Specification

For

LCD Module

KD12864B-5/B

■极限参数 ABSOLUTE MAXIMUM

Item	Symbol	Standard value	Unit
Power Supply Voltage	Vdd	-0.3 ~ +7.0	V
Power supply for LCD Drive	Vlcd	Vdd-19.0 ~ Vdd+0.3	V
Input Voltage	Vin	-0.3 ~ Vdd+0.3	V
Operating Temperature	Top	-20 ~ +70	°C
Storage Temperature	Tstg	-30 ~ +80	°C

■机械参数 MECHANICAL PARAMETERS

Item	Description	Unit
PCB Dimension	78.0 x 70.0 x 1.6	mm
LCD Dimemsion	68.0x 58.0 x 2.6	mm
View Dimension	62.0x44.0	mm
Outline Dimension	78 .0x 70.0 x15.0	mm

■接口定义 PIN ASSIGNMENT

Pin NO.	Symbol	Level	Function
1	CS1	H/L	Select chip
2	CS2	H/L	Select chip
3	VSS	0V	Power Ground
4	VDD	+5V	Power supply
5	VO	-15V	Negative voltage(-15V)to LCD
6	RS	H/L	H: Display Data, L:Display Instruction
7	R/W	H/L	H: Read Signal, L: Write Signal
8	E	H/L	Enable Signal
9-16	DB0—DB7	H/L	Data bus
17	A	白光：3.2V	LED Supply
18	K	0V	LED Ground

■电气参数 ELECTRICAL CHARACTERISTICS

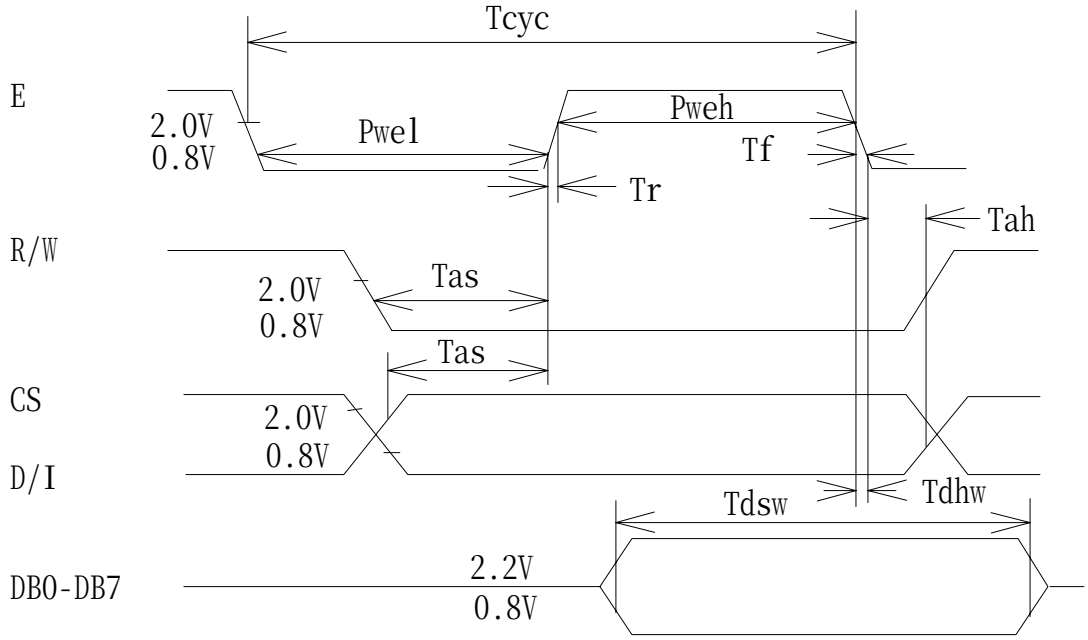
直流特性 DC Characteristics(Ta==25℃;Vdd=5.0V±10%)

PARAMETER		SYMBOL	CONDITION	MIN	TYP	MAX	UNIT
Operating Voltage(1)		VDD		4.5	5.0	5.5	V
Input Voltage	High	Vih	E,R/W,D/I,DB0~DB7 Terminals	2.0	--	VDD	V
	Low	Vil		0	--	0.8	
Output Voltage	High	Voh	DB0~DB7, Terminal	2.4	--	--	V
	Low	Vol		--	--	0.4	
Operating Current		Idd	During Display	--	--	2750	uA

