

Product Specification

Number: L-KLS9-1602A

Name: Character LCD Module

Customer: _____

Date: 2026-03-18

Customer Signature:



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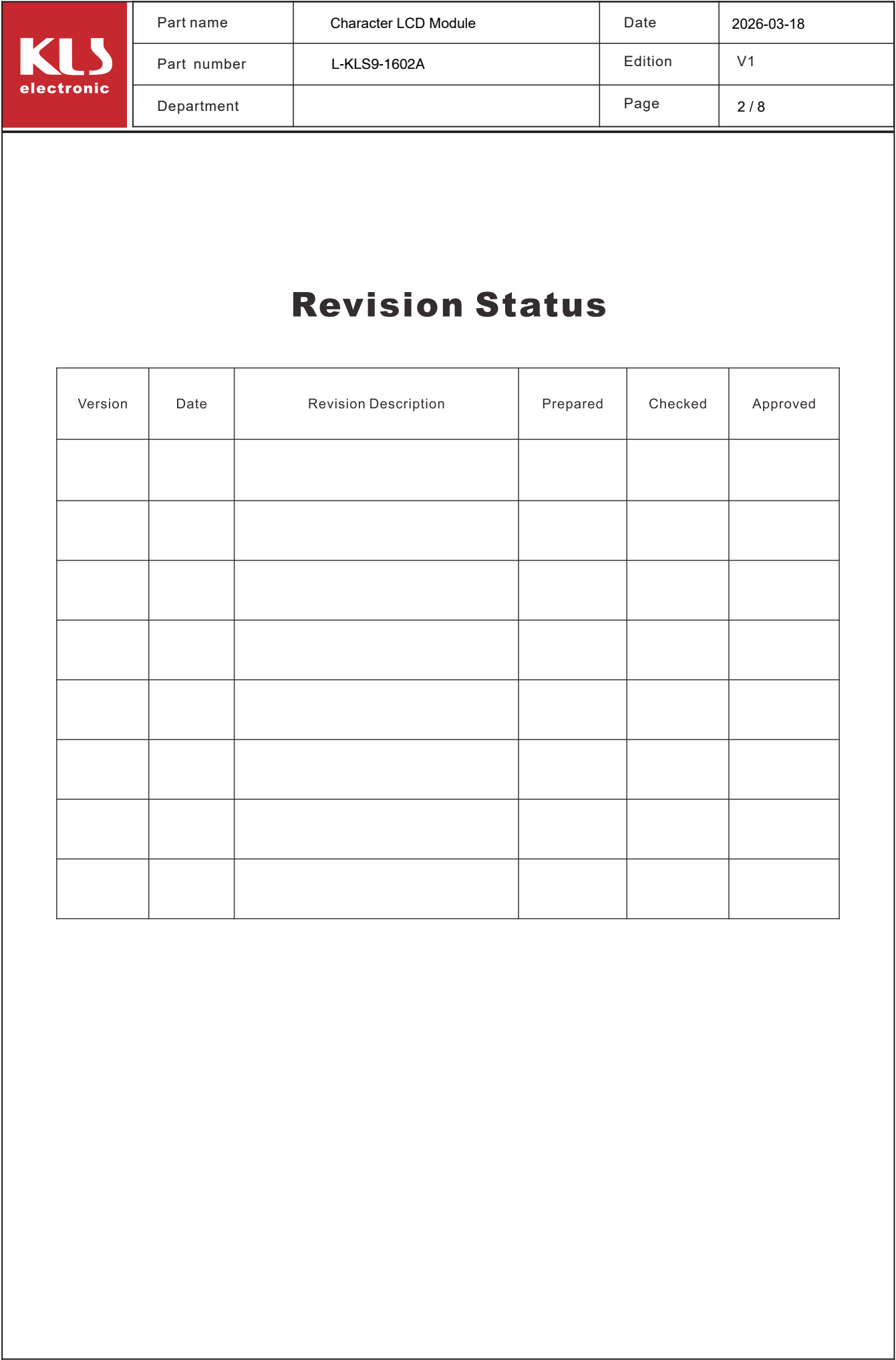
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**ADD : NO. 8-1, RONGXIA RD. XIAPU SHANQIAN
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Compi	Check	Review	Approva
Jenny	Jack.C		

