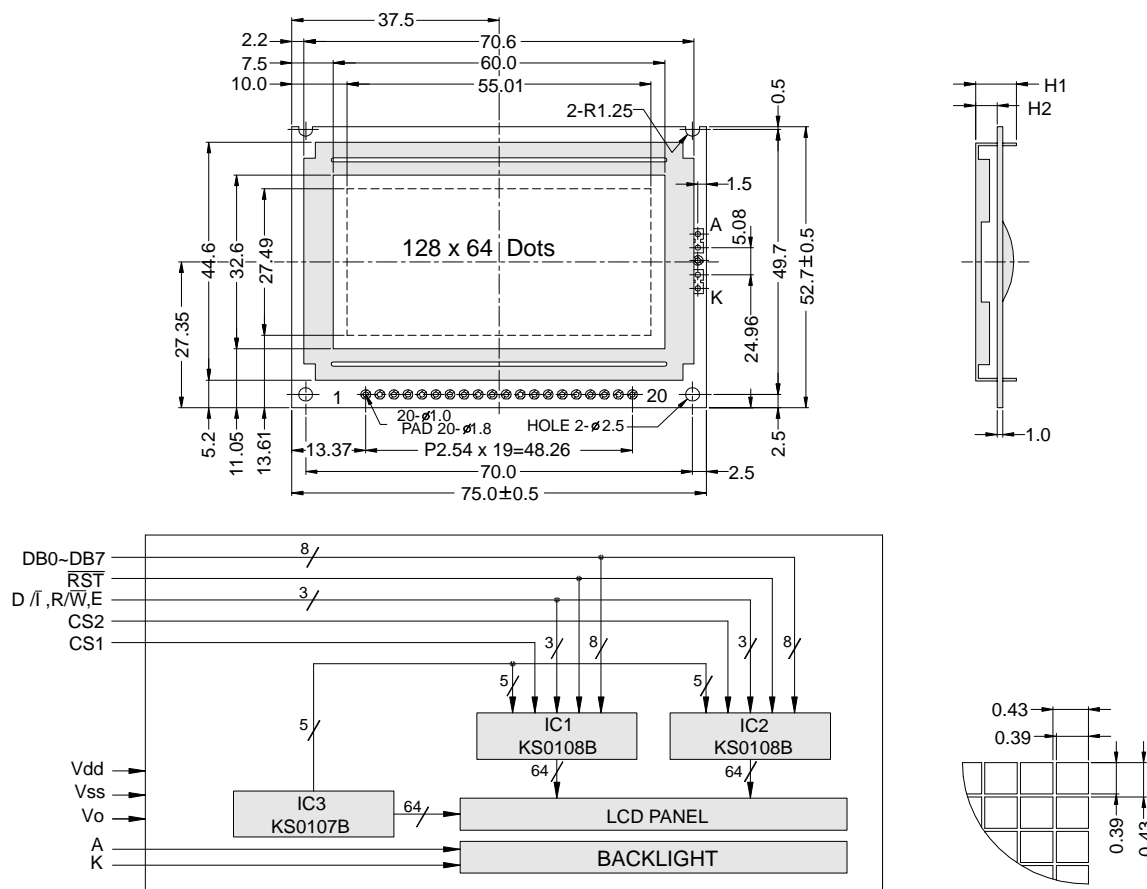


OUTLINE DIMENSION & BLOCK DIAGRAM



The tolerance unless classified ± 0.3mm

MECHANICAL SPECIFICATION			
Overall Size	75.0 x 52.7	Module	H2 / H1
View Area	60.0 x 32.6	W / O B/L	3.9 / 7.4
Dot Size	0.39 x 0.39	EL B/L	3.9 / 7.4
Dot Pitch	0.43 x 0.43	LED B/L	5.4 / 8.4

PIN ASSIGNMENT		
Pin no.	Symbol	Function
1	Vdd	Power supply(+)
2	Vss	Power supply(GND)
3	Vo	Contrast Adjust
4-11	DB0-DB7	Data bus line
12	CS1	Chip select driver 1
13	CS2	Chip select driver 2
14	RST	Reset
15	R/W	Data read / write
16	D/I	Command / data select
17	E	Chip enable signal
18	Vss	Power supply (GND)
19	A	Power supply for LED B/L(+)
20	K	Power supply for LED B/L(-)

