

Provide the Best Products with the Best Service
用最好的服务做最好的产品



LCD & LCM

TSD-Professional
LCD Solutions
Developer & Manufacturer



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China · shenzhen
中国 · 深圳

Display Innovation, Make Values
显示创新·展现价值



TSD Philosophy

Your Fastest, Trusty and Professional
LCD Solutions Supplier& Manufacturer
Focus on Size 1.44-10.1 inch TFT LCD module.



CEO's word


The development of science and technology show us more better future and life. Currently, the LCD industry is coming to us step by step, it has opportunities and also challenges. TSD will work together with the industry to promote the development of LCD industry. This is our mission and responsibility as a member of the LCD industry.

TSD aim to be one of the best LCD solution provider and manufacturer from the birth of the day. And focus on the mid-small size LCD and LCM products research and development, manufacturing and sales. Quality is the life of the company. TSD's principle is quality is produced, not inspected.

TSD always believe that, through innovation technology, continuous improvement of LCD products and higher quality service, we can bring more values to our customers, partners and employees. TSD sincerely look forward to work together with you to create and share this special value. DISPLAY INNOVATION AND MAKE VALUES to our life.



Who is TSD

Shenzhen Team Source Display Technology Co., Ltd  Established in 2004. Head Office in Shenzhen, factory In Dongguan China. TSD focus in the full range of the LCD products and LCD solutions development, offering customers unique, innovative and cost effective modules and solutions. TSD professional and experienced R&D engineers with good English knowledge to support the whole TSD overseas market.

We Professional Because We Focus. In the past 13 years in LCD field, TSD producing high quality products with perfect service to Daiwa Japan, Schneider, VTECH, Luminous, Inkel, Cino and etc. some European and US customers which is in the application field of Industrial and Medical.

深圳市一眾显示科技有限公司前身成立于2004年（品牌TSD），总部位于广东省深圳市，工厂位于东莞凤岗，是一家集液晶显示模组的研发、设计、生产、销售和服务为一体的高新技术企业。公司拥有多条全自动和半自动产线以及COB绑定线，产品包括彩色TFT屏、电容电阻触摸屏、单色图形点阵、字符点阵、笔段式；涵盖TN、HTN、STN、FSTN、TFT等多种模式；融合COG、TAB、COB、SMT等工艺形式。

我司秉承严格高效的生产管理制度和完善的质量管理体系，2010年通过ISO9001&ISO14001质量体系认证，为客户的质量和交期提供有力的保障。打造专业研发设计团队和销售团队为客户提供全方位LCD定制解决方案，为更高效的对接和服务客户，我们2016年设立一眾显示德国分公司，始终坚持用最好的服务做最好的产品，为客户创造价值，实现同心共赢。

Company History

- 2004-2005** ● Team Source Technology Limited established , Set up the TN Rear Assembly production line & build 2 semi-auto TFT line.
- 2006-2007** ● Set up Shenzhen sales office , Established Team Source(HK) limited .Enter into oversea market.
- 2008-2010** ● Start to assembly Monochrome COB&COG LCD module, Enlarge the India market. increase the capacity, get new ISO9001 quality system certificate.
- 2011-2013** ● Build mid-big size TFT & backlight production . Invest Korea AST full -automatic TFT production line.
- 2014-2015** ● Bought the office place and enlarge oversea sales team . Moved and enlarged the factory to Dongguan. Then get new ISO9001 & ISO14001 certificate for new factory.
- 2016-2017** ● Established TSD Germany & Set up CTP production line.
- 2017-2018** ● Moved to Fenggang New Factory, Combined LCM,CTP,Backlight production Lines together.



