5.0	---	V
Operating Voltage for LCD	Vlcd	Ta=25℃	---	6.5	---	V
Supply Current	Idd	Ta=25℃, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25℃, R=6.8Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25℃, Vf=4.2V	---	240	---	mA

◆OUTLINE DIMENSION



◆BLOCK DIAGRAM & POWER SUPPLY



◆MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	122.0X44.0×13.5	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	99.0X24.0	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.51X0.52	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.56X0.57	Display Type	Positive or Negative
Dots×Dots	160×32	Backlight	LED (Optional)
		Operating Temp.	0℃~50℃ or -20℃~70℃
		Controller	SED1521 or Equivalent

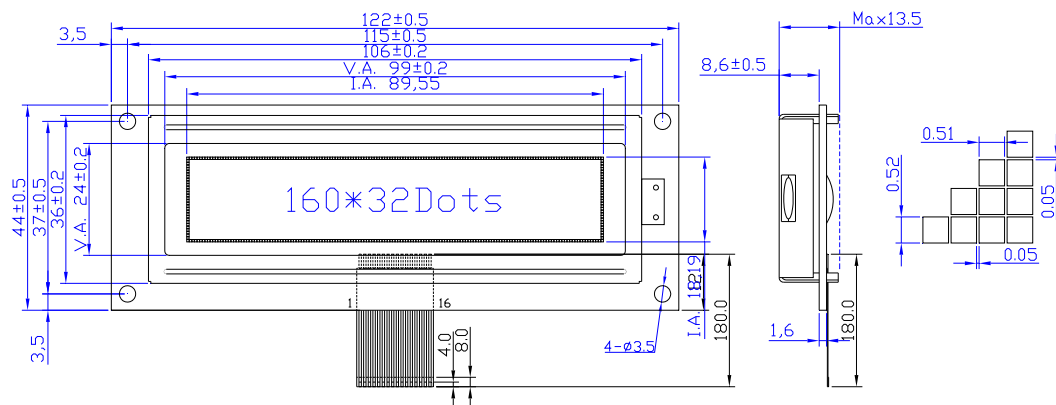
◆INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	A0	H/L Register select signal	8~15	DB0~DB7	Data bus lines
2	/CS2	Enable signal for IC2	16	RST	Reset signal
3	/CS1	Enable signal for IC1	17	VEE	Negative voltage output
4	/RD	Read signal	18	NC	Nc connector
5	/WR	Write signal	19	A	BKL +
6	VDD	Power supply for logic	20	K	BKL -
7	VSS	GND			

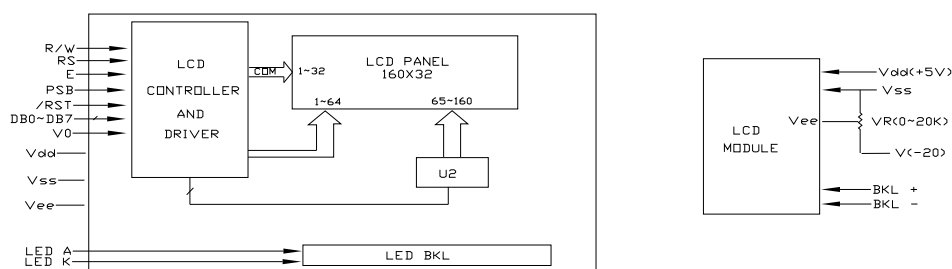
◆ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25℃	---	5.0	---	V
Operating Voltage for LCD	Vlcd	Ta=25℃	---	6.5	---	V
Supply Current	Idd	Ta=25℃, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25℃, R=6.8 Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25℃, Vf=4.2V	---	240	---	mA

◆ OUTLINE DIMENSION



◆ BLOCK DIAGRAM & POWER SUPPLY



◆ MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	122.0X44.0×13.5	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	99.0X24.0	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.51X0.52	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.56X0.57	Display Type	Positive or Negative
Dots×Dots	160×32	Backlight	LED (Optional)
		Operating Temp.	0℃~50℃ or -20℃~70℃
		Controller	ST7920 or Equivalent

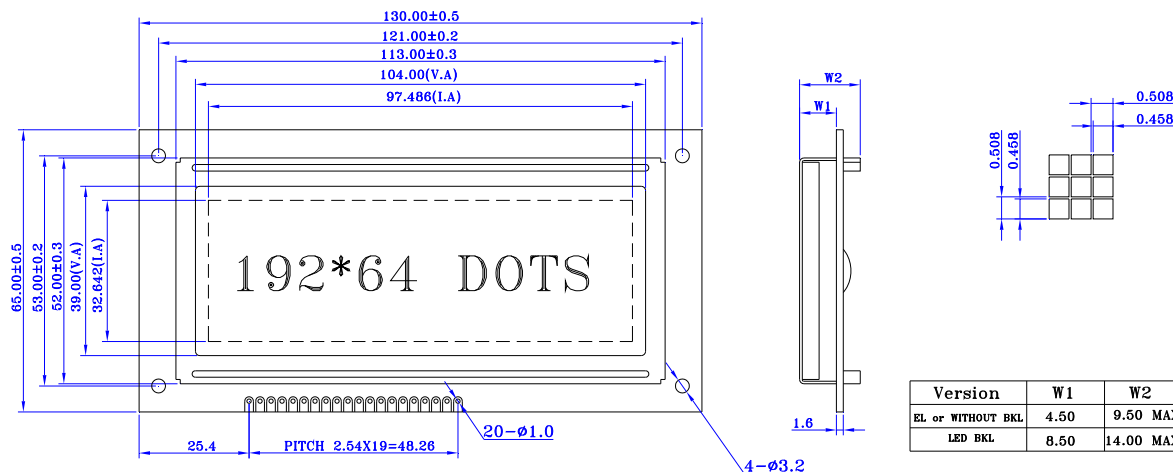
◆ INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1 / 32	Vss	Ground for logic	15/18	A	BKL +
2 / 31	Vdd	Power supply for logic	16/17	K	BKL -
3 / 30	Vo	Power supply for LCD	33	VEE	Negative voltage output
4 / 29	RS	Register selection (H:Data, L:Instruction)	34	RES	Reset signal
5 / 28	R/W	Read/Write selection (H: R, L: W)	35	NC	
6 / 27	E	Enable signal	436	PSB	Interface selection
7~14 / 26~19	DB0~DB7	Data bus lines			

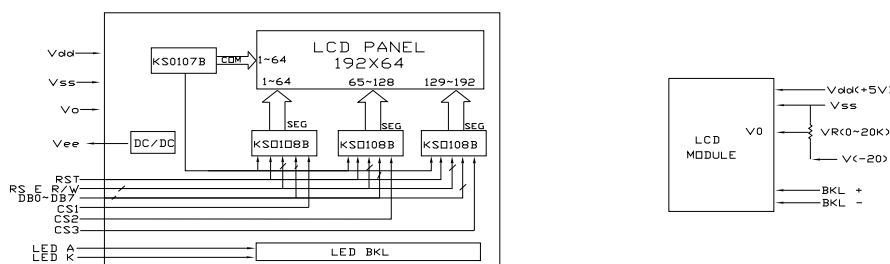
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25℃	---	5.0	---	V
Operating Voltage for LCD	Vlcd	Ta=25℃	---	6.5	---	V
Supply Current	Idd	Ta=25℃, Vdd=5.0V	---	2.0	3.0	mA
Supply Voltage for LED	Vf	Ta=25℃, R=6.8Ω	---	4.2	---	V
Supply Current for LED	If	Ta=25℃, Vf=4.2V	---	300	---	mA

◆ OUTLINE DIMENSION



◆ BLOCK DIAGRAM & POWER SUPPLY



◆ MECHANICAL SPEC. & FEATURES

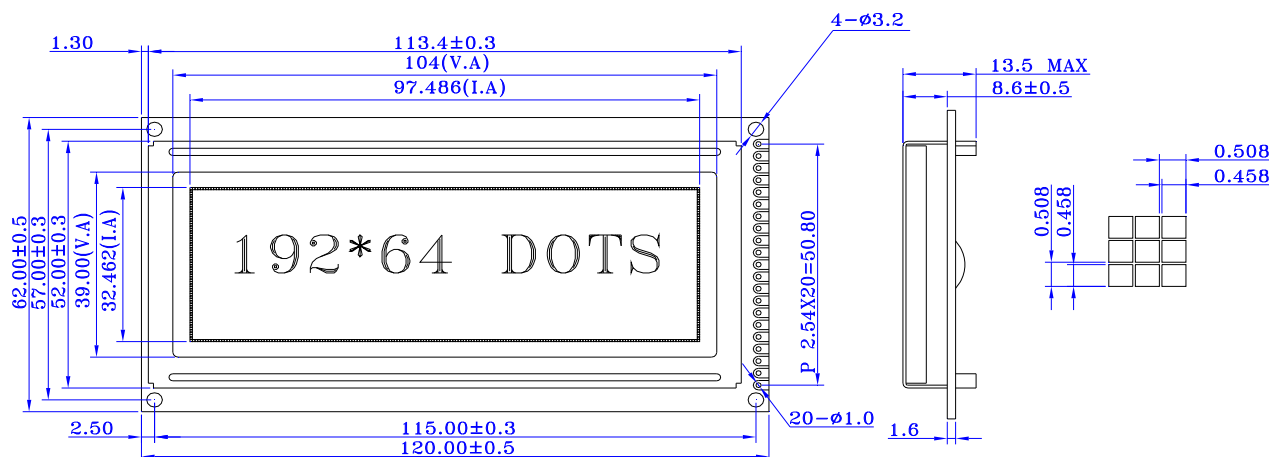
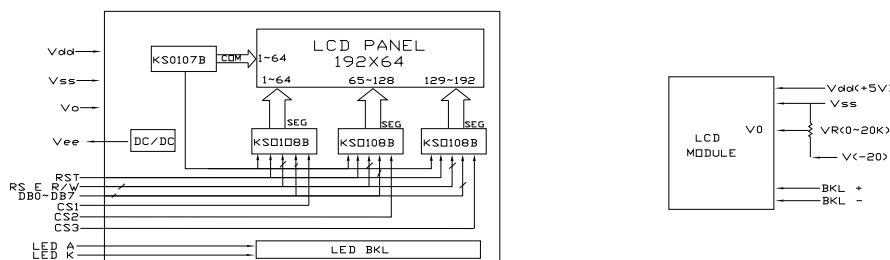
Item	Dimension(mm)	Features	
Module Size(W×H×T)	130.0×65.0×9.5/14.0	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	104.0X39.0	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.458X0.458	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.508X0.508	Display Type	Positive or Negative
Dots×Dots	192×64	Backlight	LED (Optional)
		Operating Temp.	0℃~50℃ or -20℃~70℃
		Controller	S6B0108 or Equivalent

◆ INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss/K	Ground for logic/ BKL -	15	CS1	Enable signal for IC1
2	Vdd	Power supply for logic	16	/RES	Reset signal
3	Vo	Power supply for LCD	17	CS2	Enable signal for IC2
4	RS	Register selection (H:Data, L:Instruction)	18	CS3	Enable signal for IC3
5	R/W	Read/Write selection (H: R, L: W)	19	VEE	Negative voltage output
6	E	Enable signal	20	A	BKL +
7~14	DB0~DB7	Data bus lines			

◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25℃	---	5.0	---	V
Operating Voltage for LCD	Vlcd	Ta=25℃	---	10.5	---	V
Supply Current	Idd	Ta=25℃, Vdd=5.0V	---	2.5	3.0	mA
Supply Voltage for LED	Vf	Ta=25℃	---	4.2	---	V
Supply Current for LED	If	Ta=25℃, Vf=4.2V	---	480	---	mA