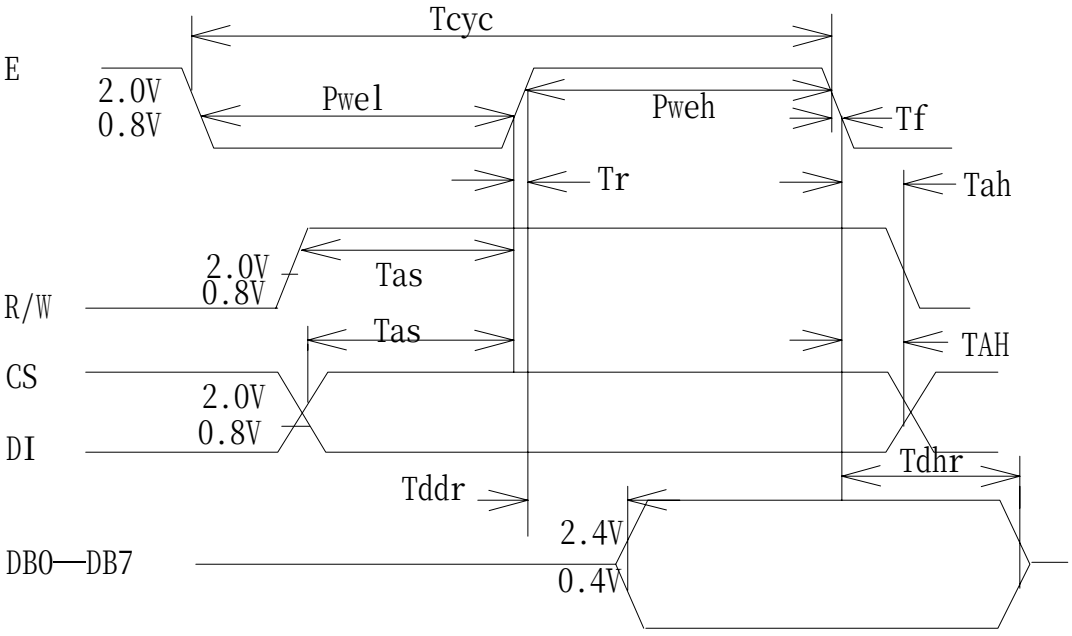
交流特性 AC characteristics (Vdd=5V±10%,Vss=0V Ta=25℃)

Characteristic	Symbol	Min.	Max.	Unit
E Cycle	Tcyc	1000	--	ns
E High Level Width	Pweh	450	--	
E Low Level Width	Pwel	450	--	
E Rise Time	Tr	--	25	
E Fall Time	Tf	--	25	
Address Set-Up Time	Tas	140	--	
Address Hold Time	Tah	10	--	
Data Set-Up Time	Tdsw	200	--	
Data Delay Time	Tddr	--	320	
Data Hold Time(Write)	Tdhw	10	--	
Data Hold Time(Read)	Tdhr	20	--	