Factory Tour

Key Partners

Dongguan factory



Shenzhen headquarter



Exported to more than 32 countries with thousands of different LCD/LCM solutions





Production facilities



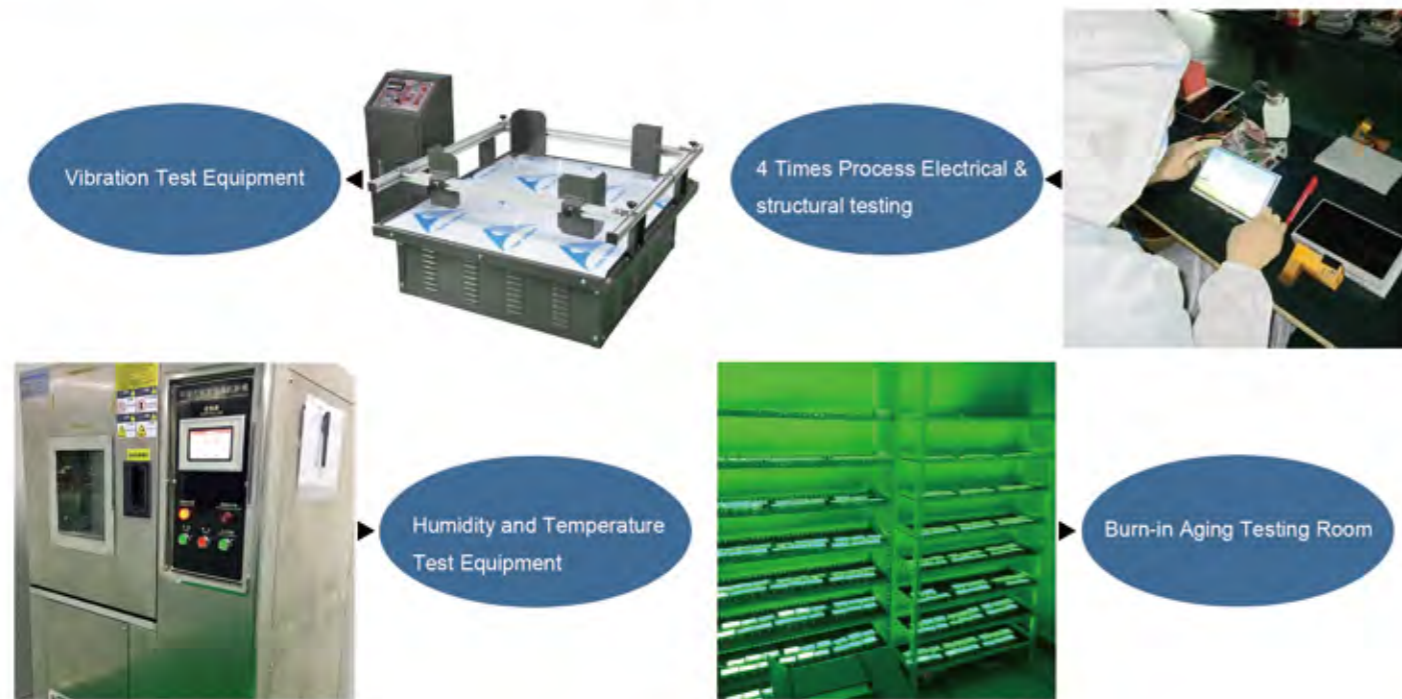
CTP Workshop

TSD Ability

More than 10 years experience R&D team work on the full range of the customization solutions development, offering customers unique, innovative, and cost effective yet market leading products, catering for a range of applications and industries. Our professional and experienced R&D team always happy to support customers in new products development in a quick and effective way, including hardware & software design.

Facilities: 3 Automatic Production Line
 2 Semi-Auto Production Line
 3 CTP line (OCR & OCA)

Production Ability: LCD 1.5KK/M
 LCM 1.5KK/M(TFT & Mono)
 CTP 500K/M
 >10 years experience R&D team
 >100 workers



ISO9001/TSDFG

ISO914001/TSDFG

ISO16949/TSDFG

REACH

生产周期及产能

Production cycle and production capacity

Drawing:LCD 1-2 days LCM 2-4 days
 Sample:LCD 10-20 days LCM 7-15 days
 Mass Production:LCD 18-28 days LCM 12-30 days

质量目标

Quality Targets

1.Product qualification rate ≥99%
 2.Customer return rate ≤0.5%
 Customer satisfaction rate ≥99%

Full Range products

TFT: 1.44"/1.77"/2.0"/2.2"/2.4"/2.8"/3.2"/3.5"/4.3"/5.0"/7.0"/8.0"/10.1"/10.4"

LCD: VBN, TN, HTN, STN, FSTN, FFSTN

LCM: COG, COB, SMT, TAB

EPD: Segment, Graphic, Character

TP: RTP, CTP(G+G/G+F/G+FF) with OCA /OCR bonding.

