ZETTLER DISPLAYS

- Manufacturing TFT, monochrome LCD modules and LED modules
- High brightness and sun-readable modules
- PCAP and resistive T/P technologies
- RGB, LVDS, MCU, MIPI, UART interfaces and more
- Custom design for various industrial applications

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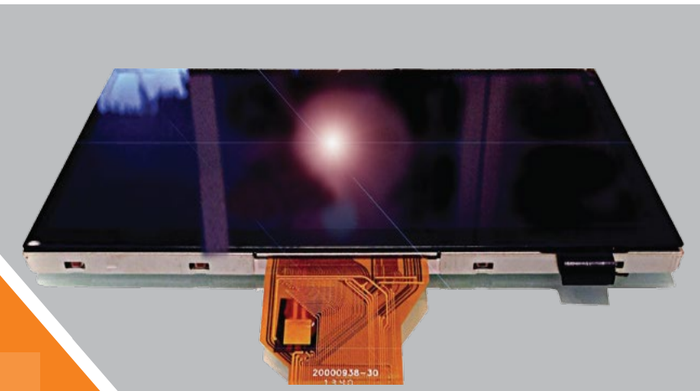
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ZETTLER DISPLAYS

Integrated Display Solutions Provider

TFT / LCM / LEDM



厦门赛特勒电子有限公司
XIAMEN ZETTLER ELECTRONICS CO.,LTD.

A ZETTLER GROUP COMPANY

DISPLAYS ZETTLER
Solutions Provider

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COMPANY PROFILE
公司介绍

As a leading display solutions provider, ZETTLER DISPLAYS manufactures and markets a broad line of Displays products, and has established an industry leading reputation as a provider of customized display solutions in a wide range of industry applications. Our top–quality display components cover TFT modules, Monochrome Graphic and Character LCD modules (TN, HTN, STN, FSTN, BTN/VA), LED displays and backlights.

With a global customer coverage, that includes North America and Europe, our products are widely adopted in many industries such as Communications, Medical, Financial, Security, CNC, Power, Solar, Automotive, Meters and Home Appliances.

We are equipped with veteran and professional engineering team, successful operation management experience and advanced facilities including class 10,000 clean room. Our sophisticated quality assurance process integrated under ISO 9001 and comprehensive laboratory can offer effective evaluation and guarantee for quality reliability of products. Meanwhile, we are committed to practicing environmental responsibility and are compliant with ISO 14001.

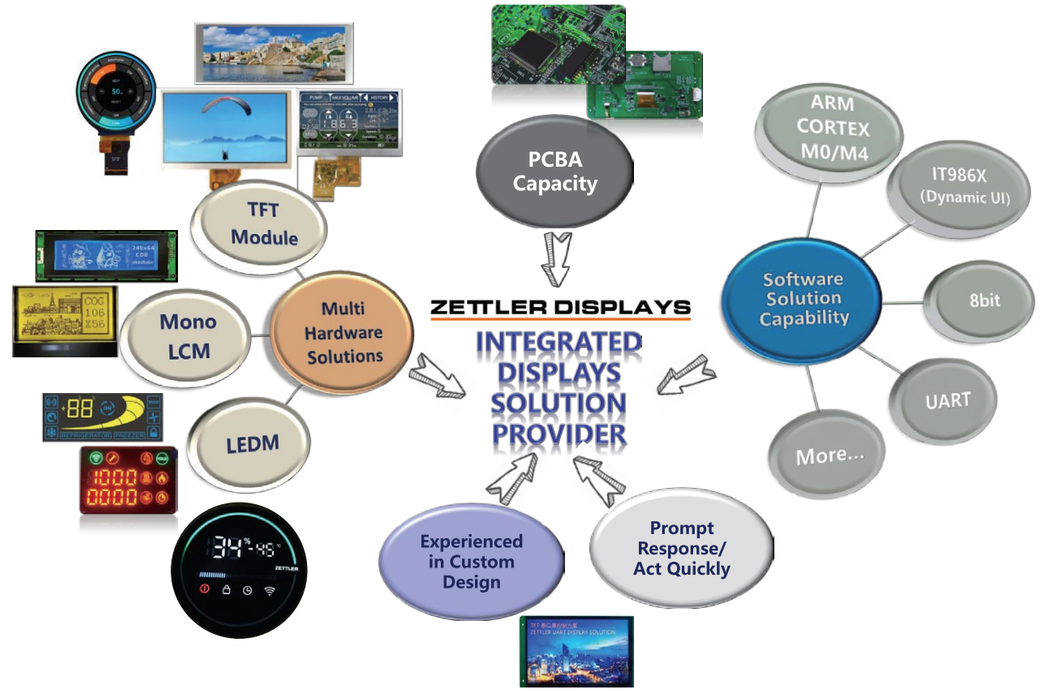
作为行业领先的显示元器件开发制造商和显示解决方案提供商，我们为客户提供一系列高品质的显示元器件产品并且能够为各种应用领域的客户提供定制的一站式显示解决方案。 我们的产品包括TFT模组、具有TN、HTN、STN、FSTN、BTN/VA等多种液晶模式的标准字段型、字符型 、图形点阵LCD模块以及LED数码管和背光产品。

我们的产品销往全球，且大部分销往北美和欧洲，被广泛应用在通信、医疗、金融、安防、数控、电力、太阳能、车载、仪器仪表、家电等行业。

我们拥有经验丰富的专业研发设计团队、成功的生产运营管理经验、万级净房设施、ISO9001质量管理体系等完善的质量控制模式和大型综合实验室以及ISO14001环境管理体系认证 ，能最大程度地保证我们产品生产工艺的稳定性和品质的可靠性。



INTEGRATED DISPLAY SOLUTIONS PROVIDER
整体集成显示方案提供商



In addition to providing TFT modules, LCD display modules and LED display modules, we can also provide customers with various customized integrated l display solutions, which are currently widely used in new energy, medical, home appliances, industrial control and other industries:

- Standard UART Display Module
  - Support different screen sizes
  - Options for Memory storage capacity, RTC, buzzer, resistor/capacitor touch panel
  - Afford PC tool(software) so that client can perform secondary development
- Customized UART Display Module
  - Assist customers to complete secondary development on basis of hardware platform of the standard UART display module
  - Fully customize the software and hardware platform, and further do customized development based on the UI and protocol provided by the customer
- Customized LED module solution
  - Various options of colorful printing films available which are comparable to the TFT display effect, so as to provide customers with low-cost and high-value-added solution
  - Provide customized design of various dynamic effects according to customer requirements and control through the UART interface
  - Various waterproof and dustproof solutions to meet strict requirements
- Solutions combine and integrate LCD/TFT display and LED display

除提供TFT和液晶显示模组及LED显示模组以外，我们还能进一步为客户提供各类定制的整体显示方案，目前已广泛应用于新能源、医疗、家电、工控等各行业：

- 标准串口屏：
  - 支持不同屏幕尺寸
  - 存储容量、RTC、蜂鸣器、电阻/电容屏可选
  - 支持上位机，客户端可进行二次开发
- 定制LED数码管方案：
  - 各类彩膜媲美彩屏显示效果，为客户提供低成本高附加值方案
  - 按照客户要求定制各种动态效果，通过串口进行控制
  - 各种防水防尘方案满足严苛要求
- 液晶显示和LED数码管显示组合并集成一体的方案