◆ OUTLINE DIMENSION

◆ BLOCK DIAGRAM & POWER SUPPLY

◆ MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	120.0×62.0×9.5/14.0	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	104.0X39.0	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.458X0.458	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.508X0.508	Display Type	Positive or Negative
Dots×Dots	192×64	Backlight	LED (Optional)
		Operating Temp.	0℃~50℃ or -20℃~70℃
		Controller	S6B0108 or Equivalent

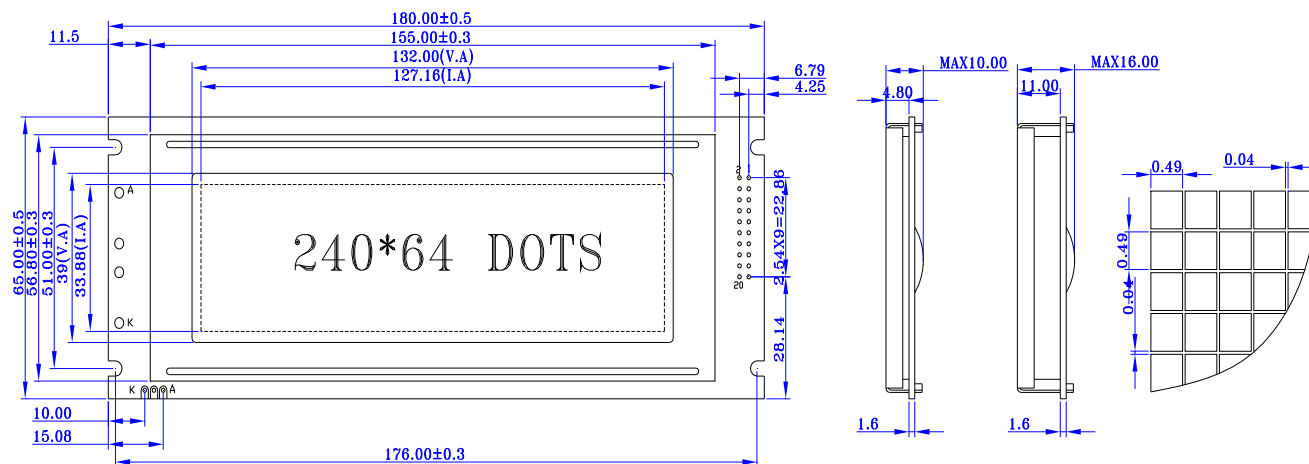
◆ INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vss	Ground for logic	8~15	DB0~DB7	Data bus lines
2	Vdd	Power supply for logic	16	CS1	Enable signal for IC1
3	Vo	Power supply for LCD	17	CS2	Enable signal for IC2
4	VEE	Negative voltage output	18	CS3	Enable signal for IC3
5	RS	Register selection (H:Data, L:Instruction)	19	/RES	Reset signal
6	R/W	Read/Write selection (H: R, L: W)	20	A	BKL +
7	E	Enable signal	21	K	BKL -

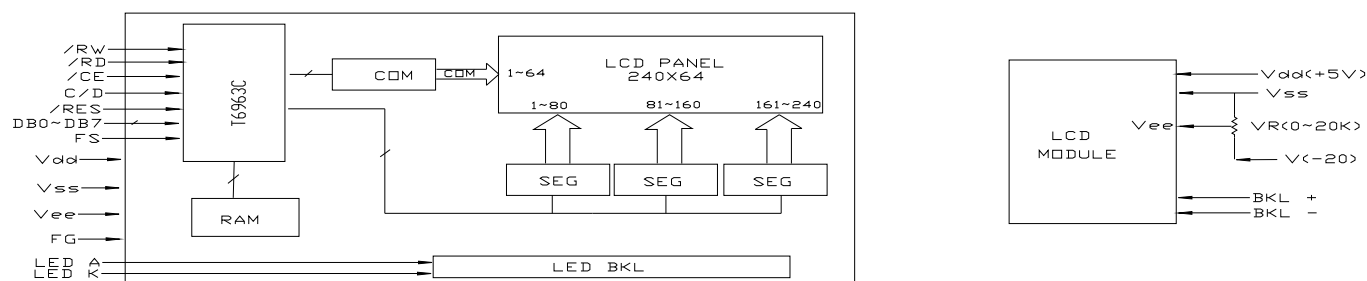
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25℃	---	5.0	---	V
Operating Voltage for LCD	Vlcd	Ta=25℃	---	10.5	---	V
Supply Current	Idd	Ta=25℃, Vdd=5.0V	---	2.5	3.0	mA
Supply Voltage for LED	Vf	Ta=25℃	---	4.2	---	V
Supply Current for LED	If	Ta=25℃, Vf=4.2V	---	480	---	mA

◆ OUTLINE DIMENSION



◆ BLOCK DIAGRAM & POWER SUPPLY



◆ MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	180.0×65.0×10.5/16.0	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	132.0X39.0	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.49X0.49	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.53X0.53	Display Type	Positive or Negative
Dots×Dots	240×64	Backlight	EL (Optional)
		Operating Temp.	0℃~50℃ or -20℃~70℃
		Controller	T6963C or Equivalent

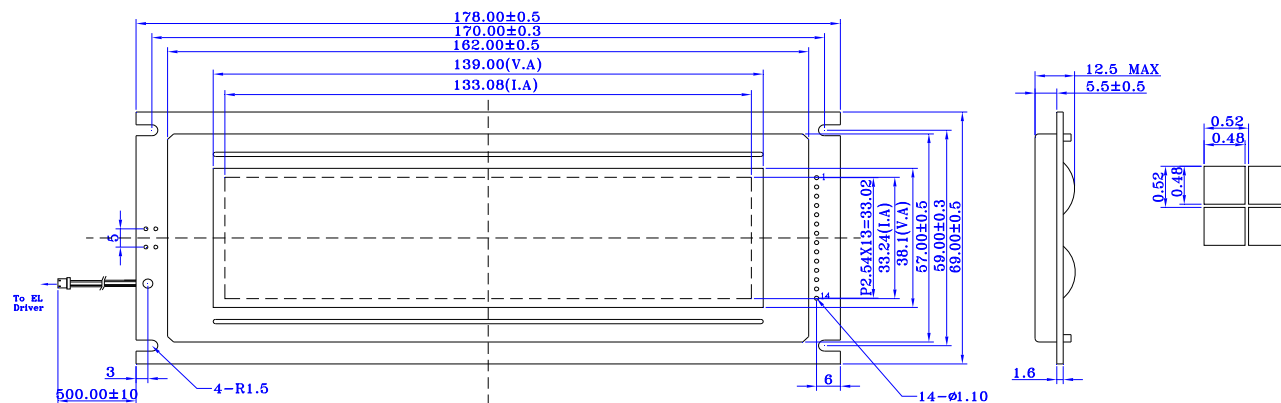
◆ INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	FG	Frame ground	8	C/D	Register selection (H:Data, L:Instruction)
2	Vss	Ground for logic	9	VEE	Negative voltage output
3	Vdd	Power supply for logic	10	/RES	Reset signal
4	V0	Power supply for LCD	11~18	DB0~DB7	Data bus lines
5	/WR	Write enable	19	FS	Font selection
6	/RD	Read enable	20	NC	---
7	/CE	Enable signal for IC			

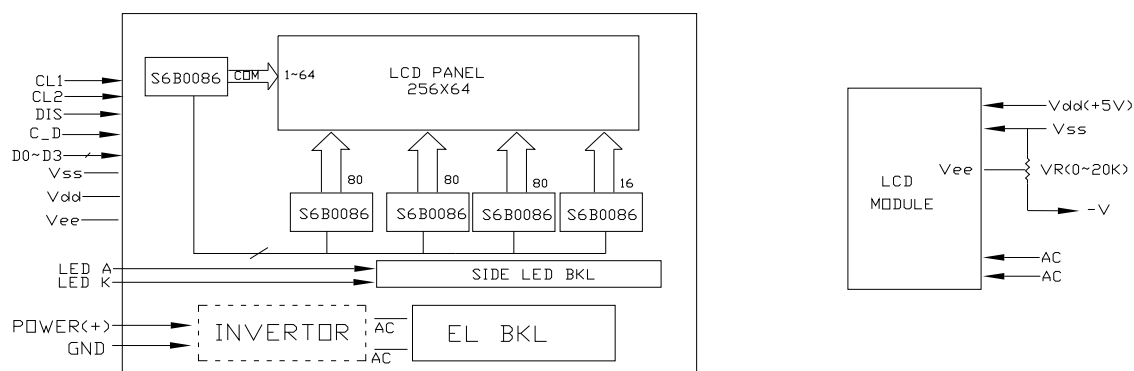
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25℃	---	5.0	---	V
Operating Voltage for LCD	Vlcd	Ta=25℃	---	10.5	---	V
Supply Current	Idd	Ta=25℃, Vdd=5.0V	---	2.5	3.0	mA
Supply Voltage for LED	Vf	Ta=25℃	---	4.2	---	V
Supply Current for LED	If	Ta=25℃, Vf=4.2V	---	630	---	mA

◆ OUTLINE DIMENSION



◆BLOCK DIAGRAM & POWER SUPPLY



◆MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	178.0×69.0×12.5	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	139.0X38.1	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.48X0.48	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.52X0.52	Display Type	Positive or Negative
Dots×Dots	256×64	Backlight	EL (Optional)
		Operating Temp.	0℃~50℃ or -20℃~70℃
		Controller	S6B0086 or Equivalent

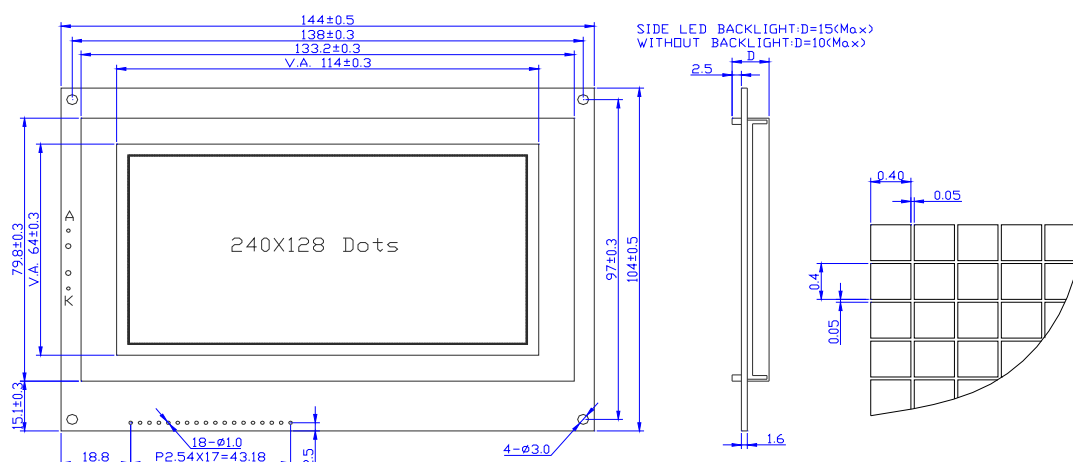
◆INTERFACE PIN CONNECTIONS

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vdd	Power supply for logic	8	C_D	Synchronous signal for row driver
2	Vss	Ground for logic	9	CL2	Data shift clock
3	V0	Power supply for LCD	10	NC	-----
4	CL1	Data latch clock	11~14	D0~D3	Display data
5	M	AC Singal		AC	Anode of EL
6	DIS	Display OFF Control		AC	Cathode of EL
7	NC	-----			