Cover Lens: Glass,PMMA;AR,AG,AF,Coating,



TSD Products

TSD provide LCD / LCM Modules total solution ,widely used in Industrial Equipment、 Medical Equipment、 Automotive Products、 Education Electronics、 Communication Products、 Fiscal Products、 Instrumentation Products、 Home Appliances

Product application



Automotive Products



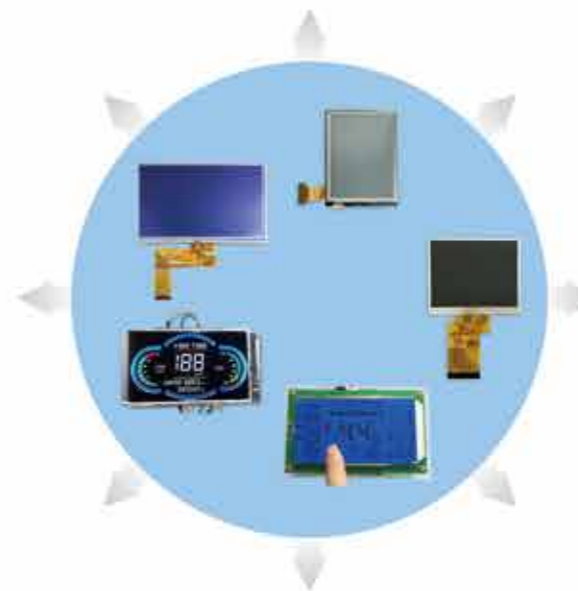
Education Electronics



Communication Products



Industrial Equipment



Medical Equipment



Fiscal Products



Instrumentation Products



Home Appliances

TFT Special Solution



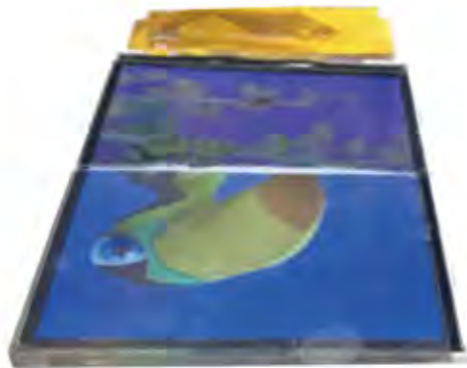
IPS TFT
4.3 inch 480x272 IPS glass
450 nits brightness backlight or higher



Anti-reflective film added TFTs
Sunlight readable, Good performance under strong light
High Brightness Backlight solution available in full range TFT sizes
Full range sizes of TFT product can be added AR film



Transflective TFT
3.5" QVGA True transflective TFT glass
Sunlight readable, super good performance under strong light
Low power consumption, energy saving
Special Resistive touch panel available



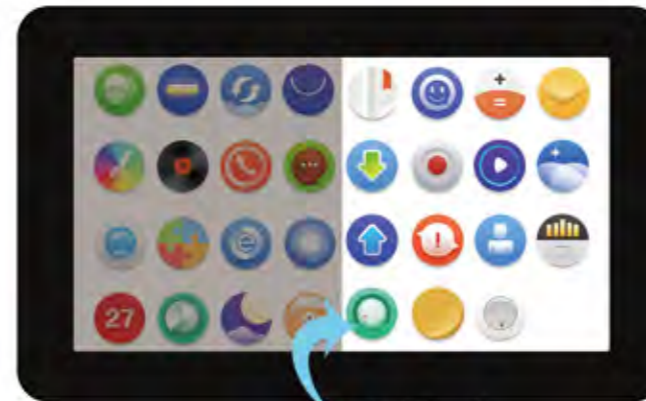
Ofilm Polarizer
Ofilm Polarizer solution TFTs,
viewing angle degree $\geq 80^\circ$ same as MVA products,
Full range sizes of TFT products can be designed
with Ofilm Polarizer solution.