PART NUMBERING SYSTEM—TFT MODULE TFT模组命名规则

Example
型号实例

ATM	0700	D	8	A1	–	CT	H	2
1	2	3	4	5		6	7	8

1 = TFT MODULE
2 = 7.0"
3 = Digital RGB Interface
4 = Display Serial Number
5 = 250 nits backlight **and Other Customized Features**
6 = Capacitive touch panel
7 = **With Housing**
8 = **Touch panel Series No.**

1 Module Type 模块类型
ATM = TFT MODULE

2 Module Size 模块尺寸
0130 = 1.3", 0700 = 7.0"
1040 = 10.4", 1560 = 15.6"
D128 = 1.28" Round Display

3 Interface Type 接口类型
D = Digital RGB Interface
B = MCU Interface(Parallel or Serial)
L = LVDS Interface
M = MIPI Interface
E = eDP Interface
C = Type-C Interface
U = UART Interface

4 Serial Number 流水号
1~89 Transmissive type
90~99 Transflective or Reflective type

5 Special Number 特殊型号标识
Could be any character/number, for customized products.Null for standard products.

6 Touch Panel or Cover layer 触摸屏或盖板
T = Resistive Touch Panel
CT = Capacitive Touch Panel
OCT = Capacitive touch panel optical bonded to display
OG = Cover glass optical bonded to display(No touch)
OP = Plastic cover optical bonded to display(No touch)
Null = No Touch Panel or cover layer

7 Housing 外壳等结构件
H = Housing
Null = No Housing

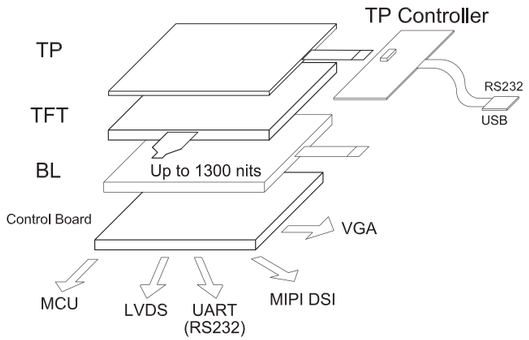
8 TP Serial Number 触屏流水号 1~99, Null for standard part.

INTEGRATED TFT SOLUTIONS TFT集成方案

Features:
- **1.3"–15.6"**
- Touch panel (capacitive, resistive)
- Control boards with optional interface: RGB,LVDS,MIPI,MCU,UART
- 250–1300 nits (sun readable at or above 1000 nits)

产品特征：
- **1.3"–15.6"**
- 电容触摸屏和电阻触摸屏可选
- 接口和控制面板可选
- ≥1000 nits 阳光下可视





STANDARD TFT SERIES 标准TFT模组列表

Size 尺寸	P/N 型号	Resolution 分辨率	Brightness 亮度	Outline 外形尺寸	A.A. 显示区尺寸	Interface 接口	Display mode 显示模式	Touch panel 触摸屏
1.3"	ATM0130B3	240x240	500	26.85x29.55x1.73	23.4x23.4	SPI	IPS	W/O
1.44"	ATM0144B3	128x128	200	33.3x38.2x2.3	25.5x26.5	SPI	TN	W/O
1.54"	ATM0154B5	240x240	500	31.52x33.72x1.78	27.72x27.72	SPI	IPS	W/O
1.77"	ATM0177B3AS	128x160	500	34.7x46.7x2.5	28.032x35.04	SPI	TN	W/O
1.77"	ATM0177B3AS-T	128x160	400	34.7x46.7x3.85	28.032x35.04	SPI	TN	RTP
2.0"	ATM0200B3	240x320	800	34.8x48.8x2.45	30.6x40.8	SPI	IPS	W/O
2.31"	ATM0231D2	320x240	350	51x45.8x2.5	46.75x35.06	RGB	TN	W/O
2.4"	ATM0240B32A	240x320	350	42.72x60.26x2.25	36.72x48.96	SPI	IPS	W/O
	ATM0240B32A-CT	240x320	300	42.72x60.26x3.65	36.72x48.96	SPI	IPS	CTP
2.41"	ATM0241D1	240x320	1000	41.72x57.06x2.2	36.72x48.96	RGB	IPS	W/O
2.7"	ATM0270D2	320x240	280	67.5x31.9x2.5	58.8x33.08	RGB	TN	W/O
	ATM0270D2-T	320x240	220	67.5x31.9x3.65	58.8x33.08	RGB	TN	RTP
2.8"	ATM0280B23B	240x320	150	50.0x69.2x2.45	43.2x57.6	MCU	TN	W/O
	ATM0280B3A	240x320	1000	48.2x67.85x2.8	43.2x57.6	MCU/RGB	IPS	W/O
3.5"	ATM0350D59K	320x240	1000	76.9x63.9x2.8	70.08x52.56	RGB	IPS	W/O
	ATM0350D59B	320x240	500	76.9x63.9x2.8	70.08x52.56	RGB	IPS	W/O
	ATM0350D59B-T	320x240	400	76.9x63.9x4.0	70.08x52.56	RGB	IPS	RTP
	ATM0350B53	320x480	300	54.46x82.94x2.15	48.96x73.44	RGB	IPS	W/O
3.97"	ATM0397D2	480x800	350	59.64x99.35x2.8	51.84x86.4	RGB	IPS	W/O
	ATM0397D2-CT2	480x800	350	67.14x106.85x4.55	51.84x86.4	RGB	IPS	CTP
4.0"	ATM0400D1K	480x480	1000	77.0x79.0x2.3	95.04x53.856	RGB	IPS	W/O
4.3"	ATM0430D62K	800x480	1000	105.5x67.2x2.85	95.04x53.856	RGB	IPS	W/O
	ATM0430D62K-T	800x480	800	105.5x67.2x4.0	95.04x53.856	RGB	IPS	RTP
	ATM0430D62K-CT	800x480	850	105.5x67.2x4.4	95.04x53.856	RGB	IPS	CTP
	ATM0430D68	480x272	600	105.4x67.1x3.0	95.04x53.856	RGB	IPS	W/O
	ATM0430D68-T	480x272	450	105.4x67.1x4.2	95.04x53.856	RGB	IPS	RTP
	ATM0430D68-CT	480x272	500	105.4x67.1x4.58	110.88x62.832	RGB	IPS	CTP
5.0"	ATM0500D52A	480x272	500	120.7x75.8x3.0	110.88x62.832	RGB	IPS	W/O
	ATM0500D52A-T	480x272	400	120.7x75.8x4.25	108.0x 64.8	RGB	IPS	RTP
	ATM0500D35	800x480	400	120.7x75.8x3.0	108.0x 64.8	RGB	IPS	W/O
	ATM0350D35B	800x480	700	120.7x75.8x3.0	108.0x 64.8	RGB	IPS	W/O
	ATM0500D35K	800x480	1000	120.7x75.8x3.0	108.0x 64.8	RGB	IPS	W/O
	ATM0500D35-T	800x480	300	120.7x75.8x4.2	108.0x 64.8	RGB	IPS	RTP
	ATM0500D35B-T	800x480	550	120.7x75.8x4.2	108.0x 64.8	RGB	IPS	RTP
	ATM0500D35K-T	800x480	800	120.7x75.8x4.2	108.0x 64.8	RGB	IPS	RTP
	ATM0500D35-CT	800x480	350	120.7x75.8x4.2	108.0x 64.8	RGB	IPS	CTP
	ATM0500D35B-CT	800x480	600	120.7x75.8x4.2	108.0x 64.8	RGB	IPS	CTP
	ATM0500D35K-CT	800x480	900	120.7x75.8x4.2	108.0x 64.8	RGB	IPS	CTP
7.0"	ATM0700D8C	800x480	500	164.9x100.0x5.55	154.08x85.92	RGB	TN	W/O
	ATM0700D8C-CTN	800x480	425	164.9x100.0x7.25	154.08x85.92	RGB	TN	CTP