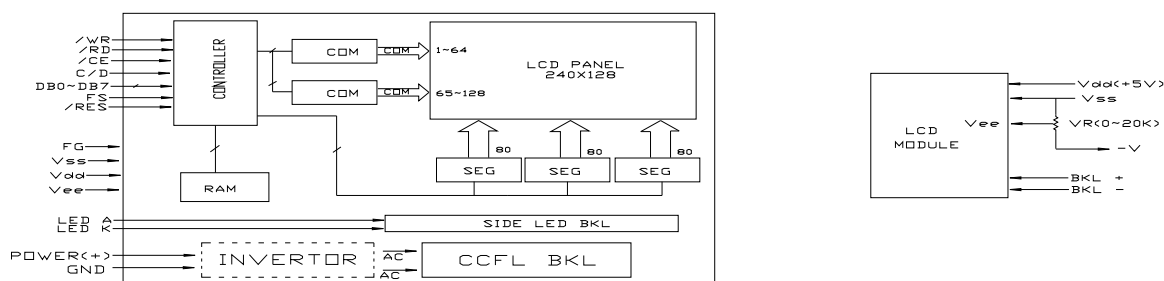
◆ ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25℃	4.5	5.0	5.5	V
Operating Voltage for LCD	Vled	Ta=25℃	---	12	---	V
Supply Current	Idd	Ta=25℃, Vdd=5.0V	---	9.5	---	mA

◆OUTLINE DIMENSION



◆BLOCK DIAGRAM & POWER SUPPLY



◆MECHANICAL SPEC. & FEATURES

Item	Dimension(mm)	Features	
Module Size(W×H×T)	144.0×104.0×10.0/15.0	LC Fluid	STN (Yellow-green, Gray, Blue), FSTN
Viewing Area(W×H)	114.0X64.0	Polarizer	Reflective, Transflective, Transmissive
Dot Size(W×H)	0.40X0.40	View Angle	6:00 o'clock or 12:00 o'clock
Dot Pitch(W×H)	0.45X0.45	Display Type	Positive or Negative
Dots×Dots	240×128	Backlight	LED (Optional)
		Operating Temp.	0°C~50°C or -20°C~70°C
		Controller	T6963C or Equivalent

◆INTERFACE PIN CONNECTIONS

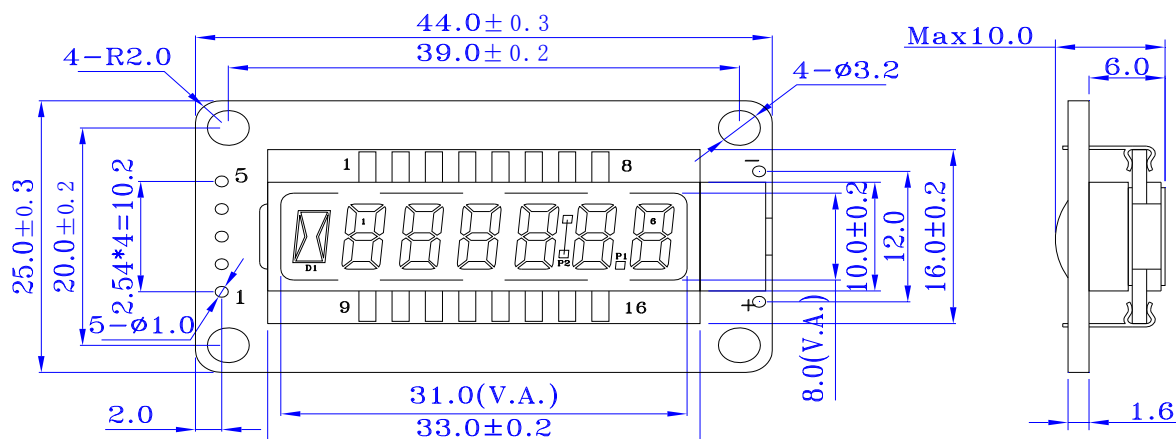
Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	FG	Frame ground	8	C/D	Register selection (H:Data, L:Instruction)
2	Vss	Ground for logic	9	/RES	Reset signal
3	Vdd	Power supply for logic	10~17	DB0~DB7	Data bus lines
4	Vee	Power supply for LCD	18	FS	Font selection
5	/WR	Write enable		A	Anode of LED
6	/RD	Read enable		K	Cathode of LED
7	/CE	Enable signal for IC			

◆ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Voltage	Vdd	Ta=25°C	4.5	5.0	5.5	V
Operating Voltage for LCD	Vlcd	Ta=25°C	---	12	---	V
Supply Current	Idd	Ta=25°C, Vdd=5.0V	---	9.5	---	mA
Supply Voltage for LED	Vf	Ta=25°C	---	4.1	---	V

Supply Current for LED	If	Ta=25°C, Vf=4.1V	---	300	---	mA
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SLDM1621-804



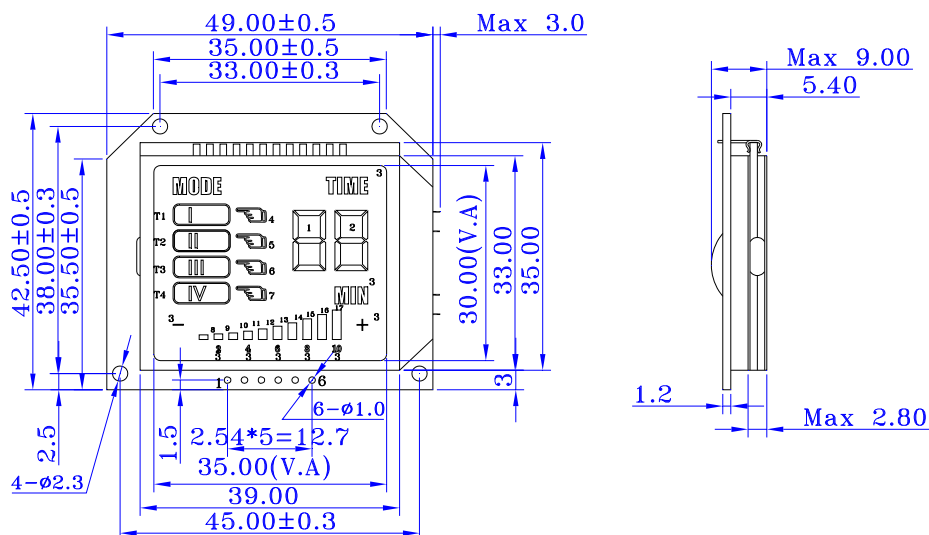
FEATURES:

1. DISPLAY MODE: TN, TRANSFLECTIVE
2. VIEW ANGLE: 12:00
3. OPERATING VOLTAGE: 5V
4. OPERATING TEMP: -30°C ~ 80°C
5. STORANE TEMP: -40°C ~ 85°C
6. BACKLIGHT: LED SIDE BACKLIGHT (YELLOW-GREEN)
7. DRIVER: HT1621 OR EQUIVALENT

TOLERANCES UNLESS OTHERWISE SPECIFIED ±0.2

PIN	1	2	3	4	5
SIGNAL	/CS	/RW	DATA	VSS	VDD

SLDM1621-806



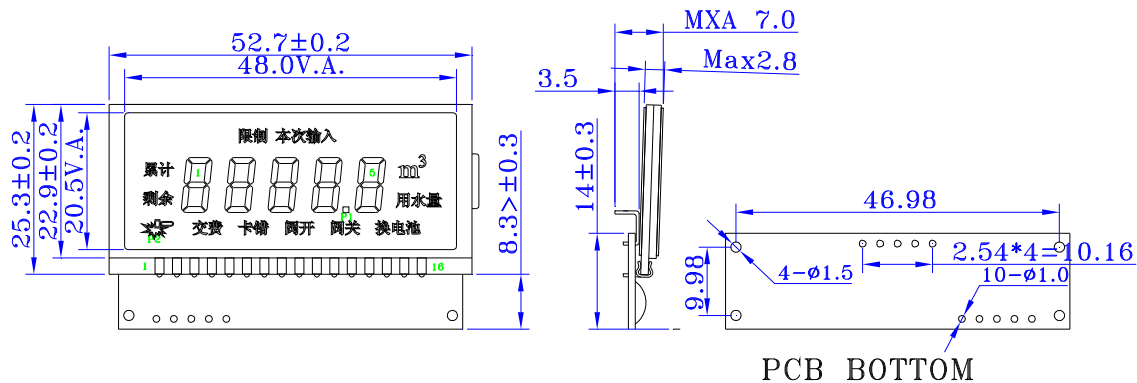
FEATURES:

1. DISPLAY MODE: TN, TRANSMISSIVE
2. VIEW ANGLE: 6:00
3. OPERATING VOLTAGE: 5V
4. OPERATING TEMP: -25°C ~ 70°C
5. STORANE TEMP: -30°C ~ 80°C
6. BACKLIGHT: LED SIDE BACKLIGHT (BLUE)
7. DRIVER: HT1621 OR EQUIVALENT

TOLERANCES UNLESS OTHERWISE SPECIFIED ±0.2

PIN	1	2	3	4	5	6
SIGNAL	VDD	VSS	DATA	/RW	/CS	VLED

SLDM1621-807



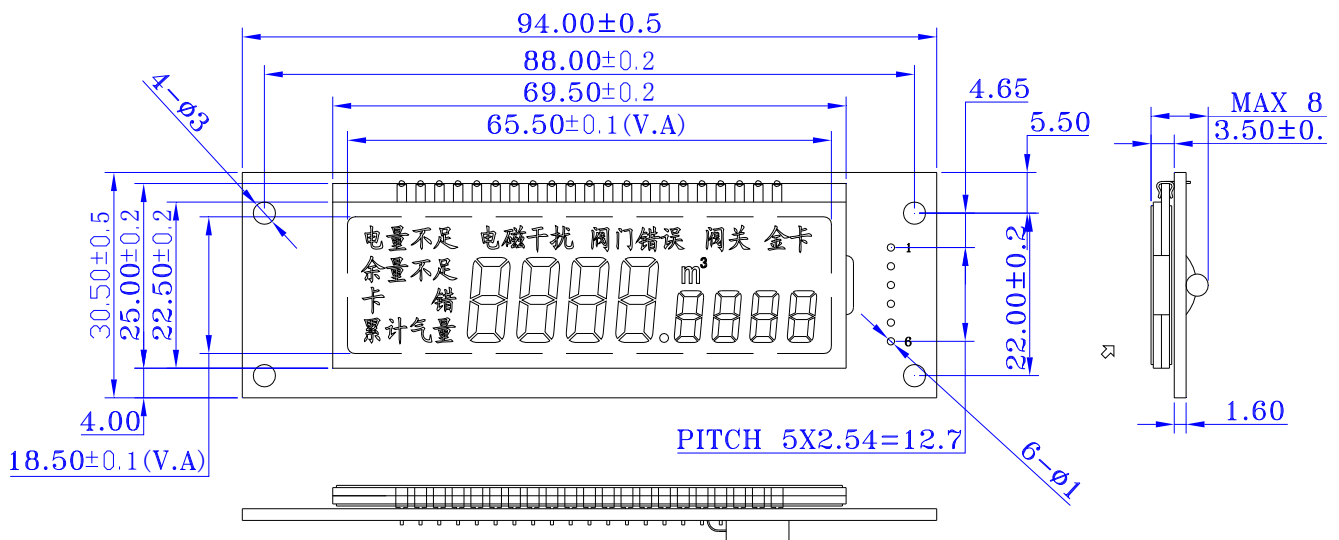
FEATURES:

1. DISPLAY MODE: TN, REFLECTIVE
2. VIEW ANGLE: 6:00
3. OPERATING VOLTAGE: 3.6V
4. OPERATING TEMP: -10°C ~ 50°C
5. STORANE TEMP: -20°C ~ 60°C
6. WITHOUT BACKLIGHT
7. DRIVER: HT1621 OR EQUIVALENT

TOLERANCES UNLESS OTHERWISE SPECIFIED ±0.2

PIN	1	2	3	4	5
SIGNAL	VDD	VSS	DATA /RW	/CS	

SLDM1621-823



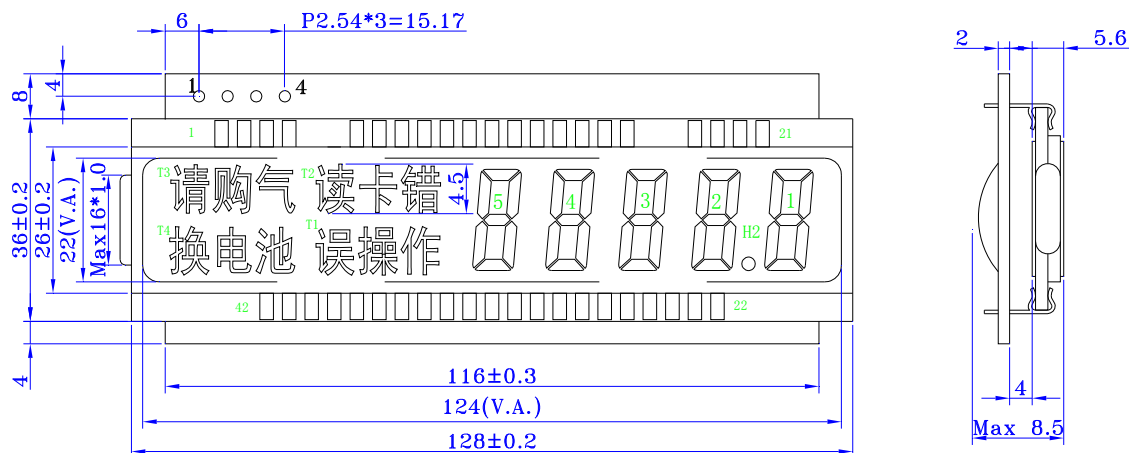
FEATURES:

1. DISPLAY MODE: TN, REFLECTIVE
2. VIEW ANGLE: 6:00
3. OPERATING VOLTAGE: 3.6V
4. OPERATING TEMP: -10°C ~ 50°C
5. STORANE TEMP: -20°C ~ 60°C
6. WITHOUT BACKLIGHT
7. DRIVER: HT1621 OR EQUIVALENT

TOLERANCES UNLESS OTHERWISE SPECIFIED ±0.2

PIN	1	2	3	4	5	6
SIGNAL	/CS	/RW	DATA	VSS	VLCD	VDD

SLDM7065-825



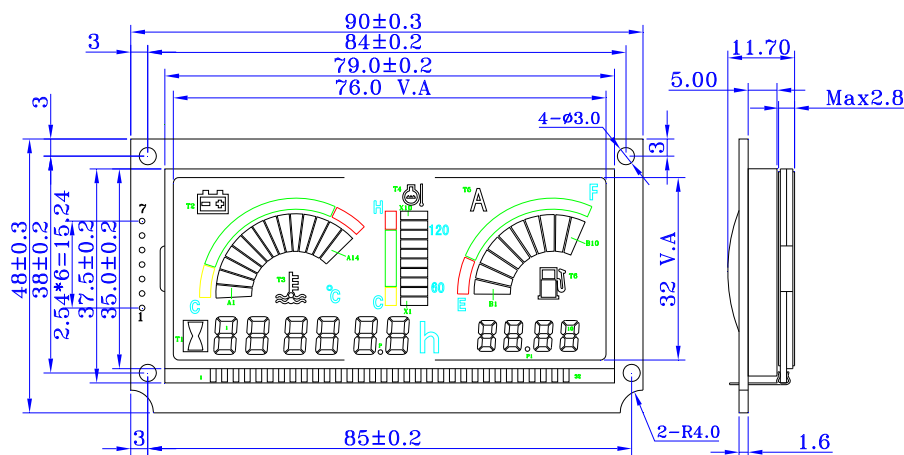
FEATURES:

1. DISPLAY MODE: TN, REFLECTIVE
2. VIEW ANGLE: 12:00
3. OPERATING VOLTAGE: 3.0~5.5V
4. OPERATING TEMP: -10°C ~ 50°C
5. STORAGE TEMP: -20°C ~ 60°C
6. WITHOUT BACKLIGHT
7. DRIVER: KS0065 OR EQUIVALENT

TOLERANCES UNLESS OTHERWISE SPECIFIED ± 0.2

PIN	1	2	3	4
SIGNAL	VDD	VSS	DI	SLK

SLDM1621-831



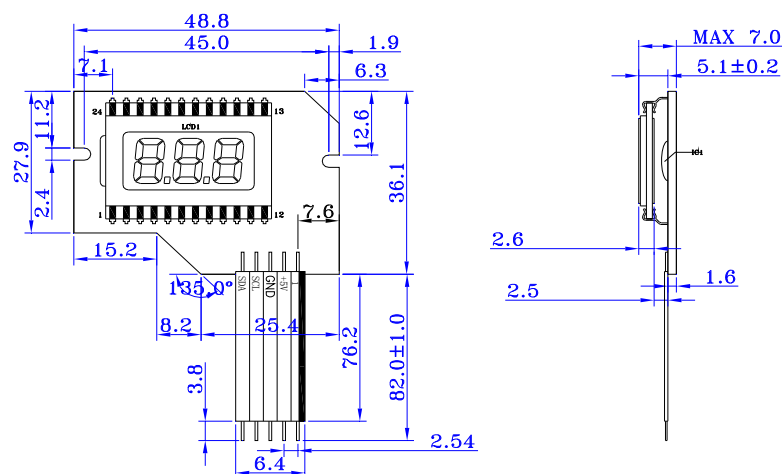
FEATURES:

1. DISPLAY MODE: STN GRAY, TRANSLFECTIVE
2. VIEW ANGLE: 6:00
3. OPERATING VOLTAGE: 5.0V
4. OPERATING TEMP: -30°C ~ 80°C
5. STORAGE TEMP: -40°C ~ 85°C
6. BACKLIGHT: LED BOTTOM BACKLIGHT (YELLOW-GREEN)
7. DRIVER: HT1621 OR EQUIVALENT

TOLERANCES UNLESS OTHERWISE SPECIFIED ± 0.2

PIN	1	2	3	4	5	6	7
SIGNAL	/CS	/RW	DATA	VSS	VDD	A	K

SLDM8566-841



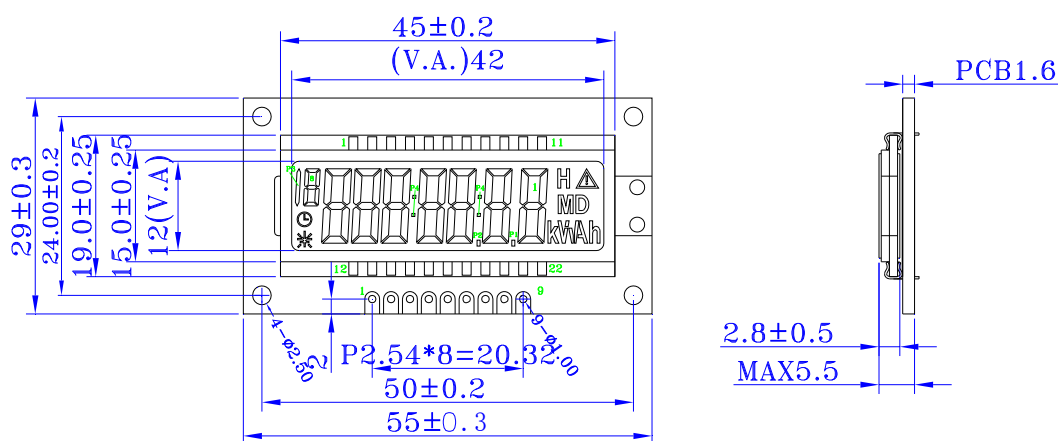
FEATURES:

1. DISPLAY MODE: TN, REFLECTIVE
2. VIEW ANGLE: 6:00
3. OPERATING VOLTAGE: 5.0V
4. OPERATING TEMP: $-10^{\circ}\text{C} \sim 60^{\circ}\text{C}$
5. STORAGE TEMP: $-20^{\circ}\text{C} \sim 70^{\circ}\text{C}$
6. WITHOUT BACKLIGHT
7. DRIVER: PCF8566 OR EQUIVALENT

TOLERANCES UNLESS OTHERWISE SPECIFIED ± 0.2

PIN	1	2	3	4	5
SIGNAL	NC	VDD	VSS	SCL	SDA

SLDM1621-86



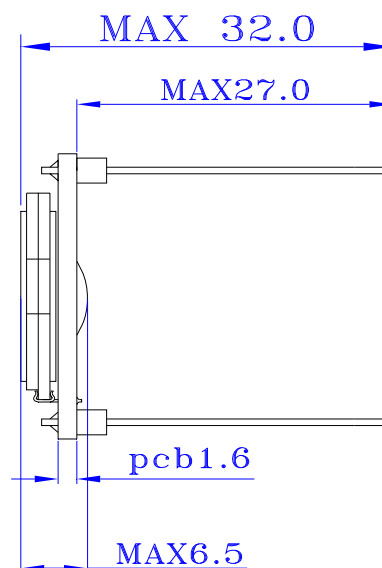
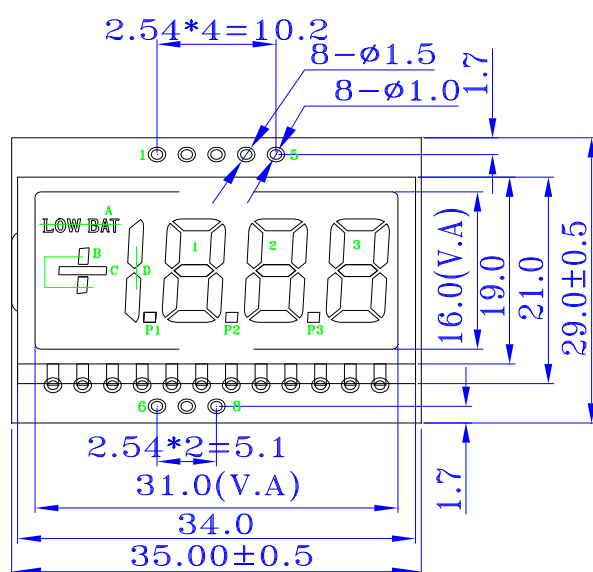
FEATURES:

1. DISPLAY MODE: TN, REFLECTIVE
2. VIEW ANGLE: 6:00
3. OPERATING VOLTAGE: 3.0V
4. OPERATING TEMP: $-20^{\circ}\text{C} \sim 80^{\circ}\text{C}$
5. STORAGE TEMP: $-30^{\circ}\text{C} \sim 85^{\circ}\text{C}$
6. BACKLIGHT: NC
7. DRIVER: HT1621 OR EQUIVALENT