CTP
Standard CTP design for 3.2" 3.5" 4.3" 5" 7" available .
All Standard CTP are using Focal Tech driver IC (can change with ctm requirements),
Can be Customised the FPC for all sizes' CTP
Competitive Prices Support in the market
Customized Sensor, slide, roll, single touch or multi touch
Glove touching support by request.
Water proof design available



Cover Lens
Any size and shap available :Round shape ,polygonal shape ,
holey shape or Irregular shape
Custom deisng logo printing
Surface treatment:AR,AG,AF coating.



Optical Bonding

Optical Bonding
OCA/OCR Optical Bonding,
Protection Purpose for Vandal or weatherproof,
Reducing the internal reflection and to Increase the
clarity and visibility,
Anti-vibration and shakes protection,
Anti-dust and moisture-proof.

TFT LCD Module List



	TST24QV13AR	TST28QV02AR	TST32QV08BR	TST35HV15AR	TST043015CMHX-P	TST50WV05AR	TST070CBOT-02WP
Size	2.4 inch	2.8 inch	3.2 inch	3.5 inch	4.3 inch	5.0 inch	7.0 inch
Resolution	240xRGBx320	240(H)x 3RGB x 320(V)	240xRGBx320	320xRGBx480	480xRGBx272	800(H)xRGBx480(V)	800xRGBx480
Display Area	36.72(w)x48.96(H)	43.2x67	48.6(w)x64.8(H)	48.96x73.44	95.04(W)x53.856(H)	108x64.8	154.08x85.92
Module size(mm)	42.72(w)x60.26(H)x3.5(D)	50x69.2x3.35	55.04(w)x77.7(H)x3.77(D)	54.5x83.0x2.1	105.5(W)x67.2(H)x4.05(D)	120.7x75.8x4.1	164.9x100.0x6.7
Viewing Angle(U,D/L,R)	55,35,55,55	35,55,55,55	55,35,55,55	45,35,55,55	75,60,75,75	70,50,70,70	70,65,70,70
Power Supply Voltage(LCD)	2.8V	2.8V	2.8V	2.8V	3.3V	3.3V	3.3V
Operating Temperature	-20~+70	-20~+70	-20~+70	-20~+70	-20~+70	-20~+70	-20~+70
Brightness(nits)	304 cd/m ²	220cd/m ²	257cd/m ²	228cd/m ²	150/300/500/1000cd/m ²	150/300/500/1000cd/m ²	150/300/500/1000cd/m ²
Interface	MCU 8/16-bit	MCU 8/16-bit	MCU 8/16-bit	MCU 8/16 bit	RGB24-bit	RGB24-bit	RGB24-bit
T/P	no/RTP	no/RTP	no/RTP/CTP	no/RTP/CTP	no/RTP/CTP	no/RTP/CTP	no/RTP/CTP