STANDARD TFT SERIES 标准TFT模组列表

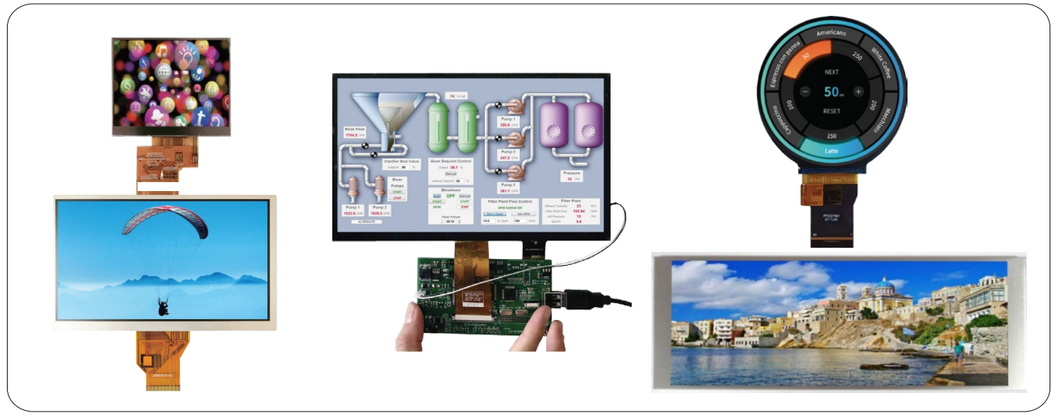
Size 尺寸	P/N 型号	Resolution 分辨率	Brightness 亮度	Outline 外形尺寸	A.A. 显示区尺寸	Interface 接口	Display mode 显示模式	Touch panel 触摸屏
7.0"	ATM0700D6J	800x480	1000	164.9x100.0x5.7	154.08x85.92	RGB	TN	W/O
	ATM0700D6J-T	800x480	800	164.9x100.0x7.2	154.08x85.92	RGB	TN	RTP
	ATM0700D6J-CTN	800x480	850	164.9x100.0x7.33	154.08x85.92	RGB	TN	CTP
	ATM0700D61J	1024x600	1000	164.9x100.0x3.55	154.08x85.92	RGB	IPS	W/O
	ATM0700D61J-CT	1024x600	850	176.42x115.7x5.33	154.21x85.92	RGB	IPS	CTP
	ATM0700L61	1024x600	600	164.9x100.0x3.3	154.21x85.92	LVDS	IPS	W/O
	ATM0700L61K	1024x600	1100	164.9x100.0x5.7	154.21x85.92	LVDS	IPS	W/O
	ATM0700L61-T	1024x600	450	164.9x100.0x4.9	154.21x85.92	LVDS	IPS	RTP
	ATM0700L61K-T	1024x600	950	164.9x100.0x7.1	154.21x85.92	LVDS	IPS	RTP
	ATM0700L61-CT	1024x600	500	164.9x100.0x5.1	154.21x85.92	LVDS	IPS	CTP
	ATM0700L61K-CT	1024x600	1000	164.9x100.0x7.48	154.21x85.92	LVDS	IPS	CTP
	ATM0700L74	800x480	360	170.0x110.0x9.0	154.21x85.92	LVDS	IPS	W/O
	ATM0700D65C	800x480	550	165 x 104.09x5.3	152.4x91.44	RGB	IPS	W/O
8.0"	ATM0800D9A	800x600	350	183x141x6.4	152.4x91.44	RGB	TN	W/O
	ATM0800D9A-T	800x600	280	183x141x7.7	162x121.5	RGB	TN	RTP
9.0"	ATM0900D6	800x480	300	210.7x126.5x5.2	162x121.5	RGB	TN	W/O
10.1"	ATM1010L1	1280x800	350	229.8x149.0x4.7	198x111.696	LVDS	IPS	W/O
	ATM1010L1B	1280x800	600	229.8x149.0x4.7	216.96x135.6	LVDS	IPS	W/O
	ATM1010L1K	1280x800	1000	229.8x149.0x4.7	216.96x135.6	LVDS	IPS	W/O
	ATM1010L1-T	1280x800	350	229.8x149.0x6.6	216.96x135.6	LVDS	IPS	RTP
	ATM1010L1B-T	1280x800	450	229.8x149.0x6.6	216.96x135.6	LVDS	IPS	RTP
	ATM1010L1K-T	1280x800	800	229.8x149.0x6.6	216.96x135.6	LVDS	IPS	RTP
	ATM1010L1-CT	1280x800	300	229.8x149.0x7.5	216.96x135.6	LVDS	IPS	CTP
	ATM1010L1B-CT	1280x800	500	229.8x149.0x7.5	216.96x135.6	LVDS	IPS	CTP
	ATM1010L1K-CT	1280x800	850	229.8x149.0x7.5	216.96x135.6	LVDS	IPS	CTP
	ATM1010D11	1024x600	900	235x143x5.5	216.96x135.6	LVDS	IPS	W/O
	ATM1010D11	1024x600	900	235x143x5.0	222.72x125.28	RGB	IPS	W/O
	ATM1010M50	800x1280	350	150.4x232.53x2.7	222.72x125.28	MIPI	IPS	W/O
	ATM1010M40	1200x1920	380	142.9x228.6x2.4	135.36x216.576	MIPI	IPS	W/O
10.4"	ATM1040L10	1024x768	600	238.6x175.8x6.5	135.36x216.576	LVDS	IPS	W/O
	ATM1040L10A	1024x768	1200	238.6x175.8x6.5	210.432 x 157.824	LVDS	IPS	W/O
11.6"	ATM1160E3	1920x1080	450	276.5x165.6x6	256.32x144.18	eDP	IPS	W/O
12.1"	ATM1210L9	1024x768	1000	260.5x204x7.2	245.76x184.32	LVDS	IPS	W/O
	ATM1210L9-CT	1024x768	850	281.8x220.8x10.35	245.76x184.32	LVDS	IPS	CTP
13.3"	ATM1330E1	1920x1080	300	300.56x188.25x2.45	293.76x165.24	eDP	IPS	W/O
15.6"	ATM1560E4	1920x1080	1000	360x212.3x5.7	344.16x193.59	eDP	IPS	W/O