TOLERANCES UNLESS OTHERWISE SPECIFIED ± 0.2

PIN	1	2	3	4	5	6	7	8	9
SIGNAL	/CS	/RD	/RW	DATA	VSS	VDD	NC	A	K

SLDM1621-875



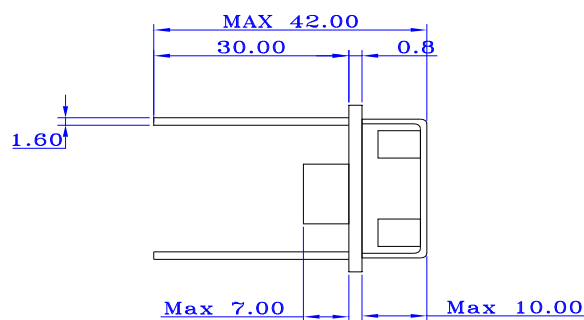
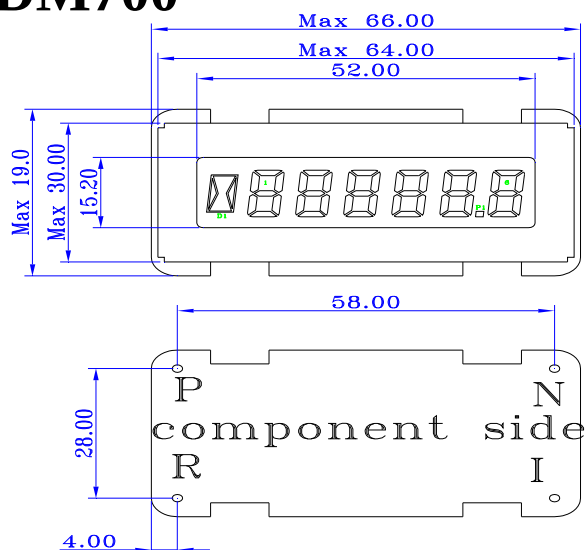
FEATURES:

1. DISPLAY MODE: TN, REFLECTIVE
2. VIEW ANGLE: 6:00
3. OPERATING VOLTAGE: 3.0V~5.0V
4. OPERATING TEMP: $-10^{\circ}\text{C} \sim 50^{\circ}\text{C}$
5. STORAGE TEMP: $-20^{\circ}\text{C} \sim 60^{\circ}\text{C}$
6. BACKLIGHT: NC
7. DRIVER: HT1621 OR EQUIVALENT

TOLERANCES UNLESS OTHERWISE SPECIFIED ± 0.2

PIN	1	2	3	4	5	6	7	8
SIGNAL	/CS	/RW	DATA	VSS	VDD	A	CTR	K

SLDM700



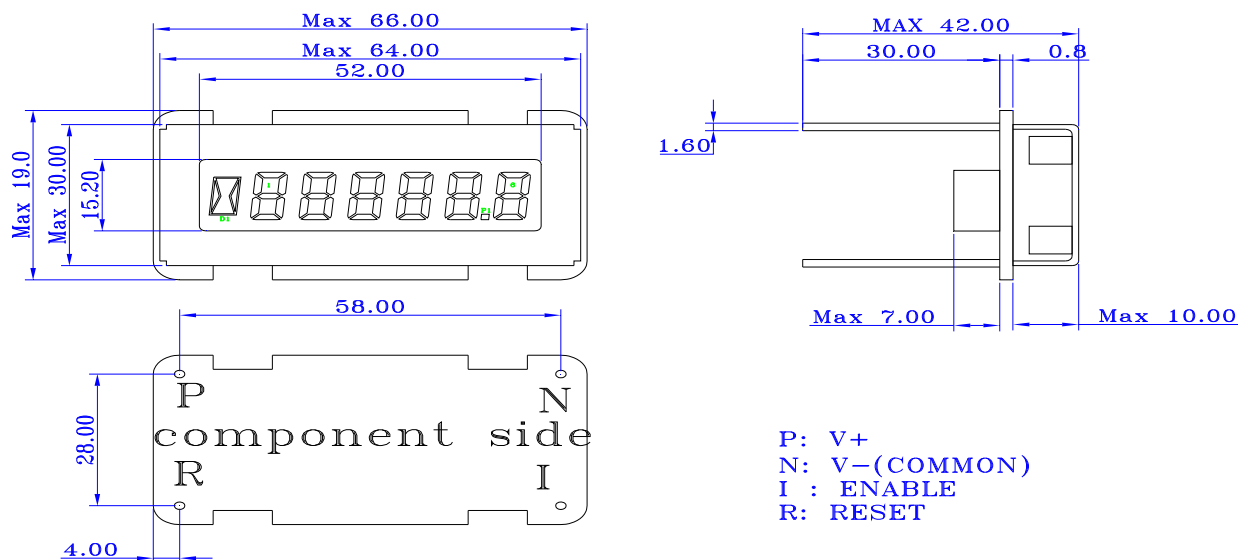
P: V+
N: V-(COMMON)
I: ENABLE
R: RESET

FEATURES:

1. DISPLAY MODE: TN, REFLECTIVE
2. VIEW ANGLE: 6:00
3. OPERATING VOLTAGE: 4.0VDC~12.0VDC
4. OPERATING TEMP: $40^{\circ}\text{C} \sim 85^{\circ}\text{C}$
5. STORAGE TEMP: $-50^{\circ}\text{C} \sim 90^{\circ}\text{C}$
6. BACKLIGHT: NC
7. DRIVER: W541E260 OR EQUIVALENT
8. NONVOLATILE MEMORY EEPROM BUILT-IN

TOLERANCES UNLESS OTHERWISE SPECIFIED ± 0.2

SLDM1707

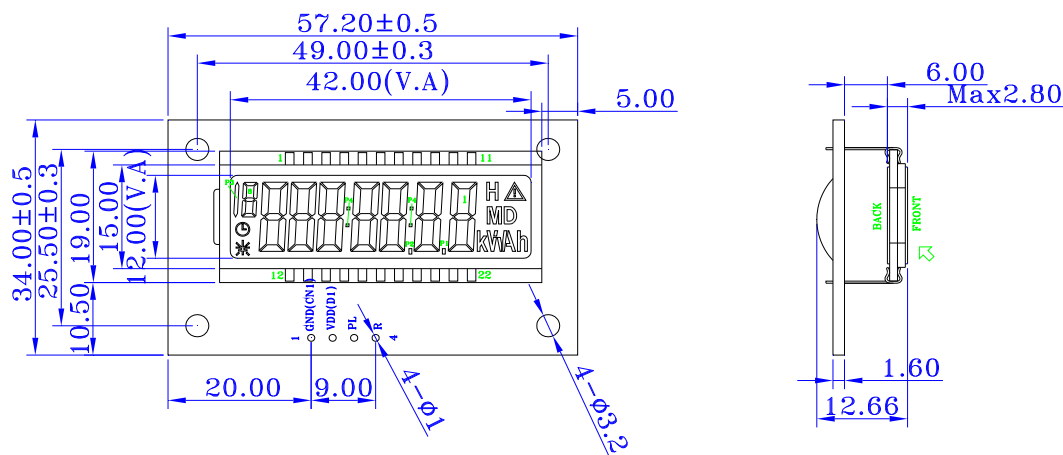


FEATURES:

1. DISPLAY MODE: TN, REFLECTIVE
2. VIEW ANGLE: 6:00
3. OPERATING VOLTAGE: 9.0V~60V DC OR 15V~75V AC
4. OPERATING TEMP: 40°C ~ 85°C
5. STORAGE TEMP: -50°C ~ 90°C
6. BACKLIGHT: NC
7. DRIVER: W541E260 OR EQUIVALENT
8. NONVOLATILE MEMORY EEPROM BUILT-IN

TOLERANCES UNLESS OTHERWISE SPECIFIED ± 0.2

SLDM54-848

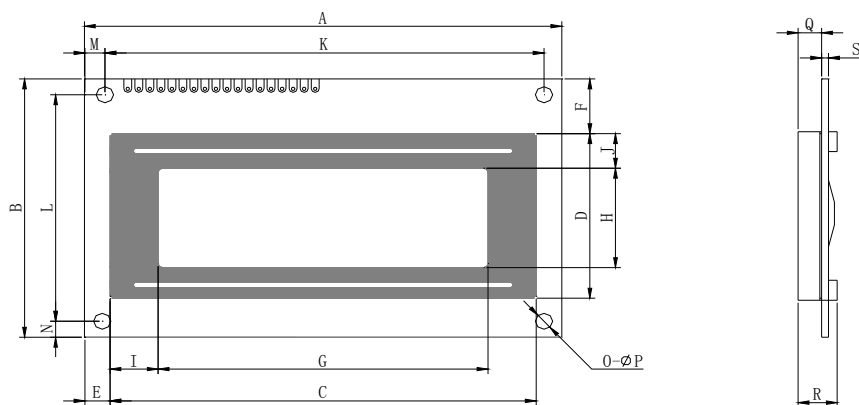
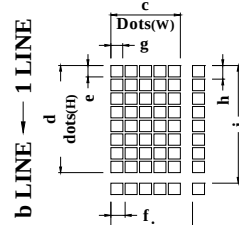


FEATURES:

1. DISPLAY MODE: TN, REFLECTIVE
2. VIEW ANGLE: 6:00
3. OPERATING VOLTAGE: 5.0V
4. OPERATING TEMP: -20°C ~ 80°C
5. STORAGE TEMP: -30°C ~ 85°C
6. BACKLIGHT: NC
7. DRIVER: W541E260 OR EQUIVALENT
8. NONVOLATILE MEMORY EEPROM BUILT-IN