	TST144QQCS-01P	TST018AOP-SE3	TST018AOP-S13	TST020CY-T01	TST020QVHI-01	TST020ACH03-28	TST220EY-01S	TST024073CMIL-01P
Size	1.44 inch	1.77 inch	1.77 inch	2.0 inch	2.0 inch	2.0 inch	2.2inch	2.4 inch
Resolution	128xRGBx128	128xRGBx160	128xRGBx160	320x RGB x 240	176xRGBx220	240xRGBx320	176xRGBx220	240xRGBx320
Display Area	25.5X26.5	28.03x35.04	28.03x35.04	30.6x40.8	31.68x39.60	30.6x40.8	34.85x43.56	36.72(w)x48.96(H)
Module size(mm)	32.35x38.0x2.6	34.7x46.7x2.55	34.7x46.7x2.55	37.88x51.3x2.5	37.68x51.3x2.15	37.88x51.5x2.5	40.3x55.26x3.65	42.72(w)x60.26(H)x3.7(D)
Viewing Angle(U,D/L,R)	20,35,45,45	20,45,45,45	45,45,45,20	45,45,45,20	45,45,45,25	45,45,45,25	45,45,45,20	60° Clock
Power Supply Voltage(LCD)	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V
Operating Temperature	-20~+70	-20~+70	-20~+70	-20~+70	-20~+70	-20~+70	-20~+70	-20~+70
Brightness(nits)	350±50cd/m ²	180cd/m ²	170cd/m ²	180cd/m ²	500cd/m ²	200cd/m ²	180cd/m ²	150cd/m ²
Interface	MCU 8bit	SPI interface	SPI interface	MCU 8bit	MCU 8bit	MCU 8bit	SPI	MCU 8/16 bit
T/P	no/RTP/CTP	no/RTP/CTP	no/RTP/CTP	no/RTP/CTP	no/RTP/CTP	no/RTP/CTP	no/RTP/CTP	no/RTP

TFT LCD Module List



	TST028CMIL-02P	TST28011T-00	TST314C-02AP	TST350MTQI-02P	TST035FP-01B	TST350MLQZ-06P	TST350MTQV-01BP	TST043WQCH-01
Size	2.8 inch	2.8 inch	3.2 inch	3.5 inch	3.5 inch	3.5 inch	3.5 inch	4.3 inch
Resolution	240xRGBx320	240xRGBx320	240xRGBx320	320xRGBx240	320xRGBx480	320xRGBx240	320xRGBx240	480xRGBx272
Display Area	43.2x67	43.2x57.6	47.87x63.84	53.64x71.52	48.96x73.44	70.08x52.56	70.08x52.56	95.04x53.856
Module size(mm)	50x69.2x3.35	50x69.2x4.1	55.04x77.7x2.4	64x85x4.11	54.5x83x2.3	76.9x63.9x4.3	76.9x63.9x4.3	105.5x67.2x2.95
Viewing Angle(U,D/L,R)	60° Clock	30,65,60,60	120,120,110,110	55,40,40,45	60,40,70,70	40,60,60,60	60,40,60,60	60,45,60,60
Power Supply Voltage(LCD)	2.8V	2.8V	2.8V	2.8V	3.2V	2.8V	3.3V	3.3V
Operating Temperature	-20~+70	-20~+70	-20~+70	-20~+70	-20~+70	-20~+70	-20~+70	-20~+70
Brightness(nits)	150cd/m ²	275cd/m ²	350cd/m ²	90cd/m ²	250cd/m ²	330cd/m ²	280cd/m ²	150/300/500/1000cd/m ²
Interface	MCU 8/16 bit	MCU 8/16 bit	MCU 8/16 bit	RGB 18 bit+SPI	MCU 8/16 bit	MCU 8/16 bit	RGB-24 bit	RGB-24bit
T/P	no/RTP	no/RTP	no/RTP/CTP	no/RTP/CTP	no/RTP/CTP	no/RTP/CTP	no/RTP/CTP	no/RTP/CTP



	TSM043MCWH-02P	TST430MCNH-07C	TST043WQII-10C	TST050WVZO-01	TST070CBOT-01	TST070MIWN-07
Size	4.3 inch	4.3 inch	4.3inch	5.0 inch	7.0 inch	7.0inch
Resolution	480xRGBx272	480xRGBx272	480xRGBx272	800xRGBx480	800xRGBx480	800xRGBx480
Display Area	95.04x53.85	95.04x53.856	95.04x53.86	108x64.8	154x85.92	154x85.92
Module size(mm)	106.7x83.98x8.45	105.5x67.2x4.7	105.5x67.2x4.6	120.7x75.8x2.7	164.9x100x4.7	164.9x100x5.5
Viewing Angle(U,D/L,R)	50,70,70,70	45,35,45,45	70,50,70,70	70,50,70,70	60,65,60,60	70,50,70,70
Power Supply Voltage(LCD)	3.3V	3.3V	3.3V	3.3V	2.8V	3.3V
Operating Temperature	-20~+70	-20~+70	-20~+70	-20~+70	-20~+70	-20~+70
Brightness(nits)	150/300/500/1000cd/m ²	150/300/500/1000cd/m ²	150/300/500/1000cd/m ²	150/300/500/1000cd/m ²	150/300/500/1000cd/m ²	150/300/500/1000cd/m ²
Interface	MCU 16bit	RGB 24bit	SPI	RGB-24bit	RGB-24bit	RGB-24bit
T/P	no/RTP/CTP	no/RTP/CTP	no/RTP/CTP	no/RTP/CTP	no/RTP/CTP	no/RTP/CTP

