

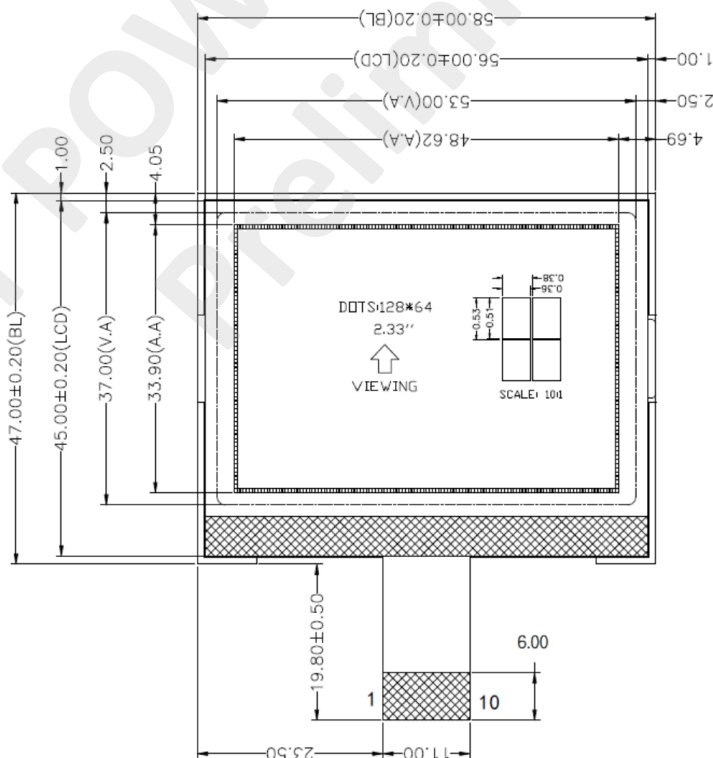
MIC-D5847-01

58 x 47 mm LCD Module

Features

- LCD Type: FSTN Positive/Negative
- Viewing Direction: 6:00 O'clock
- Module Size (W x H x T): 58 x 47 x 4.5 mm (Excluded FPC Length)
- Viewing Area (W x H): 53 x 37 mm
- Number of Dots: 128 x 64
- Backlight Type: 3 LEDS White 3.0V 45mA
- Interface Type: Serial Interface

Appearance



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Revision Table

Date	Revision	Content	By
2025/7/29	0.1	First Draft	Elio

ACT POWER TAIWAN
Preliminary

MIC-D5847-01

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Specification

Absolute Maximum Ratings			
Parameter	Symbol	Conditions	Unit
Digital Power Supply Voltage	VDD1	- 0.3 - 3.6	V
Analog Power Supply Voltage	VDD2, VDD3	- 0.3 - 3.6	V
LCD Power Supply Voltage	V0-XV0	-0.3 – 16	V
LCD Power Supply Voltage	VG	- 0.3 - 3.6	V
LCD Power Supply Voltage	VM	-0.3 - VDD2	V
Input Voltage	Vi	-0.3 - VDD1+0.3	V

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Specification

Electrical Characteristics								
Item	Symbol	Condition		Rating			Unit	Applicable Pin
				Min.	Typ.	Max.		
Operating Voltage (1)	VDD1			1.7	-	3.3	V	VDD1
Operating Voltage (2)	VDD2			2.4	-	3.3	V	VDD2
Operating Voltage (3)	VDD3			2.4	-	3.3	V	VDD3
Input High-Level Voltage	V _{IHC}			0.7 x VDD1	-	VDD1	V	MPU Interface
Input Low-Level Voltage	V _{ILC}			VSS1	-	0.3 x VDD1	V	MPU Interface
Output High-Level Voltage	V _{OHC}	IOUT = 1mA, VDD1 = 1.8V		0.8 x VDD1	-	VDD1	V	D[7:0]
Output Low-Level Voltage	V _{OLC}	IOUT = 1mA, VDD1 = 1.8V		VSS1	-	0.2 x VDD1	V	D[7:0]
Input Leakage Current	I _{LI}			-1.0	-	1.0	μA	MPU Interface
Output Leakage Current	I _{LO}			-3.0	-	3.0	μA	MPU Interface
Liquid Crystal Driver ON Resistance	R _{ON}	Ta=25°C	VOP = 8.5V ΔV = 0.85V	-	0.6	0.8	KΩ	COMx
			VG = 1.9V, ΔV = 0.19V	-	1.3	1.5	KΩ	SEGx
Frame Frequency	FR	Duty=1/65, VOP=8.5V Ta = 25°C		70	75	80	Hz	