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ORDER INFORMATION

L-KLS9-1602A-X X - X

Display: 16x2 Character
Type

C: English/Russian ; No Character: English/Japanese

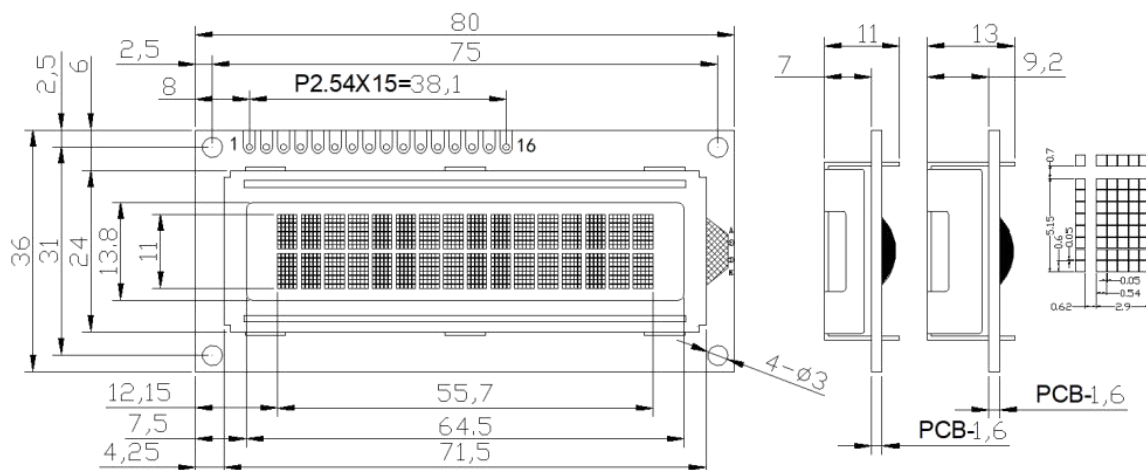
H: High Frame ; No Character: Low Frame

Colour
B=blue ; YG=Yellow-Green

1、 GENERAL SPECIFICATIONS

Screen size	2.5"(Diagonal)
Display color	Display color: Blue/Yellow-green Background color: White
Type	STN
View angle direction	6'clock
Driver mode	1/16 DUTY 1/5 BIAS
Backlight	LED
Controller IC	SPLC780D or Compatible IC
Data bus	Parallel port
Temperature range	Operation: -20 °C ---- +70°C Storage: -30 °C ---- +80°C
Number of Dots	16 x 2
Dot size	0.54 x 0.60mm
Dot pitch	0.59 x 0.65mm
Viewing size	64.5 x 13.8mm
Active area	55.7 x 11.0mm
Outline dimension	80.0 x 36.0 x 13mm Max.

2、 EXTERNAL DIMENSIONS



3、ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Min	Type	Max	Unit
Supply voltage for logic	$V_{DD}-V_{SS}$	4.5	5.0	5.5	V
Supply Voltage for LCD Driving	$V_{DD}-V_{ADJ}$	Ta=0	-	-	
		Ta=25	4.2	4.5	
		Ta=50	-	-	
Input Voltage	V_{IH}	2.5	-	V_{DD}	mA
	V_{IL}	-0.3	-	0.6	
LCM Operating Current	I_{DD}	0.9	1.5	1.7	
Supply Current for LED	I_{LED}	17	18	20	
Supply Current for LCD	I_{EE}	-	0.6	-	

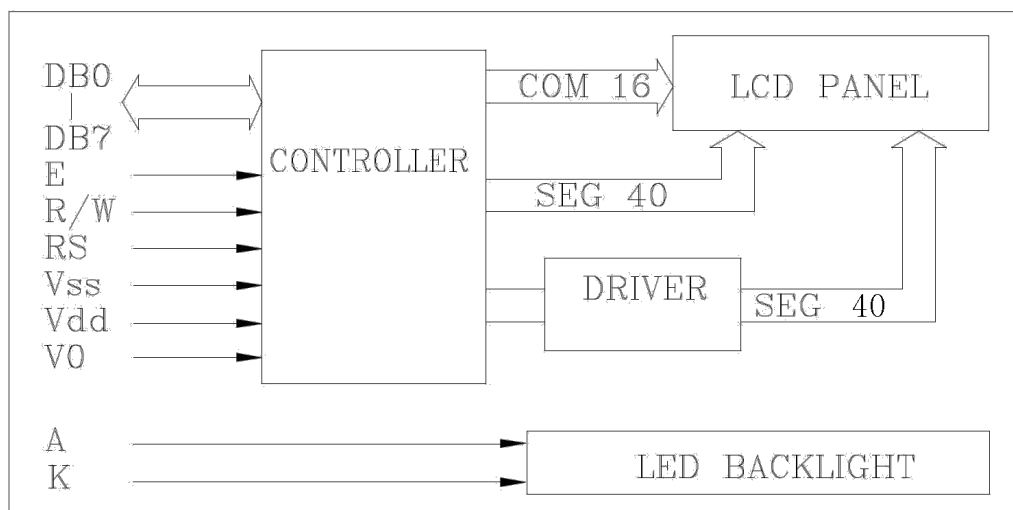
4、ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Min	Max	Unit	Remark
Supply voltage for logic	$V_{DD}-V_{SS}$	-0.3	7	V	
Supply Voltage for LCD Driving	$V_{DD}-V_{ADJ}$	$V_{DD}-10$	$V_{DD}+0.3$		
Operating temperature	T_{OP}	-20	+70	°C	
Storage temperature	T_{ST}	-30	+80		