ROUND TFT SERIES 圆形TFT模组列表

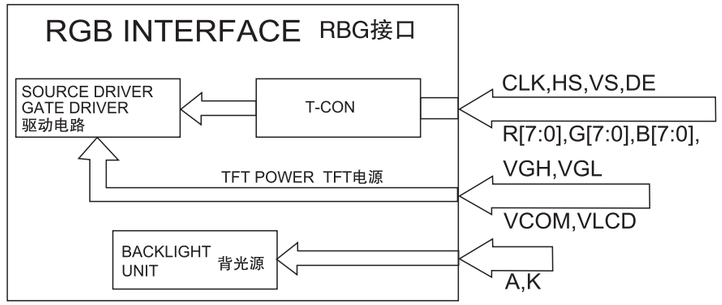
Size 尺寸	P/N 型号	Resolution 分辨率	Brightness 亮度	Outline 外形尺寸	A.A. 显示区尺寸	Interface 接口	Display mode 显示模式	Touch panel 触摸屏
1.28"	ATMD128B1	240x240	400	35.6x38x1.55	32.4	SPI	IPS	W/O
2.1"	ATMD210M1B	480x480	600	56.18x59.71x2.22	53.28	MIPI	IPSI	W/O
2.76"	ATMD276M1	480x480	300	73.03x76.48x2.26	70.128	MIPI	IPS	W/O
5.0"	ATMD500M1	1080x1080	350	73.03x76.48x2.26	127.008	MIPI	IPS	W/O

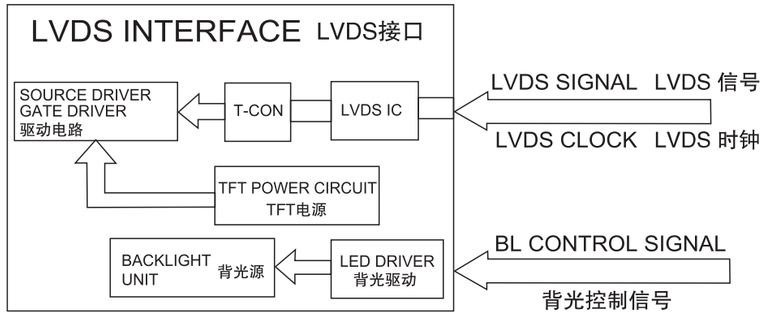
BAR TYPE TFT SERIES 长条形TFT模组列表

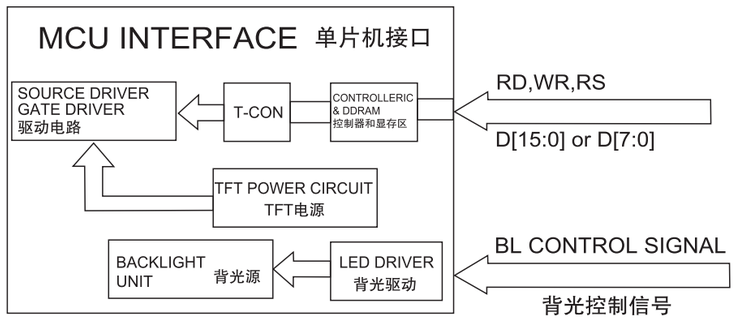
Size 尺寸	P/N 型号	Resolution 分辨率	Brightness 亮度	Outline 外形尺寸	A.A. 显示区尺寸	Interface 接口	Display mode 显示模式	Touch panel 触摸屏
1.9"	ATM0190B1	170x320	330	25.8x49.72x1.43	22.7x42.72	SPI/MCU	IPS	W/O
3.01"	ATM0301D1-CT	170x560	400	24.63x78.41x1.81	22.13x72.91	RGB	IPS	CTP
3.4"	ATM0340D2	180x640	350	25.72x88.83x1.98	23.22x82.56	RGB	IPS	W/O
3.9"	ATM0390D2	480x128	700	102.46x34.4x3.6	95.04x25.344	RGB	IPS	W/O
4.58"	ATM0458D1	320x960	450	41.57x118.8x2.5	36.768x110.304	RGB	IPS	W/O
6.8"	ATM0680M3	480x1280	450	66.8x181.1x4.5	60.192x160.512	MIPI	IPS	W/O
	ATM0680M3A	480x1280	1000	66.8x181.1x4.5	60.192x160.512	MIPI	IPS	W/O
	ATM0680M3-CT	480x1280	400	72.71x181x6.6	60.22x160.59	MIPI	IPS	CTP
	ATM0680M3A-CT	480x1280	900	72.71x181x6.6	60.22x160.59	MIPI	IPS	CTP
7.84"	ATM0784M2N	400x1280	500	67.8x205.78X4.75	59.4x190.08	MIPI	IPS	W/O
10.25"	ATM1025L1	1920x720	1000	258.9x111.1x7.55	243.648X91.368	LVDS	IPS	W/O
12.3"	ATM1230L1	1920x720	1000	311x130x8.5	292.32x109.62	LVDS	IPS	W/O

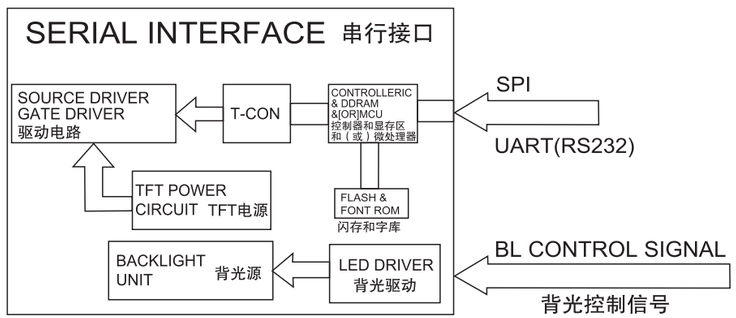


TFT INTERFACE TFT接口



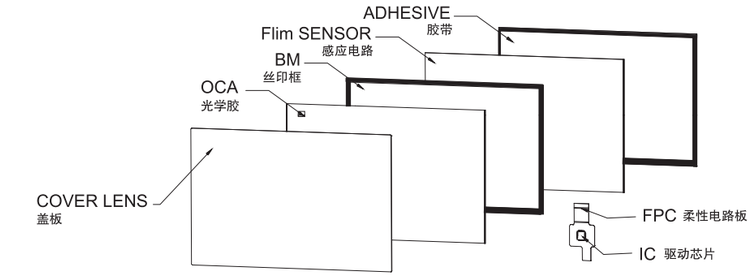




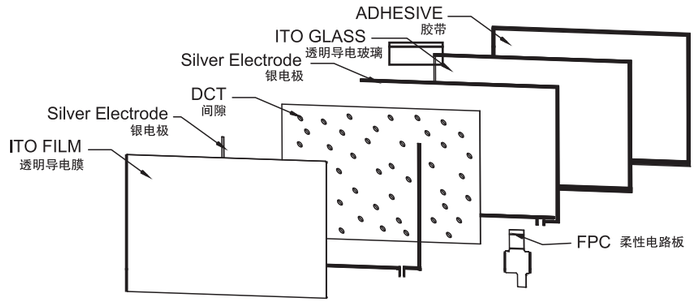


CAPACITIVE VS RESISTIVE TOUCH PANEL 电容触摸屏 VS 电阻触摸屏

CAPACITIVE TOUCH PANEL 电容触摸屏



RESISTIVE TOUCH PANEL 电阻触摸屏



Item	Capacitive	Resistive
Hardness 硬度	★★★★☆	★★☆☆☆
Transmittance 透过率	★★★★☆	★★★☆☆
Life time 寿命	★★★★★	★★★☆☆
Cost 成本	★★★★☆	★★☆☆☆
Touch sensibility 触摸灵敏度	★★★★★	★★★☆☆
Stability 稳定性	★★★★☆	★★★★★
Multi-touch 多点触摸	Y	N
Optical bonding 全贴合	Y	N