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Current Consumption: During Display, with Internal Power System, Current Consumed by Whole IC (Bare Die)

Test Pattern	Symbol	Condition	Rating			Unit	Applicable Pin
			Min.	Typ.	Max.		
Display Pattern: SNOW (Static)	ISS	VDD1=VDD2=VDD3=3.0V, Booster X5 VOP = 8.5V, Bias=1/9 Ta=25°C	-	150	300	μA	
Display OFF	ISS	VDD1=VDD2=VDD3=3.0V, Booster X5 VOP = 8.5V, Bias=1/9 Ta=25°C	-	95	190	μA	
Power Down	ISS	VDD1 = VDD2 = VDD3 = 3.0V, Ta=25°C	-	8	16	μA	

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Interface Pin Description		
Pin No.	Symbol	Pin Description
1	VG	VG is the LCD driving voltage for segment circuits at positive frame
2	XV0	XV0 is the LCD driving voltage for common circuits at positive frame
3	V0	V0 is the LCD driving voltage for common circuits at negative frame
4	VSS	Ground
5	VDD	Power Supply (+3.0)
6	SDA	Serial Data Input
7	SCL	Serial Clock Input
8	A0	Data or Command Select Signal Input
9	RES	A Reset Pin
10	CS	Chip Select Signal Input (Low Active)

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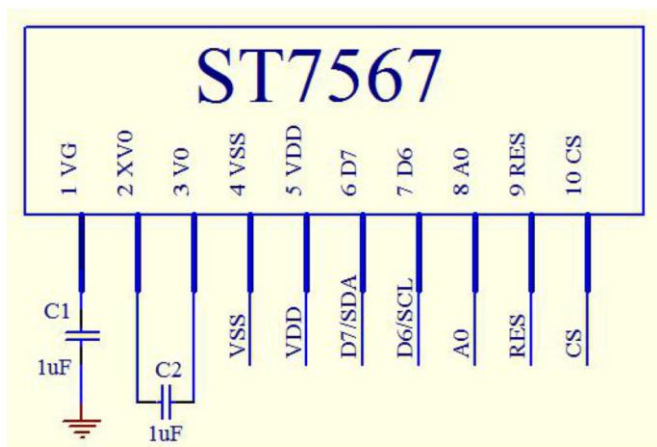
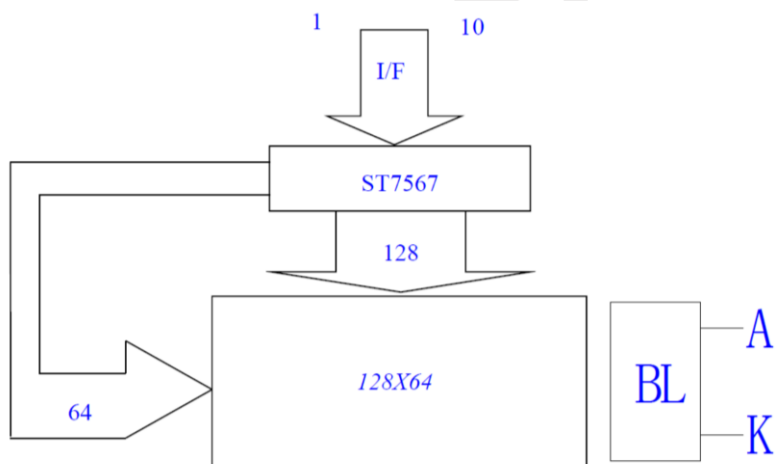
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Environment Compliance

Operating Temp.	-20°C to +70°C
Storage Temp.	-30°C to +80°C

Environmental performance may vary according to the integration method or final integration scenario.