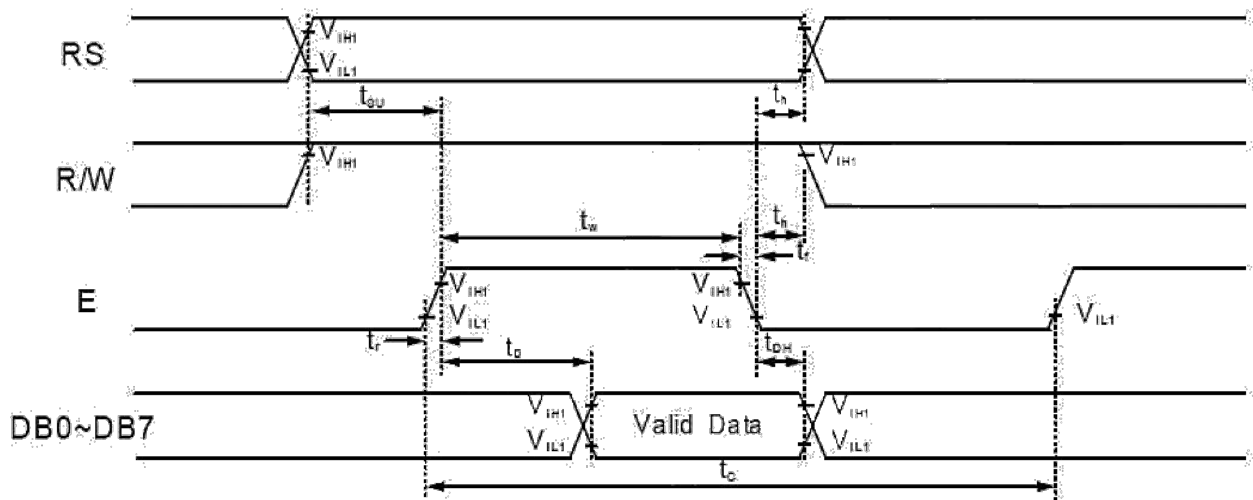
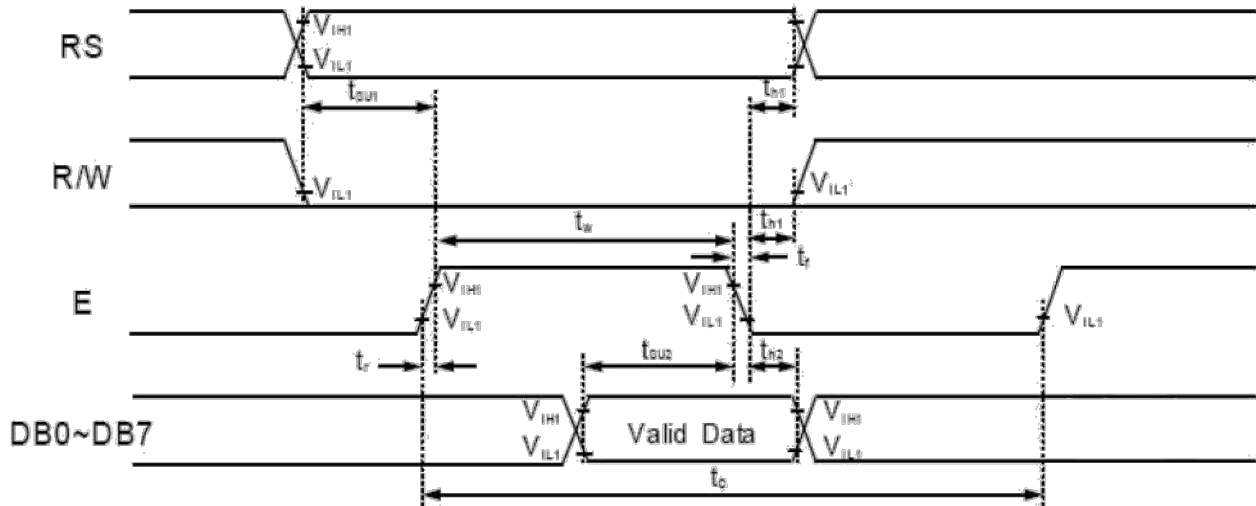
5、INTERFACE DESCRIPTION