STANDARD HIGH CONTRAST GRAPHIC MODULE
标准高对比度图形模组

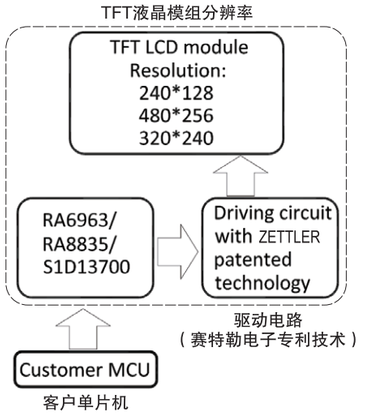
No. 序号	Size 尺寸	Series 产品系列	Resolution 分辨率	Outline Dimension 外形尺寸	V.A Size 显示区尺寸	H.H. Distance 定位孔距离	Dot Pitch 点间距	Controller 控制芯片
1	3.5"	ATM3224E	320*240	89*63.9*10	72.3*54.8	84.0/58.8	0.219*0.219	RA8835/UCi8835
2	5.0"	ATM4825A	480*256	144*104*10	113.9*65.8	138/97	0.462*0.462	RA8835/UCi8835
3	5.0"	ATM2412B	240*128	144*104*10	113.9*65.8	138/97	0.231*0.231	RA6963/UCi6963
4	5.0"	ATM2412DC	240*128	144*104*12	113.9*65.8	138/97	0.231*0.231	RA6963/UCi6963
5	5.7"	ATM3224HD	320*240	144*104*12	115.2*86.4	136.6/96.4	0.36*0.36	N.A.

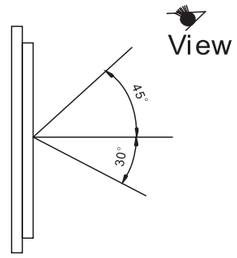
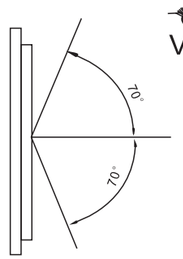
Features

- Mono LCD controller, simple connection
- TFT display, high quality display
- High contrast
- Wide viewing angle
- Optional background/font color
- Software compatible with mono LCM

产品特征

- 单色液晶控制器，连接简单
- TFT液晶显示，图像质量高
- 高对比度
- 宽视角
- 可选背景/字体颜色
- 与单色模组软件兼容



ITEM 对比项目		MONO PRODUCT 单色产品	HC PRODUCT 高对比度产品
Display effect 显示效果		ZETTLER DISPLAYS Lower Contrast Ratio Narrower Viewing Angle HW/SW Compatible Operating Temp. -20~70°C	ZETTLER DISPLAYS Higher Contrast Ratio Wider Viewing Angle HW/SW Compatible Operating Temp. -30~85°C
Viewing angle 视角			
Display color 显示颜色	Background 背景色	White,Blue,Yellow/green,Black 白,蓝,黄/绿，黑	Free 可定制
	Font 字体色	White,black 白,黑	Free 可定制
Contrast ratio (Typ.) 对比度		No more than 10：1 不高于10:1	Higher than 400：1 高于400:1
Operating temperature 工作温度		-20~70	-30~85
Storage temperature 存储温度		-30~80	-30~85

PART NUMBERING SYSTEM—MONO LCM 单色液晶模组命名规则

Example 型号实例

ACM 1602M – N L W – B B W – X
1 2 3 4 5 6 7 8 9 10

1= Character Module(字符模块) 2+3=Base Model Number(基本模块的型号)
4= Transmissive,Negative(全透，负显示) 5+6=**White LED Backlight** (白色LED背光)
7= Blue STN(蓝模STN) 8= Bottom View(6 o'clock) (底视角-6点钟)
9=**Single** Power,Wide temperature range -20℃~70℃ (单电源,宽温)
10= Special Requires(特殊要求)

1 Module Type 模块类型
ADM=Digital Module (数字模块)
AGM=Graphic Module (图形模块)
ACM=Character Module (字符模块)
ABM=TAB Module (TAB模块)
AQM=COG Module (COG模块)

2 Module Format 模块款式
1602=16 x 2 2004=20 x 4 4002=40 x 2
1232=122 x 32 1264=128 x 64

3 Design Version 设计版本
A to ZZ for design Version
Note:AE to ZE is special version for low-temp LCD modules
AE至ZE特指低温产品版本

4 Polarizer Type 偏光片
R=Reflective (反射)
M=Transmissive,Positive (全透，正显示)
N=Transmissive,Negative (全透，负显示)
F=Transflective,Positive (半透，正显示)
* B=Transflective,Negative (半透，负显示)

5 Backlight Type 背光源
N=None (无) E=EL (电致发光)
C=CCFL (冷阴极荧光) L=LED Backlight(LED背光)

6 *Backlight Color 背光颜色
A= Amber (琥珀色) B= Blue (蓝色) Y=Yellow(黄色)
G= Green (翠绿色) W=White (白色) O=Orange(橙色)
R= Red (红色) T=Tricolor(三基色) Q=Other colors(其他颜色)
*The LED backlight is Yellow-Green unless otherwise specify by a letter.
若无字母说明，则默认为黄绿背光

7 Fluid Type 液晶
T=TN *D=Black TN (黑模TN)
B=Blue STN (蓝模STN) Y=Yellow STN (黄模STN)
G=Gray STN (灰模STN)
F=FSTN(Film-compensated STN［B/W］)

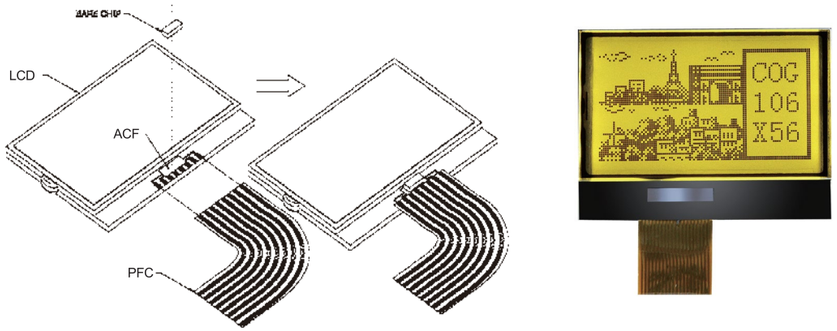
8 Viewing Direction 视角
B=Bottom View(6 o'clock) (底视角-6点钟)
T=Top View(12 o'clock) (顶视角-12点钟)
*L=Left View(9 o'clock) (左视角-9点钟)
*R=Right View(3 o'clock) (右视角-3点钟)