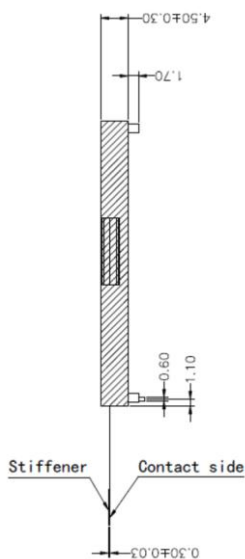
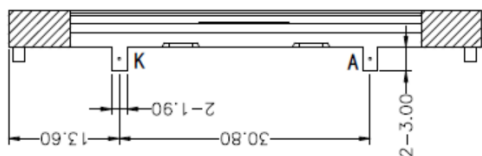
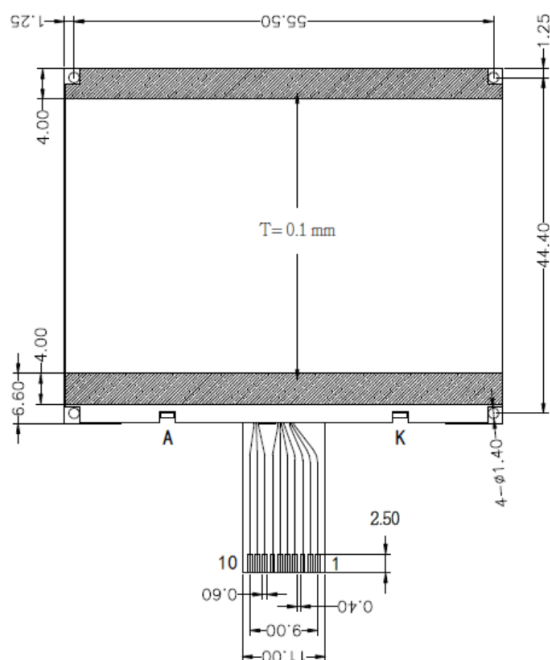
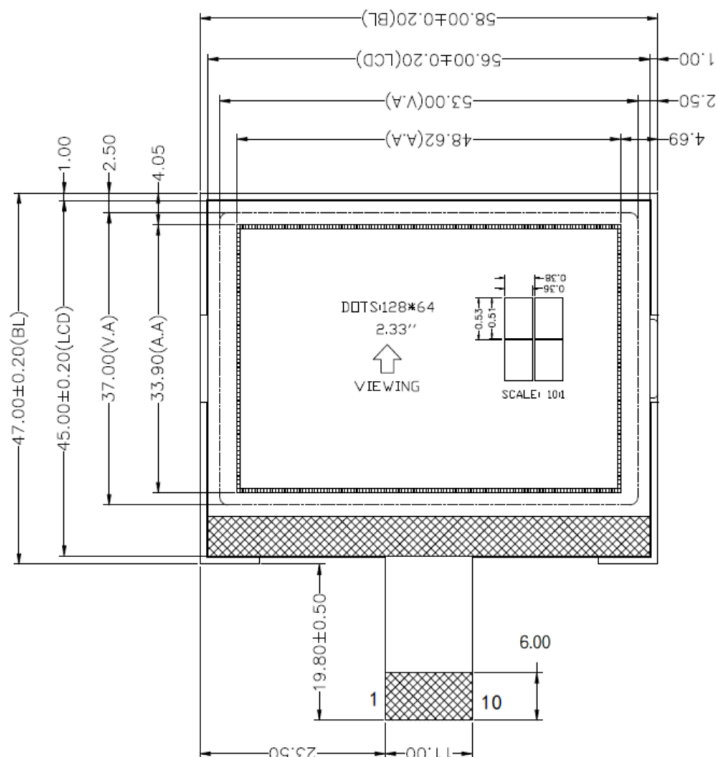
Block Diagram



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Outline Drawing



No	1	2	3	4	5	6	7	8	9	10
PIN	VG	XV0	V0	VSS	VDD	SDA	SCL	A0	RSTB	CSB

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Deliverables

1	58 x 47 mm LCD Module
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Ordering Information

Model Name	Description	Unit
MIC-D5847-01	58 x 47 mm LCD Module	1

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