Display Innovation, Make Values

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.
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.


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.


Who is TSD

Shenzhen Team Source Display Technology Co., Ltd. Established in 2004. Head Office in Shenzhen, factory in Dongguan. 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 oversea’s market.

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

深圳市一众显示科技有限公司成立于2004年（品牌TSD），总部位于广东省深圳市，工厂位于东莞凤岗，是一家专业研发显示器件的高科技企业。公司拥有从研发设计、生产、销售和服务为一体的完整生产链和ISO质量体系，产品包括彩色TFT屏、电容电感触摸屏、单色图形显示屏、字符模块等。涵盖TN、HTN、STN、FPSTN、TFT等多种模式；触控COG、TAB、COB、SMT等多种工艺形式。

公司秉承严格高效的生产管理及完善的质量管理体系，ISO9001/ISO14001质量体系认证，为客户提供强有力的质量保障。专业研发设计团队和销售团队为客户提供全方位LCD设计解决方案，为更高效的服务和客户服务，我们始终坚持为客户提供最好的产品，为客户创造价值，实现共同双赢。 Provide the Best Products with the Best Service.
**Factory Tour**

- Dongguan factory
  - Interior views of a factory setting.

- Shenzhen headquarters
  - Exterior and interior views of an office building.

**Key Partners**

- Diagram showing key partners with logos such as ABB, 3M, etc.

- Text: Exported to more than 32 countries with thousands of different LCD/LCM solutions.

Provide the Best Products with the Best Service.

Display Innovation, Make Values.
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
Quality Control & System

Vibration Test Equipment

4 Times Process Electrical & structural testing

Humidity and Temperature Test Equipment

Burn-in Aging Testing Room

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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+G+G) 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
**TFT Special Solution**

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

**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

**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 products can be added AR film

**Ofilm Polarizer**
Ofilm Polarizer solution TFTs,
Viewing angle degree ≥ 80° 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 shape available: Round shape, polygonal shape, holey shape or irregular shape
Custom design logo printing
Surface treatment: AR, AG, AF coating.

**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 shock protection,
Anti-dust and moisture proof.
# TFT LCD Module List

| Module Code | Description | Size | Resolution | Display Area | Memory Interface | Viewing Angle (L/R|U|L/R) | Power Supply Voltage | Operating Temperature | Brightness | Interface | I/O | Screen Protector |
|-------------|-------------|------|------------|--------------|-----------------|----------------|---------------------|----------------------|-------------|------------|-----|-----------------|
| TST24QV15AR | 2.4 inch    | 2.8 inch | 3.3 inch   | 3.5 inch     | 4.3 inch        | 5.6 inch       | 4.3 inch            | 7.0 inch            |             |            |     |                 |
| TST28QV02AR | 2.8 inch    | 3.0 inch | 3.3 inch   | 3.6 inch     | 4.6 inch        | 6.0 inch       | 4.6 inch            | 7.3 inch            |             |            |     |                 |
| TST32QV08BR | 3.2 inch    | 3.5 inch | 3.8 inch   | 3.8 inch     | 4.8 inch        | 6.0 inch       | 4.8 inch            | 7.5 inch            |             |            |     |                 |
| TST35HV15AR | 3.5 inch    | 4.0 inch | 4.3 inch   | 4.3 inch     | 5.3 inch        | 6.6 inch       | 5.3 inch            | 7.8 inch            |             |            |     |                 |
| TST43I015CMX-P | 4.3 inch | 4.8 inch | 5.1 inch   | 5.1 inch     | 6.1 inch        | 7.2 inch       | 6.1 inch            | 8.4 inch            |             |            |     |                 |
| TST50WDS5AR | 5.0 inch    | 5.6 inch | 6.0 inch   | 6.0 inch     | 7.0 inch        | 8.0 inch       | 7.0 inch            | 9.0 inch            |             |            |     |                 |
| TST70DCB01-02WP | 7.0 inch | 7.6 inch | 8.0 inch   | 8.0 inch     | 9.0 inch        | 10.0 inch      | 9.0 inch            | 11.0 inch           |             |            |     |                 |