Writing timing



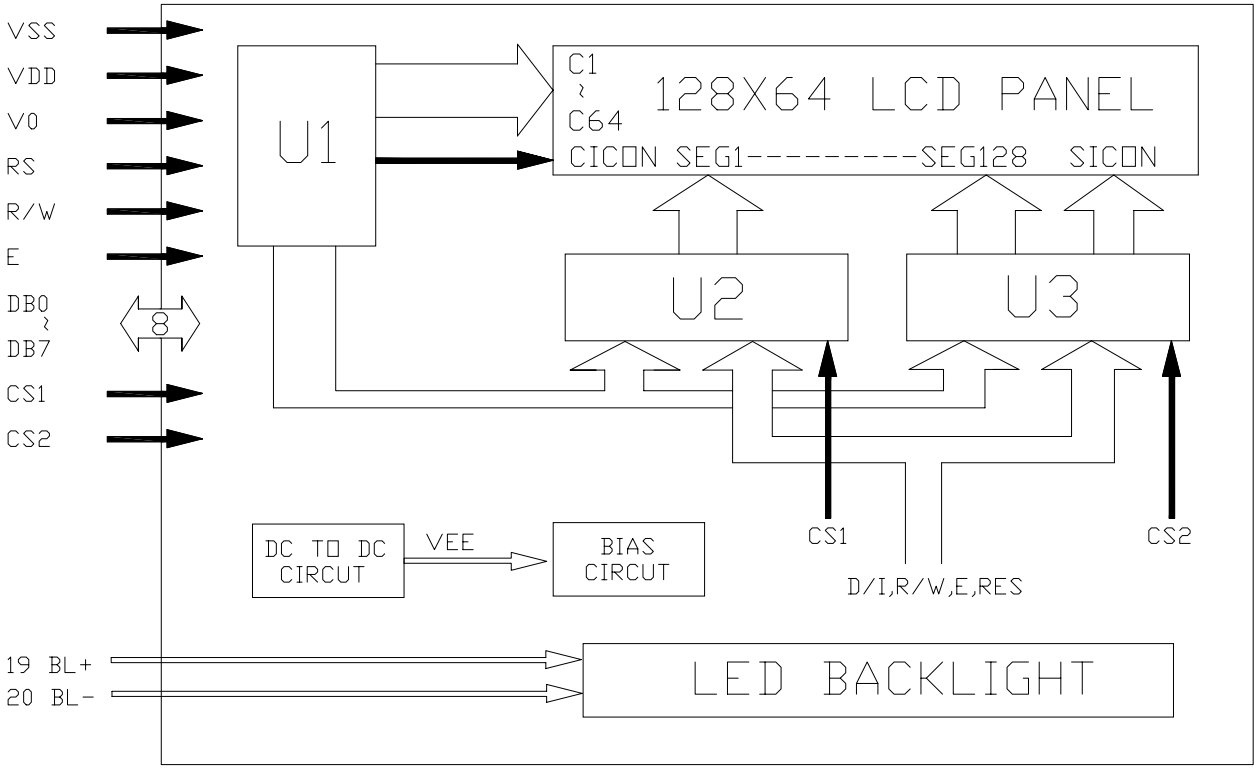
Reading Timing



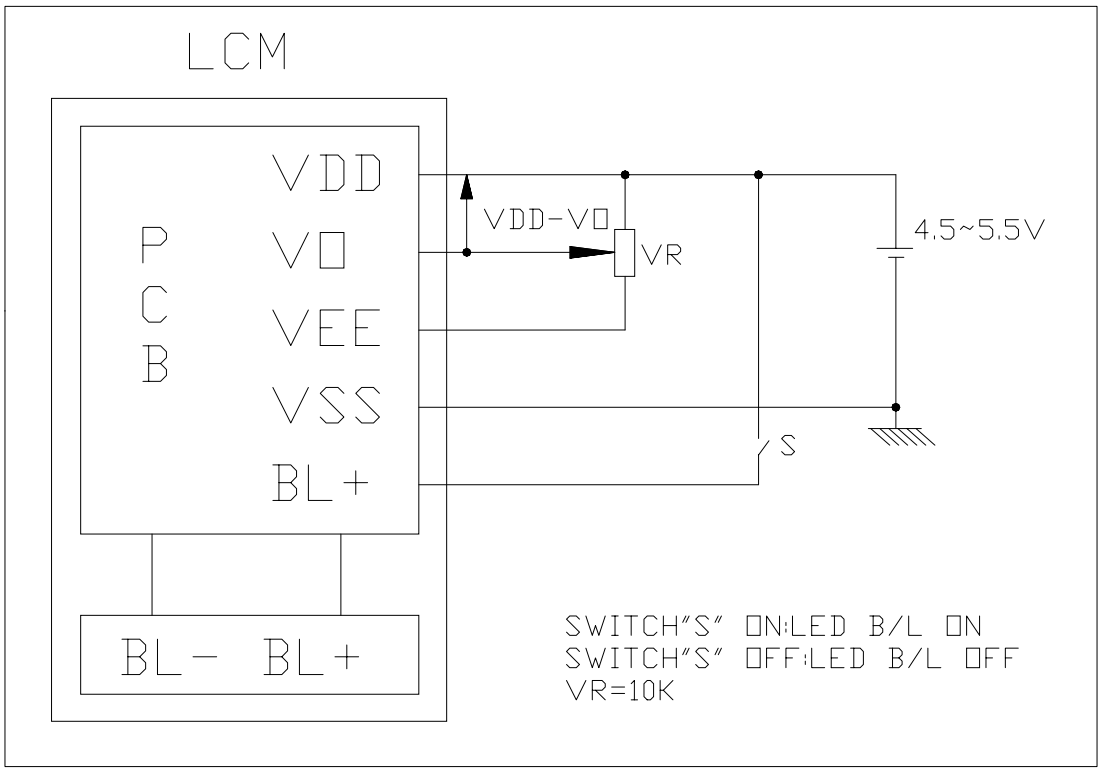
■CONTROL and DISPLAY COMMAND

Instruction	R/W	D/I	DB7	DB6	DB5	DB4	DB3	DB2	DB1	DB0	Function
Display on/off	L	L	L	L	H	H	H	H	H	L/H	Controls the display on or off.Internal status and display RAM data is not affected. L:OFF,H:ON
Set Address	L	L	L	H	Y address (0~63)						Sets the Y address in the Y address counter.
Set Page (X Address)	L	L	H	L	H	H	H	page (0~7)			Sets the X address at the X address register.
Display Start Line	L	L	H	H	Display start line (0~63)						Indicates the display data RAM display at the top of the screen