PIN	DESC	Function
1	VSS	Ground
2	VDD	Supply Voltage for Logic(+5V)
3	V0	Power supply for LCD
4	RS	Data/Command Selection(H:Data,L:Command)
5	R/W	Read/Write Selection(H:Read,L:Write)
6	E	Enable Signal
7-14	DB0-DB7	Data Bus
15	BLA	LED+
16	BLK	LED-

6、BLOCK DIAGRAM



7、AC WAVEFORM TEST DIAGRAM



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参 数 名 称	符 号	测试条件	最小	典型	最大	单位
E周期	t_c	写模式	500	-	-	ns
E上升/下降时间	t_R, t_F		-	-	20	
E脉冲宽度(1,0)	t_w		230	-	-	
R/W和RS建立时间	t_{su1}		40	-	-	
R/W和RS保持时间	t_{H1}		10	-	-	
数据建立时间	t_{su2}		80	-	-	
数据保持时间	t_{H2}		10	-	-	
E周期	t_c	读模式	500	-	-	ns
E上升/下降时间	t_R, t_F		-	-	20	
E脉冲宽度(1,0)	t_w		230	-	-	
R/W和RS建立时间	t_{su}		40	-	-	
R/W和RS保持时间	t_H		10	-	-	
数据输出延迟时间	t_D		-	-	120	
数据保持时间	t_{DH}		5	-	-	

8、Font library

b7-b4 b3-b0	0000	0001	0010	0011	0100	0101	0110	0111	1000	1001	1010	1011	1100	1101	1110	1111
0000	CG RAM (1)			0	a	P	'	P			B	W	4	.	Д	Ж
0001	(2)		!	1	A	Q	a	q			Г	Я	ш	.	Ц	Х
0010	(3)		"	2	B	R	b	r			Е	б	ь	u	Ш	Х
0011	(4)		#	3	C	S	c	s			Ж	В	ы	!!	а	Ч
0100	(5)		\$	4	D	T	d	t			Э	Г	ь	З	ф	М
0101	(6)		%	5	E	U	e	u			И	ё	э	х	Ц	Г
0110	(7)		&	6	F	V	f	v			Й	ж	ю	З	ш	З
0111	(8)		'	7	G	W	g	w			Л	Э	я	И	'	Е
1000	(1)		(	8	H	X	h	x			П	И	с	И	'	Е
1001	(2)		)	9	I	Y	i	y			У	А	о	†	~	и
1010	(3)		*	:	J	Z	j	z			Ф	К	с	↓	е	1
1011	(4)		+	;	K	[	k	]			Ч	л	"	Н	с	†
1100	(5)		,	<	L	φ	l	φ			Ш	М	Н	Н	У	Х
1101	(6)		-	=	M	I	m	i			Ъ	Н	с	Н	Н	З
1110	(7)		.	>	N	^	n	^			Ы	П	З	З	с	Н
1111	(8)		/	?	O	_	o	_			Э	Т	Е	.	О	■

9、RELIABILITY TEST

NO	Test Project	Test Condition	Remark
1	High temperature	60℃±2℃ 24H	After testing, the appearance and electrical performance deficiencies should not happen.
2	Low temperature	-20℃±2℃ 24H	
3	High temperature and humidity test	40℃±5℃×90%RH/24H	
4	Hot and cool shock test	-10℃±2→25℃→70℃±2 (30min) (5min) (30min) 10 cycles	
5	Vibration test	10Hz-50Hz-10Hz Amplitude 1.5mm X、Y、Z each 3H	

Remark:

- 1.Above test number is 2 piece.
 - 2.Do moistureproof test, should use the pure water (10M Ω resistor ").
 - 3.individual products caused by electrostatic discharge failure damage, if the products will be reset after the restore to the normal state as a good use.
- When the panel protective film LCM, Tear down the labels slowly (more than a second recommendation).
- 4 Please use the automatic switching menu (or scroll) test mode, test mode of operation.
 - 5 Suggestions Use the menu to adjust the contrast model.