9 Temperature Range 温度范围
S=Single Power,Standard **working** temperature range 0℃~50℃ (单电源,常温)
D=Dual Power,Standard **working** temperature range 0℃~50℃ (双电源, 常温)
W= Single Power,Wide **working** temperature range -20℃~70℃ (单电源,宽温)
H=Dual Power,Wide **working** temperature range -20℃~70℃ (双电源,宽温)
*E=Single Power,Super Wide **working** temperature range-30℃~80℃ (单电源,超宽温)
*Z=Dual Power,Super Wide **working** temperature range-30℃~80℃ (双电源,超宽温)

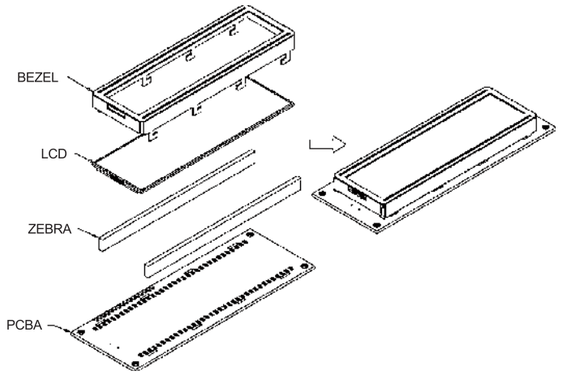
10 *Special Requires 特殊要求

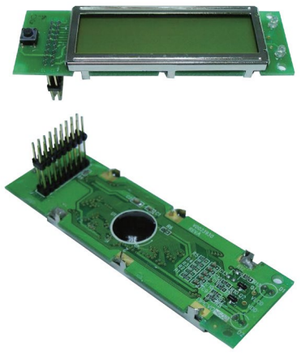
COG VS COB COG封装 VS COB封装

COG–CHIP ON GLASS



COB–CHIP ON BOARD





COMPARISONS OF DIFFERENT TECHNOLOGY 技术比较

Item	COG(Chip on Glass)	COB(Chip on Board)
Thickness(without backlight) 厚度（不含背光）	1.8mm(Min)	8mm(Min)
Thickness(with backlight) 厚度（含背光）	3.5mm(Min)	10mm(Min)
Cost 成本	Lower	Higher
Structure 结构	LCD+IC+FPC	LCD+IC+PCB+BEZEL+ZEBRA
Trace gap 走线间距	15um(Min)	150um(Min)
Interface 接口	Parallel/Serial	Parallel

STANDARD CHARACTER LCD MODULE LIST 标准字符模组列表

Display Format 显示内容	Series 产品系列	Outline Dimension 外形尺寸	H.H Distance 定位孔尺寸	V.A Size 显示区尺寸	Character Size 字符大小	Dot Size 点尺寸	Bonding Type 绑定类型
8 x 1	ACM0801B	54.0x37.0x13.5	50.0X30.0	32.1x16.0	2.9*7.6	0.5x0.6	COB
8 x 2	ACM0802C	58.0x32.0x13.8	53.0X27.0	38.0x16.0	2.96*5.56	0.56x0.66	COB
	AQM0802A	30x19.5x5.5	N.A.	27.0x10.5	2.45*4.35	0.45x0.5	COG
12 x 2	ACM1202B	59.0x32.0x13.2	31.2X30.0	46.0x14.5	2.65*5.5	0.45x0.60	COB
16 x 1	ACM1601C	80.0x36.0x13.5	75.0X31.0	64.5x14.0	3.07*6.56	0.55x0.75	COB
	ACM1601H	122.0x33.0x13.5	115.0X25.0	100.0x14.0	4.84*9.22	0.92x1.10	COB
16 x 2	ACM1602B	84.0x44.0x13.5	79.0X36.0	64.5x16.4	3.0*5.23	0.56x0.61	COB
	ACM1602E	85.0x36.0x13.5	80.0X31.0	64.5x16.4	3.0*5.23	0.56x0.61	COB
	ACM1602FA	53.0x20.0x8.0	48.0X15.0	36.0x10.0	1.85*3.15	0.33x0.35	COB
	ACM1602K	80.0x36.0x13.5	75.0X31.0	64.5x16.4	3.0*5.23	0.56x0.61	COB
	ACM1602KC	80.0x36.0x12.8	75.0X31.0	64.5x16.4	3.0*5.23	0.56x0.61	COB
	ACM1602KR	80.0x36.0x13.5	75.0X31.0	64.5x16.4	3.0*5.23	0.56x0.61	COB
	ACM1602M	85.0x29.5x12.8	81.0X24.0	64.5x16.4	3.0*5.23	0.56x0.61	COB
	ACM1602S	122.0x44.0x13.5	115.0X36.9	99.0x24.0	5.2*9.55	1.00x1.15	COB
	ACM1602T	85.0x32.6x13.5	79.0X29.2	64.5x16.4	3.0*5.23	0.56x0.61	COB
	ACM1602Y	71.5x36.0x13.5	66.6X30.5	64.5x16.4	3.0*5.23	0.56x0.61	COB
	AQM1602AD	55.0X31.0X5.4	N.A.	51.0X14.5	2.47*5.57	0.47X0.67	COG
	AQM1602G	56.8X26.2X5.5	N.A.	45.7X14.3	2.2*4.68	0.41X0.55	COG
	AQM1602Y	43.6X25.47X6.0	N.A.	38.2X12.82	1.86*4.56	0.35X0.50	COG
	ACM1602CM	84.0x44.0x12.0	76.0X36.0	67.9X20.0	3.45*8.73	0.65X1.05	COB
16 x 4	ACM1604C	87.0x60.0x14.2	82.0X55.0	61.8x25.2	2.95*4.75	0.55x0.55	COB
	ACM1604D	87.0x60.0x14.2	82.0X55.0	61.8x25.2	2.95*4.75	0.55x0.55	COB
20 x 2	ACM2002D	116.0x37.0x14.2	108.0X29.0	83.0x18.6	3.20*5.55	0.60x0.65	COB
	ACM2002E	116.0x37.0x14.2	108.0X29.0	83.0x18.6	3.20*5.55	0.60x0.65	COB
	ACM2002I	146.0x43.0x14.0	139.0X36.0	123.0x23.0	4.84*9.22	0.92x1.10	COB
	ACM2002R	180.0x40.0x14.6	172.0X32.0	149.0x23.0	6.00*9.66	1.12x1.12	COB
	ACM2002M	86.0X34.0X10.5	82.0X30.0	74.5X12.5	3.2*5.55	0.6X0.65	COB
	AQM2002C	70.3X25.0X6.1	N.A.	61.0X15.1	2.54*5.55	0.45X0.65	COG
	AQM2002G	70.3X25.0X6.1	N.A.	61.0X15.1	2.54*5.55	0.45X0.65	COG
20 x 4	ACM2004D	98.0x60.0x14.2	93.0X55.0	76.0x25.2	2.95*4.75	0.55x0.55	COB
	ACM2004F	146.0x62.5x14.2	139.0X55.5	123.0x42.5	4.85*9.23	0.93x1.11	COB
	ACM2004G	98.0x60.0x14.2	92.9X54.9	76.0x25.2	2.95*4.75	0.55x0.55	COB
24 x 2	ACM2402C	118.0x36.0x14.2	113.0X31.0	94.5x18.0	3.20*5.55	0.60x0.65	COB
	ACM2402F	190.0x42.0x14.2	184.0X36.0	159.3x23.0	5.40*8.70	1.00x1.00	COB
40 x 2	ACM4002E	182.0x33.5x14.2	175.0X26.5	154.5x16.5	3.20*5.55	0.60x0.65	COB
	ACM4002G	172.0X33.5X15.5	169.1X23.2	148.5X12.5	3.2*5.55	0.6X0.65	COB
40 x 4	ACM4004E	190.0x54.0x14.2	183.0X47.0	147.0x29.5	2.78*4.89	0.50x0.55	COB
	ACM4004H	190.0x54.0x14.2	183.0X47.0	147.0x29.5	2.78*4.89	0.50x0.55	COB
	ACM4004I	160.0x47.0x13.5	155.0X32.0	140.0x29.0	2.70*4.35	0.50x0.50	COB
	ACM4004K	190.0x54.0x14.2	183.0X47.0	147.0x29.5	2.78*4.89	0.50x0.55	COB
56 x 2	ACM5502B	224.0X41.0X12.4	200.0X35.0	209.9X12.5	3.2*5.55	0.6X0.65	COB
56 x 2	ACM5602B	319.0X43.0X13.0	319.0X38.0	286X14.5	4.2*6.35	0.8X0.75	COB