TOLERANCES UNLESS OTHERWISE SPECIFIED ± 0.2

PIN	1	2	3	4
SIGNAL	VSS	VDD	PL	R

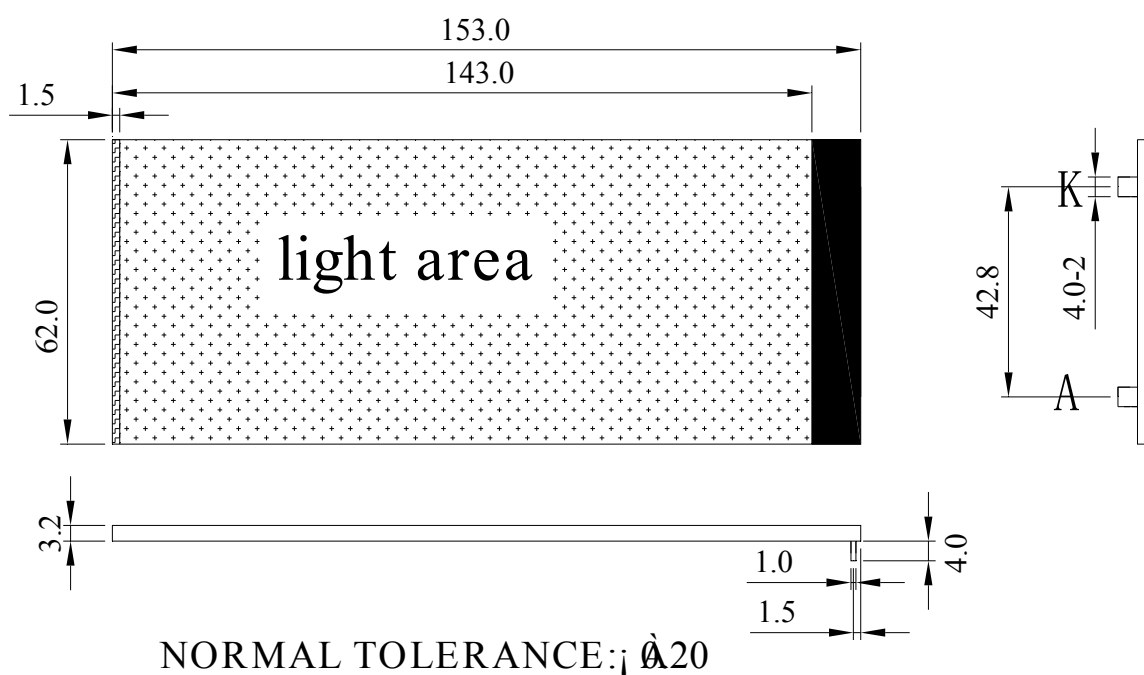
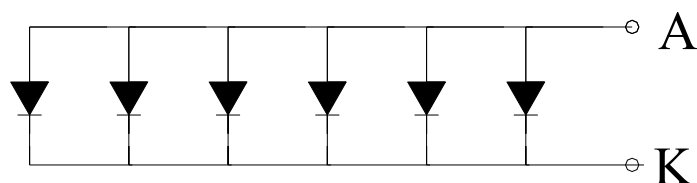
Customer Information 客户信息	Company 公司:				Contact 联系人:	
	E-mail 邮件:		Website 网站:		Tel 电话:	
	Application 产品应用:				Fax 传真:	
Schedule 计划	Item 项目	Specification 图纸规格	Prototypes 样品	Production 批量	Monthly Quantity 月用量	Total Quantity 总量
	Date 日期					
	Quantity 数量					
Dimensions 尺寸						
	Item 项目	Size 尺寸	Item 项目	Size 尺寸	Item 项目	Size 尺寸
	Module Size 模块外形	A	Viewing Area 视区	G	Mounting Hole 装配孔位	K
		B		H		L
		R		I		M
	LCD Holder 框外形	C	Holder Highness 高度	J	Hole Quantity 孔数	N
		D		Q		O
E		PCB Thickness 线路板厚度		S		Hole Diameter 孔直径
F	Unit 单位		☐ mm ☐ inch			
Display Contents 显示内容	1CHA. → a CHA. Display Format: ☐Character type 字符 [a=]Chars 字数 X [b=]Lines 行数 显示格式 ☐Graphic Type 图形 [c=]Dots 点数 X [d=]Dots 点数 Character Font 字形: [c=]Dots 点 X [d=]Dots 点 Character Size 字尺寸: [W=] X [H=]mm Character Pitch 字间距: [j=] X [i=]mm Dot Size 点尺寸: [e=] X [g=]mm Dot Pitch 点间距: [f=] X [h=]mm					
						
LCD Panel 液晶屏	☐ TN ☐ HTN ☐ STN Yellow-Green ☐ STN Gray ☐ STN Blue ☐ FSTN B/W					
	Viewing Angle 视角: ☐ 12:00 (from Up-Side,从上向下看) ☐ 6:00 (from Down-Side,从下向上看) ☐ Others 其它:					
	Display Mode 显示模式: ☐ Positive Image 正显 ☐ Negative Image 负显					
	Polarizer Mode 偏光片模式: ☐ Reflective 反射式 ☐ Transflective(Semi-Transmissive)半透式 ☐ Transmissive 全透式					
Backlight 背光	☐ With 有 ☐ Without 无 Type 类型: ☐ LED Array 底背光 ☐ LED Edge 侧背光 ☐ EL ☐ CCFL ☐ Others 其它: Color 颜色: _____ Backlight Current Consumption 背光功耗电流 _____mA Inverter built-in 是否带逆变器: ☐ Yes 是 ☐ No 否					
	IC 驱动控制器					
	Driver IC _____ Segment _____ Common _____ Controller _____ []Attached type []Built-in type					
Power Supply & Consumption 电源及功耗	Logic Operating Voltage 逻辑工作电压 Vop= _____V; Power Consumption Current 功耗电流: Ipd= _____mA					
Connect Method 连接方式	LCD Connect Method 液晶屏连接方式: ☐ Rubber 导电胶条 ☐ Heat-Seal 热压 ☐ Pin 金属管脚 Module Connect Method 模块连接方式:					
Temperature Range 温度范围	Operating Temperature 工作温度: _____ deg C~ _____deg C Storage Temperature 储存温度: _____deg C~ _____deg C					
Other Requirements 其他要求						

LED SIDE BACKLIGHT

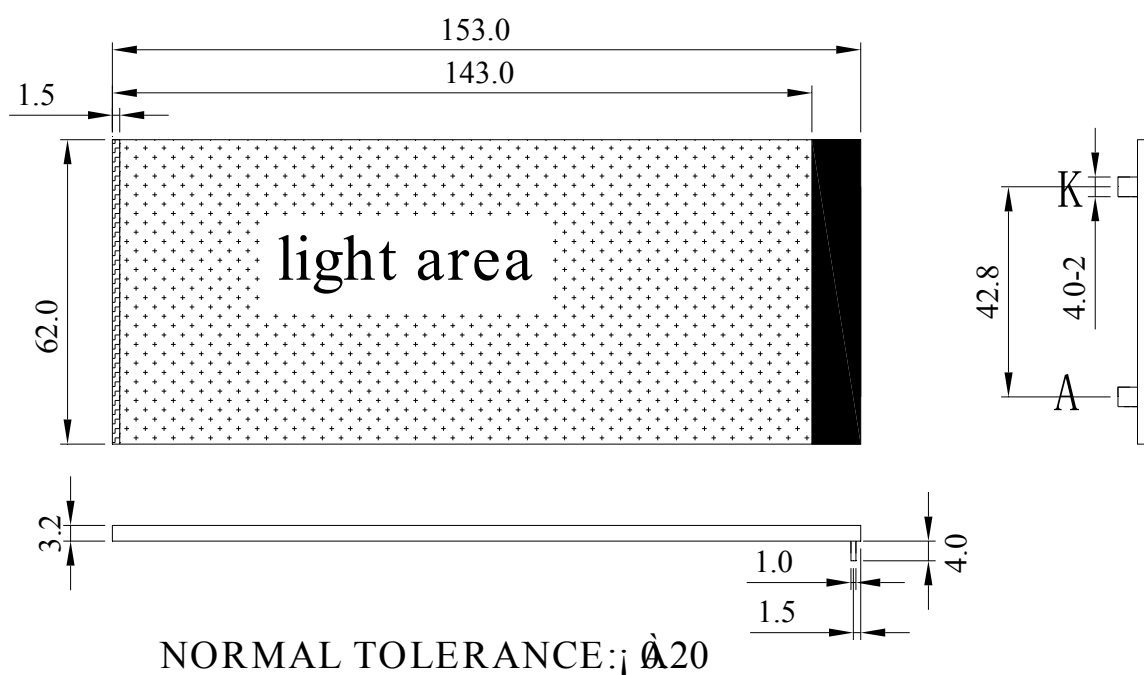
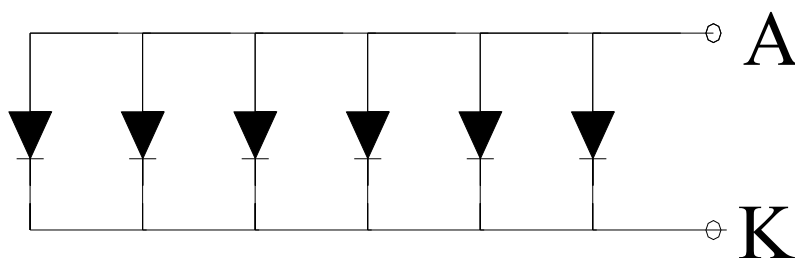
NO.	FORM	P/N	OUTLINE DIMENSION W X H X D (mm)	VIEWING AREA W X H (mm)	VOLTAGE (VF)	DICE	COLOR
1	Side	UPCB153623A2	153.0X62.0X3.2	141.5X62.0	3.2	6	B
2	Side	UPCW153623A2	153.0X62.0X3.2	141.5X62.0	3.2	6	W
3	Side	UPCB45272A1	45.0X27.0X1.7	45.0X21.0	3.2	2	B
4	Side	UPCB90623A0	90.0X62.5X3.3	80.5X62.5	3.2	3	B
5	Side	UPCB112363A2	112.0X36.0X3.2	104.0X32.0	3.0	4	B
6	Side	UPCB75513A0	75.0X51.5X3.2	67.5X51.5	3.1	2	B
7	Side	UPCW99573A1	99.0X57.0X3.3	83.0X57.0	3.3	3	W
8	Side	UPCB78343A0	78.0X34.0X3.2	71.5X34.0	11.0	3	B
9	Side	UPCBRY124864D0	124.0X86.0X4.0	115.5X86.0	2.1	16	R/Y
10	Side	UPCW167933A2	167.8X93.0X3.2	150.0X93.0	3.2	16	W
11	Side	UPCWB93223A2	93.5X22.0X3.3	83.0X22.0	3.2	2	W/B
12	Side	UPCY15634D0	156.8X34.0X16.0	151.0X34.0	3.3	8	Y
13	Side	UPCB12340C0	125.0X40.0X14.2	113.50X40.0	3.2	4	B
14	Side	UPCB49373A0	49.0X37.0X3.2	49.0X31.5	3.2	2	B
15	Side	UPCB58252A0	58.0X25.0X2.8	50.0X25.0	3.2	2	B
16	Side	UPCB57453A0	57.0X45.0X3.0	47.5X45.0	3.2	3	B
17	Side	UPCB49243A0	49.0X24.0X3.0	43.0X24.0	3.2	2	B
18	Side	UPCB55303A0	55.5X30.0X3.0	50.0X30.0	3.2	2	B
19	Side	UPCW68153A2	68.0X15.0X3.2	56.5X15.0	3.2	1	W
20	Side	UPCB158503A2	158.0X50.0X3.2	144.0X50.0	3.2	4	B
21	Side	UPCB107323A0	107.0X32.5X3.5	103.0X30.5	3.2	6	B
22	Side	UPCW42233A0	50.0X23.0X2.0	40.5X23.0	3.2	1	W
23	Side	UPCB59212A0	59.0X21.0X2.8	51.5X21.0	3.3	2	B
24	Side	UPCB56212A0	56.1X21.1X2.3	47.9X21.1	3.2	1	B
25	Side	UPCYG48441A0	48.0X44.0X1.6	48.0X36.5	2.1	5	YG
26	Side	UPCW4448A0	48.0X44.0X1.8	45.0X35.0	3.2	3	W
27	Side	UPCW90333A2	90.0X33.0X3.2	80.0X32.0	3.1	4	W
28	Side	UPCB87723A2	87.0X72.0X3.2	75.5X72.0	3.2	4	B
29	Side	UPCW167173A2	167.0X17.0X3.2	150.0X15.0	3.1	4	W
30	Side	UPCRGB70293A0	70.0X29.0X3.2	47.0X29.0	2.03/3.2/3.1	3	R/G/B
31	Side	UPCWB91413A2	91.0X41.0X3.2	79.5X41.0	3.1	4	B/W
32	Side	UPCYG91403A0	91.0X40.3X3.2	84.5X40.3	1.7	4	YG
33	Side	UPCB78683A2	78.0X68.0X3.2	67.0X66.0	3.2	5	B/W
34	Side	UPCB91363A0	91.0X36.0X3.0	85.0X36.0	3.2	4	G
35	Side	UPCB90483A2	90.0X48.0X3.2	80.0X48.0	3.1	4	B
36	Side	UPCRGB73173A2	73.6X17.43X3.2	63.6X17.43	1.9/3.0/3.0	1	R/G/B
37	Side	UPCB12353A2	123.0X45.0X3.2	111.0X45.0	3.2	4	B