| Module Code | Description | Size | Resolution | Display Area | Memory Interface | Viewing Angle (L/R|U|L/R) | Power Supply Voltage | Operating Temperature | Brightness | Interface | I/O | Screen Protector |
|-------------|-------------|------|------------|--------------|-----------------|----------------|---------------------|----------------------|-------------|------------|-----|-----------------|
| TST44Q0QCS-01P | 4.4 inch | 5.4 inch | 5.6 inch   | 5.6 inch     | 6.6 inch        | 7.2 inch       | 6.6 inch            | 7.8 inch            |             |            |     |                 |
| TST08A02P-SE3 | 8.0 inch | 9.0 inch | 9.6 inch   | 9.6 inch     | 10.6 inch       | 11.6 inch      | 10.6 inch           | 11.8 inch           |             |            |     |                 |
| TST018AP-S13 | 1.8 inch   | 2.2 inch | 2.5 inch   | 2.5 inch     | 3.5 inch        | 4.0 inch       | 3.5 inch            | 4.5 inch            |             |            |     |                 |
| TST020CY-T01 | 2.0 inch   | 2.2 inch | 2.5 inch   | 2.5 inch     | 3.5 inch        | 4.0 inch       | 3.5 inch            | 4.5 inch            |             |            |     |                 |
| TST20QV1H01 | 2.0 inch   | 2.4 inch | 2.6 inch   | 2.6 inch     | 3.6 inch        | 4.2 inch       | 3.6 inch            | 4.6 inch            |             |            |     |                 |
| TST202ACH03-2B | 2.0 inch | 2.4 inch | 2.6 inch   | 2.6 inch     | 3.6 inch        | 4.2 inch       | 3.6 inch            | 4.6 inch            |             |            |     |                 |
| TST220HY-01S | 2.2 inch   | 2.6 inch | 2.8 inch   | 2.8 inch     | 3.8 inch        | 4.3 inch       | 3.8 inch            | 4.8 inch            |             |            |     |                 |
| TST24087CML-01P | 2.4 inch | 2.8 inch | 3.0 inch   | 3.0 inch     | 4.0 inch        | 4.5 inch       | 4.0 inch            | 5.0 inch            |             |            |     |                 |

| Module Code | Description | Size | Resolution | Display Area | Memory Interface | Viewing Angle (L/R|U|L/R) | Power Supply Voltage | Operating Temperature | Brightness | Interface | I/O | Screen Protector |
|-------------|-------------|------|------------|--------------|-----------------|----------------|---------------------|----------------------|-------------|------------|-----|-----------------|
| TST144Q0QCS-01P | 14.4 inch | 15.6 inch | 16.8 inch   | 16.8 inch     | 17.8 inch       | 18.8 inch      | 17.8 inch           | 19.8 inch           |             |            |     |                 |
| TST180A02P-SE3 | 18.0 inch | 19.0 inch | 20.0 inch   | 20.0 inch     | 21.0 inch       | 22.0 inch      | 21.0 inch           | 23.0 inch           |             |            |     |                 |
| TST218AP-S13 | 2.1 inch   | 2.3 inch | 2.5 inch   | 2.5 inch     | 3.5 inch        | 4.0 inch       | 3.5 inch            | 4.5 inch            |             |            |     |                 |
| TST220CY-T01 | 2.2 inch   | 2.4 inch | 2.6 inch   | 2.6 inch     | 3.6 inch        | 4.2 inch       | 3.6 inch            | 4.6 inch            |             |            |     |                 |
| TST20QV1H01 | 2.0 inch   | 2.4 inch | 2.6 inch   | 2.6 inch     | 3.6 inch        | 4.2 inch       | 3.6 inch            | 4.6 inch            |             |            |     |                 |
| TST202ACH03-2B | 2.0 inch | 2.4 inch | 2.6 inch   | 2.6 inch     | 3.6 inch        | 4.2 inch       | 3.6 inch            | 4.6 inch            |             |            |     |                 |
| TST220HY-01S | 2.2 inch   | 2.6 inch | 2.8 inch   | 2.8 inch     | 3.8 inch        | 4.3 inch       | 3.8 inch            | 4.8 inch            |             |            |     |                 |
| TST24087CML-01P | 2.4 inch | 2.8 inch | 3.0 inch   | 3.0 inch     | 4.0 inch        | 4.5 inch       | 4.0 inch            | 5.0 inch            |             |            |     |                 |
## TFT LCD Module List