STANDARD GRAPHIC LCD MODULE LIST 标准图形模组列表

Resolution 分辨率	Series 产品系列	Outline Dimension 外形尺寸	H.H Distance 定位孔尺寸	V.A Size 显示区尺寸	Character Size 字符大小	Dot Size 点尺寸	Controller 控制芯片	Bonding Type 绑定类型
122 x 32	AGM1232CA	76.5x29.0x12.4	70.8	60.5x19.0	0.36x0.41	0.40x0.45	PT6520	COB
	AGM1232G	84.0x44.0x13.5	76.0X36.0	60.0x18.0	0.40x0.45	0.44x0.49	PT6520	COB
	AGM1232GA	84.0x44.0x13.5	76.0X36.0	60.0x18.0	0.40x0.45	0.44x0.49	ST7920	COB
	AGM1232J	88.0X36.0X13.7	75.0X31.0	60.0X18.0	0.40X0.45	0.44X0.49	ST7920	COB
132 x 32	AQM1332C	80.0X35.0X11.0	75.0X31.0	64.0X16.0	0.40X0.40	0.43X0.43	ST7565R	COG
192 x 32	AGM1932A	116.0X37.0X10.8	108.0X29.0	88.0X19.0	0.38X0.47	0.42X0.51	ST7920	COB
128 x 48	AQM1248A	34.0x20.0x2.0	N.A.	32.0x11.0	0.2x0.17	0.22x0.19	UC1601S	COG
106 x 56	AQM1056B	36.6x28.0x4.5	N.A.	32.6x17.6	0.27x0.27	0.29x0.29	ST7565P	COG
128 x 64	AGM1264F	93.0x70.0x14.2	88.0X65.0	70.7x38.8	0.48x0.48	0.52x0.52	AiP31107	COB
	AGM1264K	78.0x70.0x13.5	68.0X65.0	62.0x44.0	0.40x0.56	0.44x0.60	AiP31107	COB
	AGM1264GX	73.0X42.0X9.2	67.5X34.0	55.0X30.2	0.37X0.37	0.41X0.41	ST7565R	COG
	AQM1264FG	70.0X43.0X6.0	N.A.	58.0X29.5	0.39X0.39	0.43X0.43	ST7567	COG
	AQM1264AX	68.8X49.2X5.7	N.A.	60.6X33.1	0.4x0.48	0.43X0.43	ST7565R	COG
	AQM1264FE	84.5X51.8X6.0	N.A.	71.7X38.8	0.48x0.48	0.52X0.52	ST7567	COG
	AQM1264BX	37.0X30.3X4.6	N.A.	31.4X20.3	0.195X0.23	0.215X0.25	ST7565R	COG
	AQM1264GX	73.0X44.0X12.8	N.A.	55.0X30.6	0.37X0.37	0.41X0.41	ST7565R	COG
	AQM1264HA	55.0X46.0X5.6	N.A.	51.0X31.0	0.36X0.42	0.375X0.435	ST7565R	COG
	AQM1264LZ	77.4X52.4X6.5	N.A.	70.0X40.0	0.48X0.48	0.52X0.52	ST7565R	COG
	AGM1264Y	75.0X52.7X9.0	70.0X49.7	60.0X32.5	0.40X0.40	0.43X0.43	SBN6400	COB
132 x 64	AQM1364C	82.0 x 37.0 x 2.85	N.A.	80.0X24.0	0.427 x 0.308	0.447 x 0.328	ST7567	COG
192 x 64	AGM1964C	130.0x65.0x14.0	121.0X53.0	104.0x39.0	0.458x0.458	0.508x0.508	AiP31107	COB
	AGM1964D	120.0x62.0x14.0	115.0X57.0	104.0x39.0	0.458x0.458	0.508x0.508	AiP31107	COB
	AGM1964K	123.0x65.0x14.0	115.0X57.0	104.0x39.0	0.458x0.458	0.508x0.508	AiP31107	COB
240 x 64	AGM2464B	180.0x65.0x15.0	176.0X54.0	133.0x39.0	0.49x0.49	0.53x0.53	RA6963	COB
150 x 81	AQM1581A	108.0X70.2X11.0	116.0X35.2	93.0X53.0	0.54X0.54	0.58X0.58	S1D15721	COG
160 x 96	AQM1696A	90.5X61.36X5.41	N.A.	74.31X44.87	0.40X0.38	0.43X0.41	ST7528	COG
160 x 100	AQM1016A	57.0X43.5X5.4	N.A.	50.0X32.0	0.275X0.275	0.29X0.29	ST7528	COG
128 x 128	AQM1212P	64.0X54.4X10.7	N.A.	43.0X42.8	0.275X0.285	0.29X0.30	ST7571	COG
240 x 128	AGM2412A	144.0x104.0x13.5	138.0X97.0	114.0x64.0	0.40x0.40	0.45x0.45	RA6963	COB
240 x 160	AQM2416D	98.7X64.2X9.8	92.7X55.0	78.5X47.5	0.27X0.255	0.29X0.275	ST7586	COG
320 x 240	ABM3224K	92.0X71.3X9.0	N.A.	78.78X59.58	0.22X0.22	0.24X0.24	7701/7702	COF