TFT LCD Module List



	TSM070JDM6M-13B-27H	TST800MIXH-01	TST080HH002-01
Size	7.0 inch	8.0inch	8.0 inch
Resolution	1024xRGBx600	1024xRGBx600	1024xRGBx600
Display Area	153.6X90	176.64x99.36	176.64x99.36
Module size(mm)	165.75x105.39x2.7	192.8x116.9x6.4	192.8x116.9x4.2
Viewing Angle(U,D/L,R)	60,65,65,65	75,70,75,75	80,70,80,80
Power Supply Voltage(LCD)	3.3V	3.3V	3.2V
Operating Temperature	-20~+70	-20~+70	-30~+70
Brightness(nits)	150/300/500/1000cd/m ²	450/750cd/m ²	450/750cd/m ²
Interface	HDMI & VGA	Digital	LVDS
T/P	no/RTP/CTP	no/RTP/CTP	no/RTP/CTP



	TST101T-HBD-50D	TST101WXAU-A45	TST104XGZH-02CW
Size	10.1 inch	10.1 inch	10.4inch
Resolution	1024xRGBx600	1280xRGBx800	1024xRGBx768
Display Area	222.72x125.28	95.04x53.856	211.2x158.4
Module size(mm)	106.7x83.98x8.45	229.46x149.1x2.5	236x174.3x7.4
Viewing Angle(U,D/L,R)	15,35,45,45	85,85,85,85	60,80,75,75
Power Supply Voltage(LCD)	3.2V	3.3V	3.3V
Operating Temperature	-20~+70	-20~+60	-20~+70
Brightness(nits)	200/350/500/750/1000cd/m ²	200/350/500/750/1000cd/m ²	400cd/m ²
Interface	TTL	8 bit LVDS	LVDS
T/P	no/RTP/CTP	no/RTP/CTP	no/RTP/CTP

Graphic Module List

Dots	Model Name	Driver IC	Outline(mm)	V.A(mm)	Supply Voltage	Interface Mode
128x64	TSM12864E	S680108	93.0 x 70.0 x 14.1MAX.	72.0 x 39.5	5.0V	Parallel
	TSM12864D	S680108	78.0 x 70.0 x 13.2MAX.	62.0 x 44.0	5.0V	Parallel
160x32	TSM12864-6C	T6963C	78.0 x 70.0 x 13.2MAX.	62.0 x 44.0	5.0V	Parallel
	TSM16032C	KS0107+1521	146.0 x 43 x 12.30MAX.	122 x 32.8	5.0V	Parallel
160x64	TSM24064A	T6963C	180 x 62.0 x 14.5MAX.	132.0 x 39.0	5.0V	Parallel
240x128	TSM240128A	T6963C	144.0 x 104.0 x 12.0MAX.	114.0 x 64.0	5.0V	Parallel
256x128	TSM256128C		147.0 x 116.0 x 14.6MAX.	122.0 x 70.0	5.0V	Parallel
320x240	TSM320240A	RA8835/8806	160.0 x 109.0 x 13.0MAX.	122.0 x 92.0	3.3V / 5.0V	Parallel