ABSOLUTE MAXIMUM RATING									
Item	Symbol	Condition	Min.		Max.		Units		
Supply for logic voltage	Vdd-Vss	25°C	-0.3		7.0		V		
LCD driving supply voltage	Vdd-Vee	25°C	-0.3		19.0		V		
Input voltage	Vin	25°C	-0.3		Vdd-0.3		V		
ELECTRICAL CHARACTERISTICS									
Item	Symbol	Condition	Min.		Typical		Max.		Units
Power supply voltage	Vdd-Vss	25°C	4.5		—		5.5		V
LCD operation voltage	Vop	Top	N	W	N	W	N	W	V
		-20°C	—	8.3	—	9	—	9.7	V
		0°C	8.2	—	8.9	—	9.6	—	V
		25°C	7.7	8.3	8.4	9	9.1	9.7	V
		50°C	7.3	—	8.0	—	8.7	—	V
		70°C	—	7.7	—	8.4	—	9.1	V
LCM current consumption (No B/L)	Idd	Vdd=5V	—		2.5		5		mA
Backlight current consumption	LED/edge	VB/L=4.2V	—		100		—		mA
	LED/array	VB/L=4.2V	—		—		—		mA

REMARK

LCD option: STN, TN, FSTN

Backlight Option: LED, EL Backlight feature, other Specs not available on catalog is under request.



PRODUCTS
 OUR PRODUCTS

Products

- Mono Type Part Numbering System
- Color Type Part Numbering System
- COG Part Numbering System
- Mono COG Part Numbering System
- EMS Part Numbering System
- Self-made product Part Numbering System

Mono Type Part Numbering System

P C 16 02 * * * - * * * - * - *
1 2 3 4 5 6 7 8 9 10 11

No	Code value	Description	Remark
1	P	Powertip products	Brand
2	C	Character type	Module type
	G	Graphic type	
3	08,16,20,24...	Character per line (for character modules)	Characters per line or row dots
	120,122,128...	Row dots (for graphic modules)	
4	01,02,03,04,...	Lines (for graphic modules)	Lines or column dots
	32,240...	Column dots (for graphic modules)	
5	A	Without backlight	
	B	EL backlight blue-green	
	D	EL backlight yellow-green	
	E	EL backlight white	
	F	CCFL backlight white	
	L	LED backlight yellow-green	
	M	LED backlight amber	
	N	LED backlight red	Backlight mode
	O	LED backlight orange	(Type+Color)
	P	LED backlight pure-green	
	S	LED backlight green	
	T	Double LED backlight	
	U	LED backlight blue	
	V	LED backlight blue white	
	W	LED backlight white	
	R	Triple LED backlight	
6	R	Standard (Through hole, cable, connector and etc.)	Connecting type
	Y	Straight pin-header	
	Z	Right angle pin-header	
7	None	TN positive gray	
	N	TN negative blue	
	P	PBT(Pure Black Tech.)	
	Q	E-TN(Enhanced TN)	
	H	HTN Positive Gray	
	J	HTN Negative (Black/Blue)	
	S	STN positive gray	LCD Mode

	U	STN positive yellow-green	200 10000 (Type+Color)
	M	STN negative blue	
	G	ASTN(Automotive STN)	
	W	E-STN(Enhanced STN)	
	F	FSTN positive white	
	T	FSTN negative black	
	Y	E-FSTN(Enhanced FSTN)	
8	0~Z	Series number	Model name
9	00~ZZ	IC manufacturer/character pattern /total solution series number	Table A
	NN	Without controller	
10	A~Z	Refer to display viewing features system	Table B
11	No Code value	Standard product	Version
	01~ZZ	Special code	

Table A

S*	SUMSUNG LSI	T*	TOSHIBA LSI	Y*	SANYO LSI
M*	MOTOROLA LSI	E*	EPSON LSI	H*	HITACHI LSI
N*	NOVATEK	W*	SITRONIX LSI	A*	APANPEC LSI
R*	SHARP LSI	P*	PHILIPS LSI	J*	JRC LSI
U*	UMC GROUP LSI	Z*	HOTEK LSI	O*	OKI LSI
B*	RAIO	C*	ASLIC	F*	TOMATO LSI
G*	AVANT	L*	SUNPLUS LSI		

Table B

Operation Temperature		Normal Temp.(NT):0°C~50°C		Wide Temp.(WT):-20°C~70°C	
Viewing direction		6:00	12:00	6:00	12:00
Polarizer	Reflective	A	D	G	J
	Transflective	B	E	H	K
	Transmissive	C	F	I	L

TOP

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