CHOICES OF MONO DISPLAYS 显示模式选择



A11 FSTN负显全透白背光
NLW-F



A12 FSTN正显半透白背光
FLW-F



A13 FSTN负显全透黄绿背光
NL-F



A14 FSTN负显全透翠绿背光
NLG-F



A15 FSTN负显全透红背光
NLR-F



A16 FSTN负显全透琥珀背光
NLA-F



A17 FSTN负显全透蓝背光
NLB-F



A18 FSTN正显半透翠绿背光
FLG-F



A19 FSTN正显半透蓝背光
FLB-F



A20 FSTN反射正显
RN-F

ZETTLER DISPLAYS Solutions Provider

CHOICES OF MONO DISPLAYS 显示模式选择



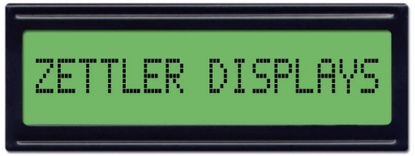
A01 黄绿膜反射正显
RN–Y



A02 黄绿膜半透正显白背光
FLW–Y



A03 灰膜半透黄绿背光
FL–G



A04 黄绿膜半透黄绿背光
FL–Y



A05 黄绿膜半透翠绿背光
FLG–Y



A06 黄绿膜半透琥珀背光
FLA–Y



A07 灰膜反射正显
RN–G



A08 蓝膜负显全透白背光
NLW–B

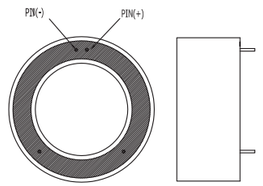


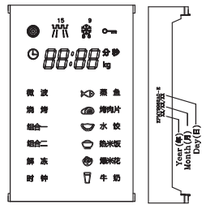
A09 FSTN负显全透黄绿背光
NL–F

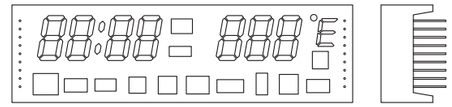


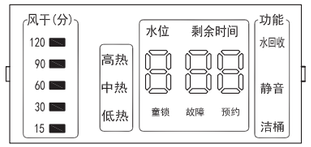
A10 FSTN正显半透琥珀背光
FLA–F

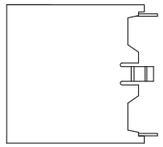
LED DISPLAYS 数码管显示屏

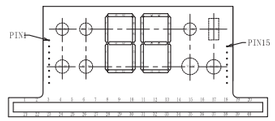


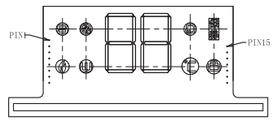














COLOR–PRINTING FILM LEDM WITH NEW TOUCH SOLUTION 具有新触控设计的彩膜数码管方案产品

The robust colorful–printing film LEDM solution that could be further equipt with our special touch designs, will provide an richer visual experience while still with a lower cost LEDM design.

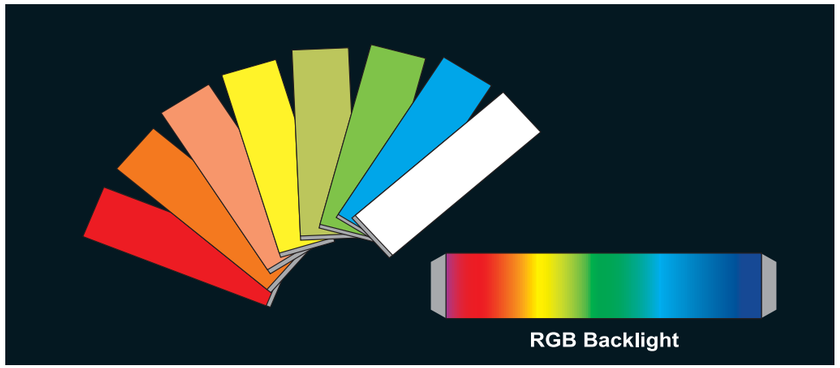
色彩丰富细腻的数码管彩膜显示，同时进一步集成赛特勒特别的新触摸方案，在保持低成本LEDM设计的同时，可以给用户提供更绚丽的视觉体验。



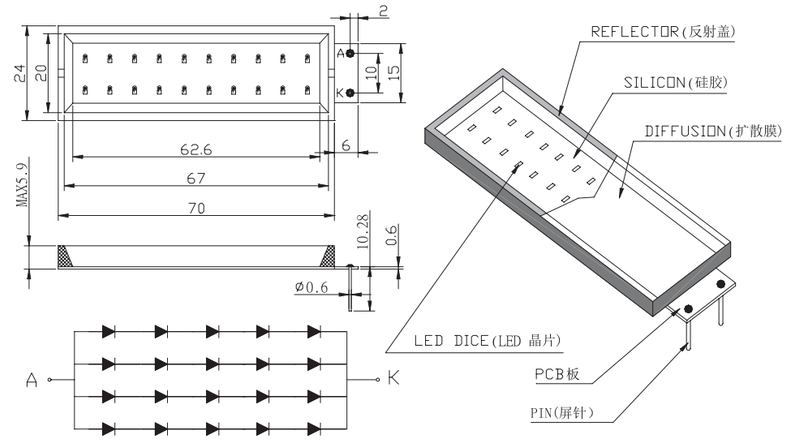
LED BACKLIGHT 背光产品

LED底部背光源--LED Bottom Backlight
LED侧部背光源--LED Side Backlight

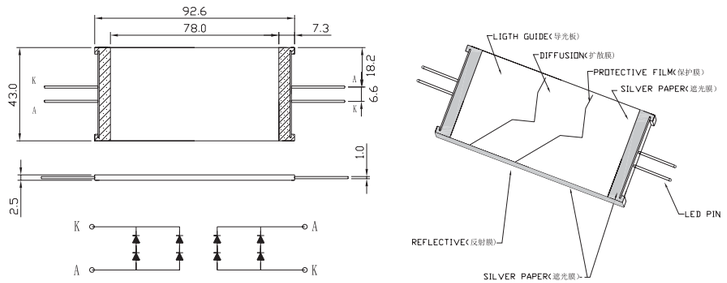
Thickness: 0.7mm(MIN)
Size: 254mm*254mm(MAX)



● 底部发光方式—Structural diagram of bottom lights



● 双侧发光方式—lighting from the double side



ZETTLER GROUP PROFILE
赛特勒集团简介

Building on a foundation of more than a century of expertise in German precision engineering, ZETTLER GROUP is a world-class enterprise, engaged in the design, manufacturing, sales and distribution of Electronic Components. Our industry leadership is based on an unique combination of Engineering Competence and Global Scale.

ZETTLER GROUP's diversified product lines are designed to provide complete solutions for component applications across a broad spectrum of industries:

- Electromechanical Relays
- Power Products
- TFT/LCD/LEDM Displays
- HVAC/R Control Components and Thermostats
- New Energy Solutions

With a global network of operating companies established across many parts of the industrialized world, we are not only present in low cost manufacturing geographies, but also have the ability to provide customer focused solutions in local proximity to the industrial and commercial markets we serve:

- North America.
- China and South East Asia
- Europe
- South America:

经历了一个多世纪的德国精密工程技术和工艺的传承，如今赛特勒已成为一个专门从事电子元器件设计、制造和销售的世界级企业。卓越的工程开发能力与广泛的全球业务网络的独特结合是我们成为行业领导者的保证。

赛特勒集团拥有的多元化产品线能针对各种客户需求提供元器件应用方面的完整解决方案。目前产品分如下四大系列:

– 继电器
– 电源产品
– TFT/LCD/数码管显示模组
– 暖通空调及制冷控制元器件/温控器
– 新能源解决方案

通过在世界多个工业地区建立全球运营网络，我们不仅具有成本的优势，而且有能力为以下区域所所服务的工业和民用领域客户提供快捷的定制化产品解决方案。

– 北美
– 中国和东南亚
– 欧洲
– 南美



Europe
欧洲



China and South East Asia
中国和东南亚



North America
美国