Status read	H	L	BUSY	L	ON/OFF	RESET	L	L	L	L	Read the status : busy 1:working,0:ready ADC 1:clockwise output 0:counterclockwise ON/OFF 1:disp off 0:disp on RESET 1:reset 0:normal
Write Display Data	L	H	Write Data								Write data (DB0:7) into display data RAM. After writing instruction, Y address is increased by 1 automatically.
Read Display Data	H	H	Read Data								Read data (DB0:7) from display data RAM to the data bus

■ SYSTEM BLOCK DIAGRAM



■ POWER SUPPLY

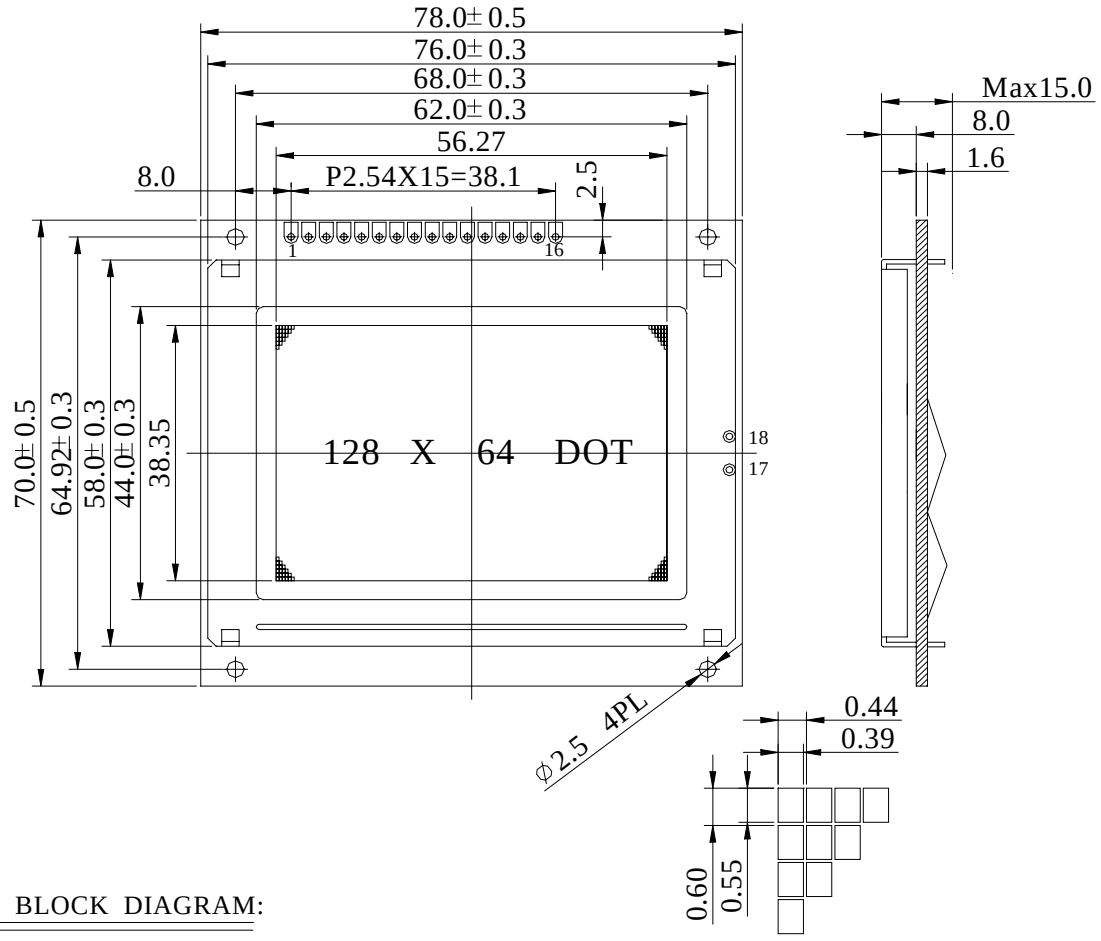


■ 外型及框图 ASSEMBLY AND BLOCK DIAGRAM

TECHSTAR

12864B-5

◎ EXTERNAL DIMENSIONS



◎ BLOCK DIAGRAM:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
CS1	CS2	VSS	VDD	V0	RS	R/W	E	DB0	DB1	DB2	DB3	DB4	DB5	DB6	DB7	BLA	BLK