LED BOTTOM BACKLIGHT

NO.	FORM	P/N	OUTLINE DIMENSION L X W X H (mm)	VIEWING AREA L X W (mm)	VOLTAGE (VF)	DICE	COLOR
1	Bottom	UPDYG84365A0	84.0X36.0X4.8	76.0X32.0	4.2	60	YG
2	Bottom	UPDYG93435A0	93.0X43.0X5.5	89.0X39.0	10.5	55	YG
3	Bottom	UPDYG12727A1	127.0X27.0X4.7	123.0X23.0	4.2	60	YG
4	Bottom	UPDYG113275A0	113.0X28.5X5.0	101.0X24.5	4.2	42	YG
5	Bottom	UPDYG62205A1	61.8X18.8X4.8	54.8X15.8	4.2	18	YG
6	Bottom	UPDYG112165A1	112.0X16.0X5.0	102.0X14.0	4.2	36	YG
7	Bottom	UPDYG112186A0	112.0X17.5X5.8	100.0X13.5	4.0	16	YG
8	Bottom	UPDYG101245A1	101.0X24.0X5.0	85.0X20.0	4.2	36	YG
9	Bottom	UPDYG74204A0	74.0X20.5X4.5	66.0X17.5	4.2	22	YG
10	Bottom	UPDYG13827A0	137.0X26.9X5.4	125.6X23.1	4.2	36	YG
11	Bottom	UPDYG49194A0	52.3X19.0X4.0	46.8X16.0	4.2	16	YG
12	Bottom	UPDYG79895A0	84.5X89.0X5.0	76.0X85.0	4.2	144	YG
13	Bottom	UPDYG6718A0	72.7X18.6X4.7	65.0X16.6	4.2	20	YG
14	Bottom	UPDYG8752A0	93.0X55.0X5.0	84.0X52.0	4.2	84	YG
15	Bottom	UPDYG43195A0	47.0X19.0X5.5	40.0X16.0	4.2	12	YG
16	Bottom	UPDYG63384D0	68.0X38.0X4.5	60.0X35.0	4.2	50	YG
17	Bottom	UPDYG105285A0	105.0X28.5X5.0	101.0X24.5	4.2	42	YG
18	Bottom	UPDYG79365A0	79.0X36.0X4.8	76.0X32.0	4.2	60	YG

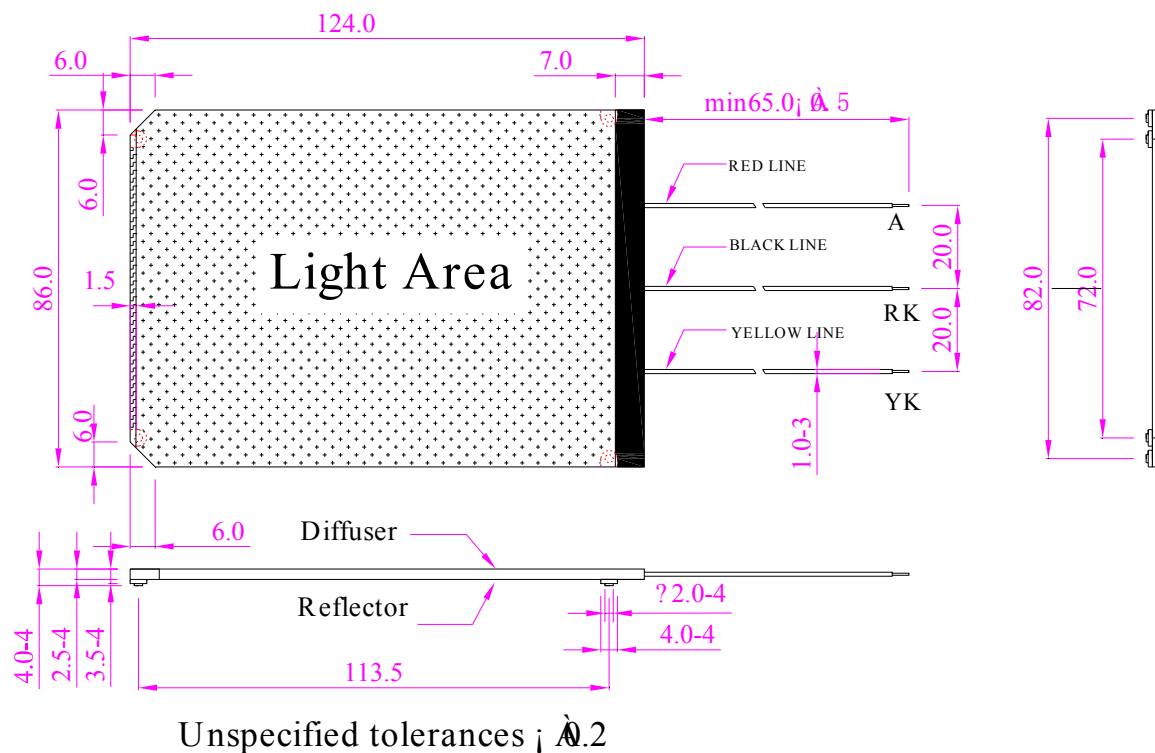
◆ 外形尺寸图 PACKAGE DIMENSIONS

◆ 电路原理图 INTERNAL CIRCUIT DIAGRAM (LED 6 DIES)

◆ 光电参数 OPTOELECTRIC CHARACTERISTICS RATING (Ta=25℃)

参数名称 PARAMETER	符号 SYMBOL	最小值 MIN	典型值 TYP	最大值 MAX	单位 UNIT	测试条件 TEST CONDITION
正向电压 Forward Voltage	VF	3.0	3.2	3.5	V	IF=120mA
反向电流 Reverse Current	IR	—	—	60	uA	VR=5V
发光强度 Luminous Intensity	IV	180	—	—	cd/m ²	IF=120mA
主波长 Dominant Wavelength	λ_d	465	468	470	nm	
光谱半宽度 Spectral Line Half Width	$\Delta\lambda$	—	25	—	nm	

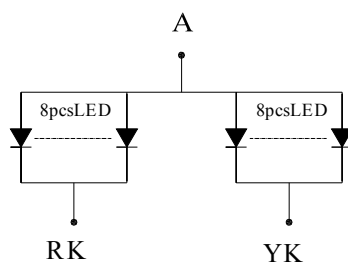
◆ 外形尺寸图 PACKAGE DIMENSIONS

◆ 电路原理图 INTERNAL CIRCUIT DIAGRAM (LED 6 DIES)

◆ 光电参数 OPTOELECTRIC CHARACTERISTICS RATING (Ta=25℃)

参数名称 PARAMETER	符号 SYMBOL	最小值 MIN	典型值 TYP	最大值 MAX	单位 UNIT	测试条件 TEST CONDITION
正向电压 Forward Voltage	VF	3.0	3.2	3.5	V	IF=120mA
反向电流 Reverse Current	IR	—	—	60	uA	VR=5V
发光强度 Luminous Intensity	IV	200	—	—	cd/m ²	IF=120mA
色坐标 Color Coordinate	X	—	0.26	—	nm	IF=120mA
	Y	—	0.28	—	nm	

◆ 外形尺寸图 PACKAGE DIMENSIONS



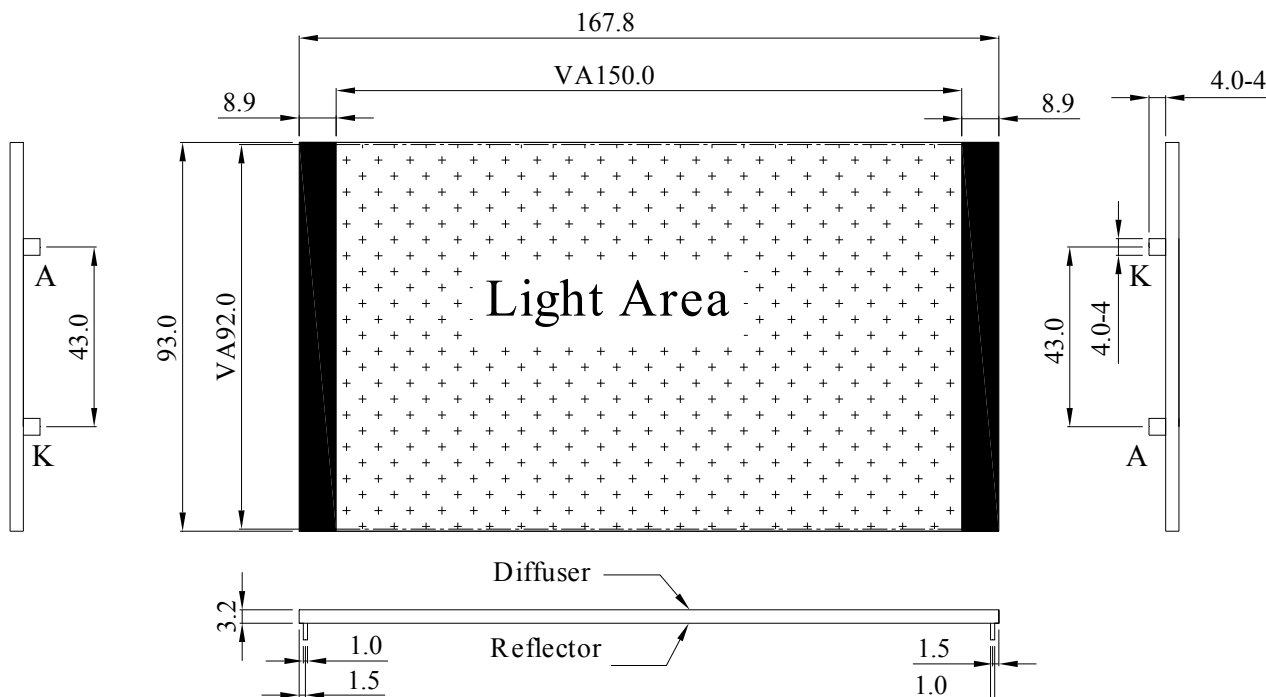
◆ 电路原理图 INTERNAL CIRCUIT DIAGRAM (LED 16 DIES)



◆ 光电参数 OPTOELECTRIC CHARACTERISTICS RATING (Ta=25℃)

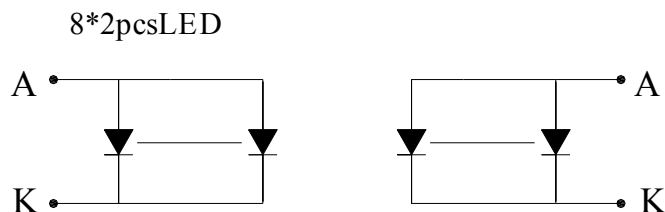
参数名称 PARAMETER	符号 SYMBOL	最小值 MIN	典型值 TYP	最大值 MAX	单位 UNIT	测试条件 TEST CONDITION	
正向电压 Forward Voltage	VF	1.9	2.1	2.2	V	R	IF=160mA
		1.9	2.1	2.2		Y	IF=160mA
反向电流 Reverse Current	IR	—	—	80	uA	R	VR=5 V
		—	—	80		Y	VR=5 V
发光强度 Luminous Intensity	IV	120	—	—	cd/m ²	R	IF=160mA
		120	—	—		Y	IF=160mA
主 波 长 Dominant Wavelength	λ d	627	630	632	nm	R	IF=160mA
		587	590	592		Y	IF=160mA
光谱半宽度 Spectral Line Half Width	Δ λ	—	35	—	nm	R	IF=160mA
		—	35	—		Y	IF=160mA