Character Module List

Dots	Model Name	Outline Dimension(mm)	V.A(mm)	Supply Voltage	Remark
16x1	TSM1601A	80.0 x 36.0 x 10.1MAX.	64.5 x 16.0	3.3V / 5.0V	反射Reflective
16x2	TSM1602A	80.0 x 36.0 x 13.1MAX.	64.5 x 16.0	3.3V / 5.0V	
	TSM1602B	122.0 x 44.0 x 14.6MAX.	99.0 x 24.0	5.0V	STN-Gray/FSTN
	TSM1602-A101	84.0 x 44.0 x 13.5MAX.	61.0 x 15.8	3.3V / 5.0V	
16x4	TSM1604B	87.0 x 60.0 x 14.3MAX.	61 x 25.2	3.3V / 5.0V	
20x4	TSM2004A	98.0 x 60.0 x 14.2MAX.	76.0 x 25.8	3.3V / 5.0V	
40x2	TSM4002A	182.0 x 33.5 x 14.0MAX.	155.1 x 16.0	3.3V / 5.0V	

COG LCD Module List

Display mode	Part Number	Outline mm	Driver IC	Interface
12864	TSG12864-MD6	52.4x77.4x3.5max	ST7565R	parallel/ serial
	TSG12864Y-01	39x58.2x8.0max	NT75451	parallel
	TSG12864I-18J	52.2X71.3x6.1max	ST7565R	parallel/ serial
	TSG12864M-F-A	32X47x2.0max	ST7565R	parallel/ serial
	TSG12864K1	89.8X54.6X7.0MAX.	NT7534	parallel

Custom LCD / LCM



- Fuel Dispenser Customized Segment
- Long Life Time up to 150000
- TN LCD panel, Duty 1/1
- Super wide working Temp range: -40c-+90c
- Sunlight readable, Anti-UV



- Electric motor, VA type LCD panel
- Super wide temperature -30-+80
- Vivid mix-colors available
- Anti-UV, Anti-vibration
- High- brightness backlight.



- Cloth Washing Machine, STN Negative type
- Inset Touch key function
- Anti-vibration
- Anti-glare and high brightness



- Air Cleaner Instrument, HTN negative type with Surface four color printing

Customized Requirements

TS Display Basic requirements of LCD Module

Customer Information	Company:	Contact:		
	Email:	TEL:		
Dimensions				
			Module size(WxHxT)=	A() x B() x C() mm
			Viewing Area(WxH)=	E() x F() mm
			Active Area(WxH)=	G() x H() mm
LCD Panel	Character Type:	() Characters x () Lines		
	Graphics Type:	() Dots x () Dots		
	Segment Type:	(Please fill the display contents here.)		
Display Contents	Liquid Crystal:	TN[], HTN[], STN Yellow-Green[], STN Gray[], STN Blue[], FSTN[], DFSTN[]		
	Polarizer Mode:	Reflective[], Transflective[], Transmissive[]		
	Display Mode:	Positive[], Negative[]		
	Viewing Angle:	6:00[], 12:00[], Other[]		
Backlight	Type:	Without[], LED Array[], LED Edge[], other[]		
	Colour:	Green[], Yellow-Green[], White[], Green[], Blue[], Orange/Amber[], Other[]		
Specified IC	LCD driver:(): Controller:()			
Product form	LCD panel[], COB(LCD module)[], COG[], COF[]			
Connector:	Zebra[], Metal pin[], FPC[], FFC[], Heat seal[]			
Operating Temperature:	0 to +50°C [], -10 to +60°C [], -20 to +70°C [], -30 to +80°C []			
Operating Environment:	Outdoors[], Indoors[]			
Operating Voltage:	3V [], 3.3V [], 5V [], Other[]			
Application:				
Other Requirements:				
<p>Notes: 1. Please fill "Y" in the matched [] and your particular requirements in the () and bank. 2. Please send us the draft diagram of LCD you need if you have.</p>				

How to customize your LCD ?

Customized flow chart

1. Project scope clarification
2. Fill TSD Requirements form
3. Engineering analysis
4. Cost Evaluation
5. Customer confirmation
6. Pre-drawing or specification
7. Customer confirmation
8. Sampling
9. Customer approval
10. Mass Production