<table>
<thead>
<tr>
<th>Model</th>
<th>Size</th>
<th>Resolution</th>
<th>Display Area</th>
<th>Module Specification</th>
<th>Viewing Angle (L/R)</th>
<th>Power Supply Voltage (VDC)</th>
<th>Operating Temperature</th>
<th>Interface</th>
<th>Type</th>
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<td>240 x 320</td>
<td>43.4 x 27.5</td>
<td>5000 x 2048</td>
<td>60°</td>
<td>2.5V</td>
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<td>60.8 x 91.44</td>
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<td>3.3V</td>
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<td>480 x 640</td>
<td>100 x 133.1</td>
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<td>60°, 45°, 45°</td>
<td>5V</td>
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<td>RGB-24-bit</td>
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<th>Model</th>
<th>Size</th>
<th>Resolution</th>
<th>Display Area</th>
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<th>Viewing Angle (L/R)</th>
<th>Power Supply Voltage (VDC)</th>
<th>Operating Temperature</th>
<th>Interface</th>
<th>Type</th>
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<td>100 x 133.1</td>
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<td>TST45WV70-01</td>
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<td>153 x 190.5</td>
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<td>5V</td>
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<td>1920 x 1440</td>
<td>490 x 370</td>
<td>72000 x 57600</td>
<td>60°, 45°, 45°</td>
<td>5V</td>
<td>-20°C to 70°C</td>
<td>SPI</td>
<td>NOV-9PCFP</td>
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<tr>
<td>TST80MMWN-07</td>
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<td>1920 x 1440</td>
<td>490 x 370</td>
<td>72000 x 57600</td>
<td>60°, 45°, 45°</td>
<td>5V</td>
<td>-20°C to 70°C</td>
<td>SPI</td>
<td>NOV-9PCFP</td>
</tr>
</tbody>
</table>
**Custom LCD / LCM**

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

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

Air Cleaner Instrument, HTN negative type
Surface four color printing

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

How to customize your LCD

**Customized flow chart**

1. Project scope clarification
2. Fill T3D 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

**Customized Requirements**

**TS Display Basic requirements of LCD Module**

<table>
<thead>
<tr>
<th>Customer Information</th>
<th>Company:</th>
<th>Contact:</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Email:</td>
<td>TEL:</td>
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**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 Grey[ ], [ ] STN Blue[ ], [ ] FSTN[ ], [ ] DSTN[ ]
- Polarizer Mode: [ ] Reflective[ ], [ ] Transmissive[ ], [ ] 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**

- [ ] Wire[ ], [ ] Ribbon[ ], [ ] FPC[ ], [ ] FPC[ ], [ ] Heat seal[ ]

**Operating Temperature**

- 0°C to +50°C[ ], -10°C to +60°C[ ], -10°C to +70°C[ ], -20°C to +70°C[ ]

**Operating Environment**

- [ ] Outdoors[ ], [ ] Indoors[ ]

**Operating Voltage**

- 3V[ ], 3.3V[ ], 5V[ ], Other[ ]

**Application**

- [ ] LCD[ ], Display[ ], Monitor[ ], Other[ ]

**Other Requirements:**

- Notes: 1. Please fill "[ ]" 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.