◆ 外形尺寸图 PACKAGE DIMENSIONS



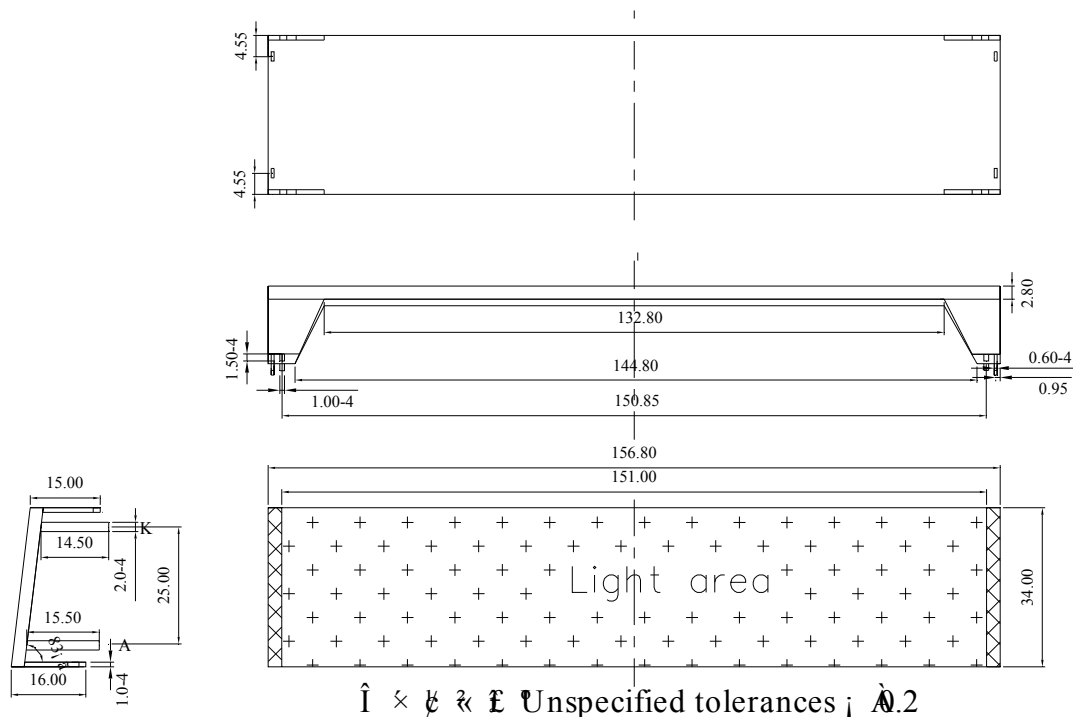
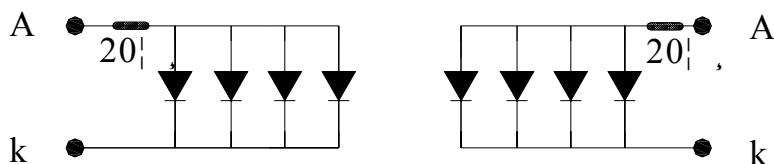
Unspecified tolerances : ± 0.2

◆ 电路原理图 INTERNAL CIRCUIT DIAGRAM (LED 16 DIES)



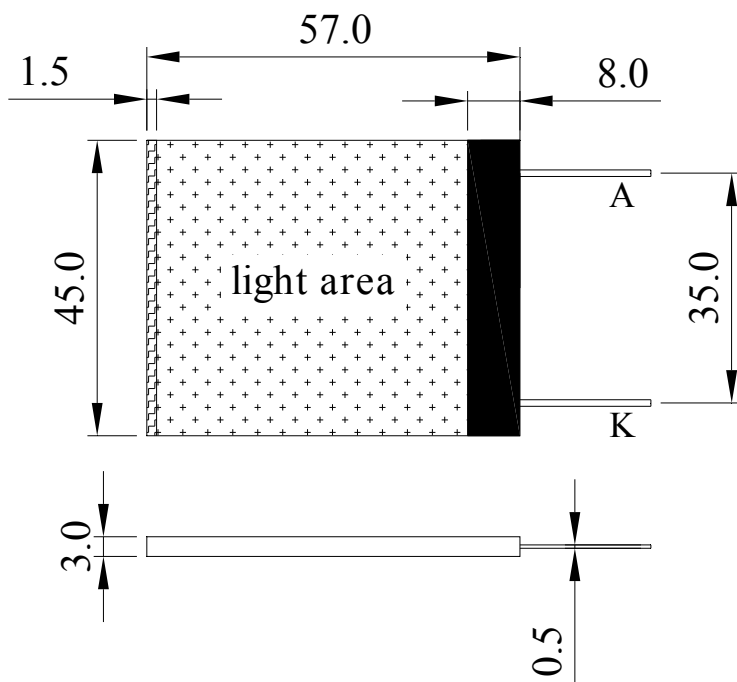
◆ 光电参数 OPTOELECTRIC CHARACTERISTICS RATING (Ta=25℃)

参数名称 PARAMETER	符号 SYMBOL	最小值 MIN	典型值 TYP	最大值 MAX	单位 UNIT	测试条件 TEST CONDITION
正向电压 Forward Voltage	VF	3.0	3.2	3.5	V	IF=160*2mA
反向电流 Reverse Current	IR	—	—	160	uA	VR=5V
发光强度 Luminous Intensity	IV	200	—	—	cd/m ²	IF=160*2mA
色坐标 Color Coordinate	X	—	0.26	—	nm	IF=160*2mA
	Y	—	0.28	—	nm	

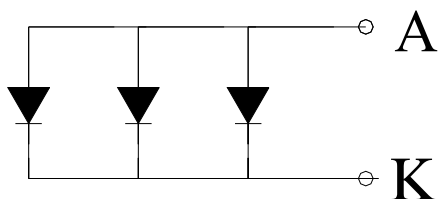
◆ 外形尺寸图 PACKAGE DIMENSIONS

◆ 电路原理图 INTERNAL CIRCUIT DIAGRAM (LED 8 DIES)

◆ 光电参数 OPTOELECTRIC CHARACTERISTICS RATING (Ta=25℃)

参数名称 PARAMETER	符号 SYMBOL	最小值 MIN	典型值 TYP	最大值 MAX	单位 UNIT	测试条件 TEST CONDITION
正向电压 Forward Voltage	VF	3.0	3.3	3.5	V	IF=80*2mA
反向电流 Reverse Current	IR	—	—	40*2	uA	VR=5 V
发光强度 Luminous Intensity	IV	80	—	—	cd/m ²	IF=80*2mA
主波长 Dominant Wavelength	λ_d	585	589	592	nm	
光谱半宽度 Spectral Line Half Width	$\Delta\lambda$	—	20	—	nm	

◆ 外形尺寸图 PACKAGE DIMENSIONS



◆ 电路原理图 INTERNAL CIRCUIT DIAGRAM (LED 3 DIES)



◆ 光电参数 OPTOELECTRIC CHARACTERISTICS RATING (Ta=25℃)

参数名称 PARAMETER	符号 SYMBOL	最小值 MIN	典型值 TYP	最大值 MAX	单位 UNIT	测试条件 TEST CONDITION
正向电压 Forward Voltage	VF	—	3.2	3.5	V	IF=60mA
反向电流 Reverse Current	IR	—	—	30	uA	VR=5V
发光强度 Luminous Intensity	IV	180	—	—	cd/m ²	IF=60mA
主波长 Dominant Wavelength	λ_d	465	468	470	nm	
光谱半宽度 Spectral Line Half Width	$\Delta\lambda$	—	25	—	nm	

Technical drawing of a rectangular plate with dimensions and a light area.

Overall dimensions:

- Length: 105.0
- Width: 28.5

Internal dimensions and features:

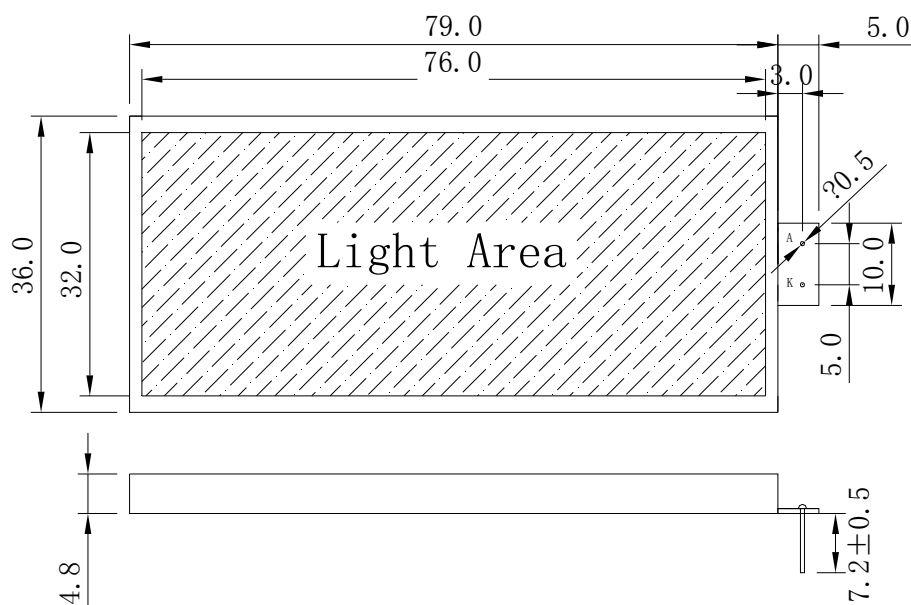
- Inner length: 101.0
- Inner width: 24.5
- Light Area: A central rectangular area containing a grid of asterisks (*).
- Distance from right edge to light area: 8.0
- Distance from bottom edge to light area: 10.0
- Distance from bottom edge to light area (inner): 5.0
- Distance from bottom edge to light area (outer): 1.0

Bottom edge details:

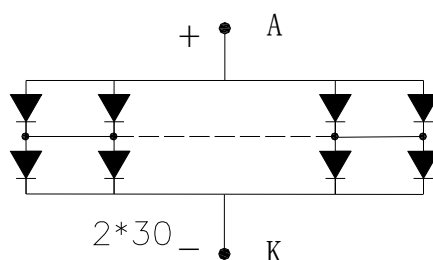
- Bottom edge thickness: 5.0-0.2
- Bottom edge width: 0.5
- Bottom edge tolerance: ± 0.5

Normal Tolerance: ± 0.20

参数名称 PARAMETER	符号 SYMBOL	最小值 MIN	典型值 TYP	最大值 MAX	单位 UNIT	测试条件 TEST CONDITION
正向电压 Forward Voltage	VF	—	4. 2	4. 5	V	IF=220mA
反向电流 Reverse Current	IR	—	—	110	uA	VR=10 V
发光强度 Luminous Intensity	IV	200	—	—	cd/m²	IF=220mA
主 波 长 Dominant Wavelength	λd	570	572	575	nm	
光谱半宽度 Spectral Line Half Width	Δλ	—	30	—	nm	

◆ 外形尺寸图 PACKAGE DIMENSIONS


NORMAL TOLERANCE: ± 0.20

◆ 电路原理图 INTERNAL CIRCUIT DIAGRAM (LED 2*30 DIES)

◆ 光电参数 OPTOELECTRIC CHARACTERISTICS RATING ($T_a=25^\circ\text{C}$)

参数名称 PARAMETER	符号 SYMBOL	最小值 MIN	典型值 TYP	最大值 MAX	单位 UNIT	测试条件 TEST CONDITION
正向电压 Forward Voltage	V _F	—	4.2	4.5	V	I _F =300mA
反向电流 Reverse Current	I _R	—	—	150	uA	V _R =10 V
发光强度 Luminous Intensity	I _V	200	—	—	cd/m ²	I _F =300 mA
主波长 Dominant Wavelength	λ_d	570	572	575	nm	
光谱半宽度 Spectral Line Half Width	$\Delta\lambda$	—	30	—	nm	