

MODEL	:	**TY029FWL02NH**
ISSUED DATE	:	**2025-04-09**
VERSION	:	**1.0**

● Version Record

Issued Date	Description	Version	Editor	Audit
2025-4-9	First release	1.0	Pearl	

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1. Hardware Introduction

1.1. Pinout IO Definitions

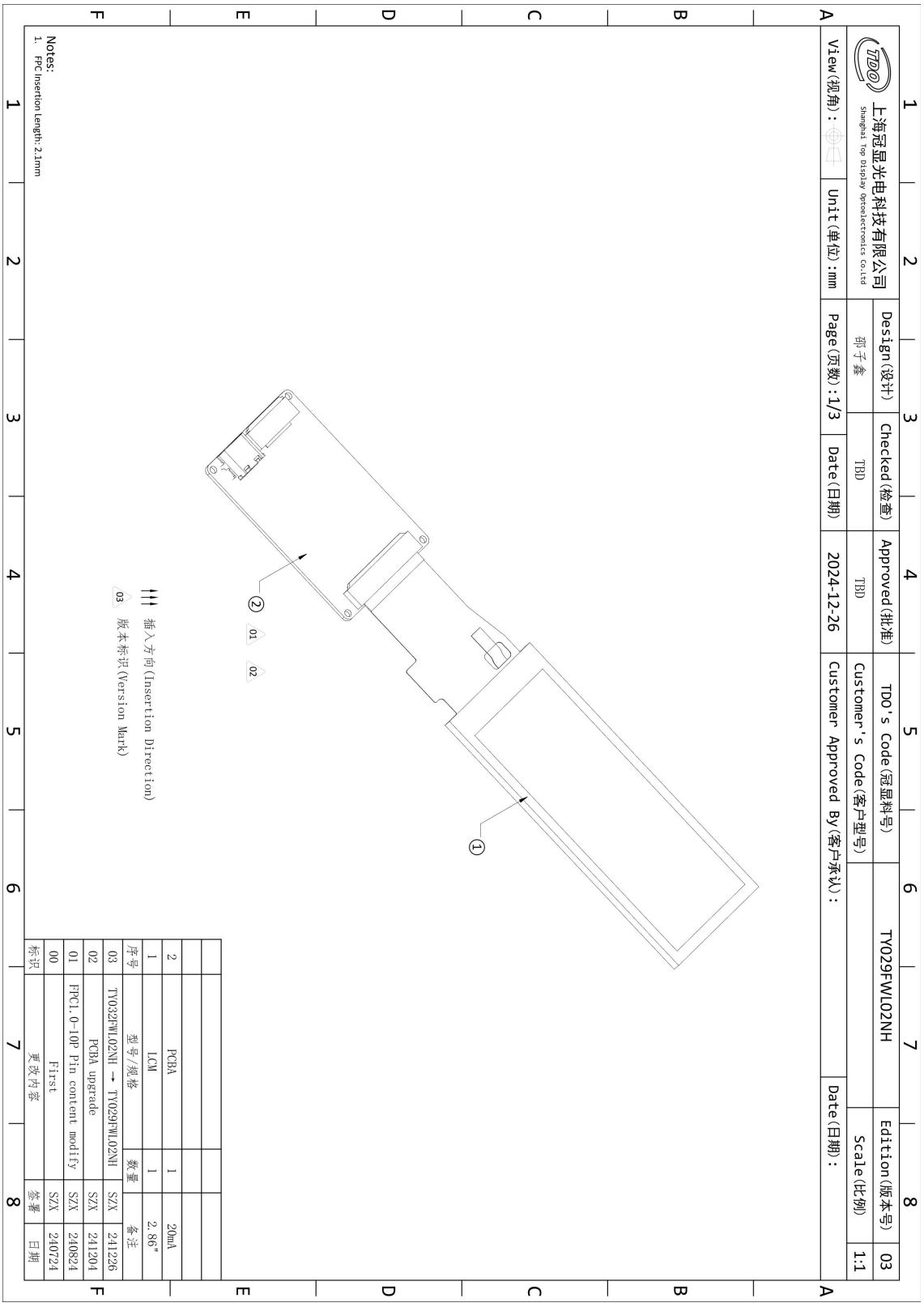
Number	Pin Name	Reset state	Function	Note
1	VCC	-	POWER-IPUT, 5~15V	All multiplexed functions can be forced to convert to GPIO when not in use
2	VCC	-	POWER-IPUT, 5~15V	
3	PA2	Z	Default function: I2C1-SCL (Need to connect 2~5KΩ pull-up resistor)	
4	PA3	Z	Default function: I2C1-SDA (Need to connect 2~5KΩ pull-up resistor)	
5	PA5	Z	Default function: UART2-RX (Connect to user's TX)	
6	PA4	Z	Default function: UART2-TX (Connect to user's RX)	
7	PB6	Z	Default : AUDIO-PA-EN (High level- no audio output Low level -audio output)	
8	PE13	Z	Default : SPK (Connect to audio amplifier)	
9	GND	-	POWER-GND	
10	GND	-	POWER-GND	

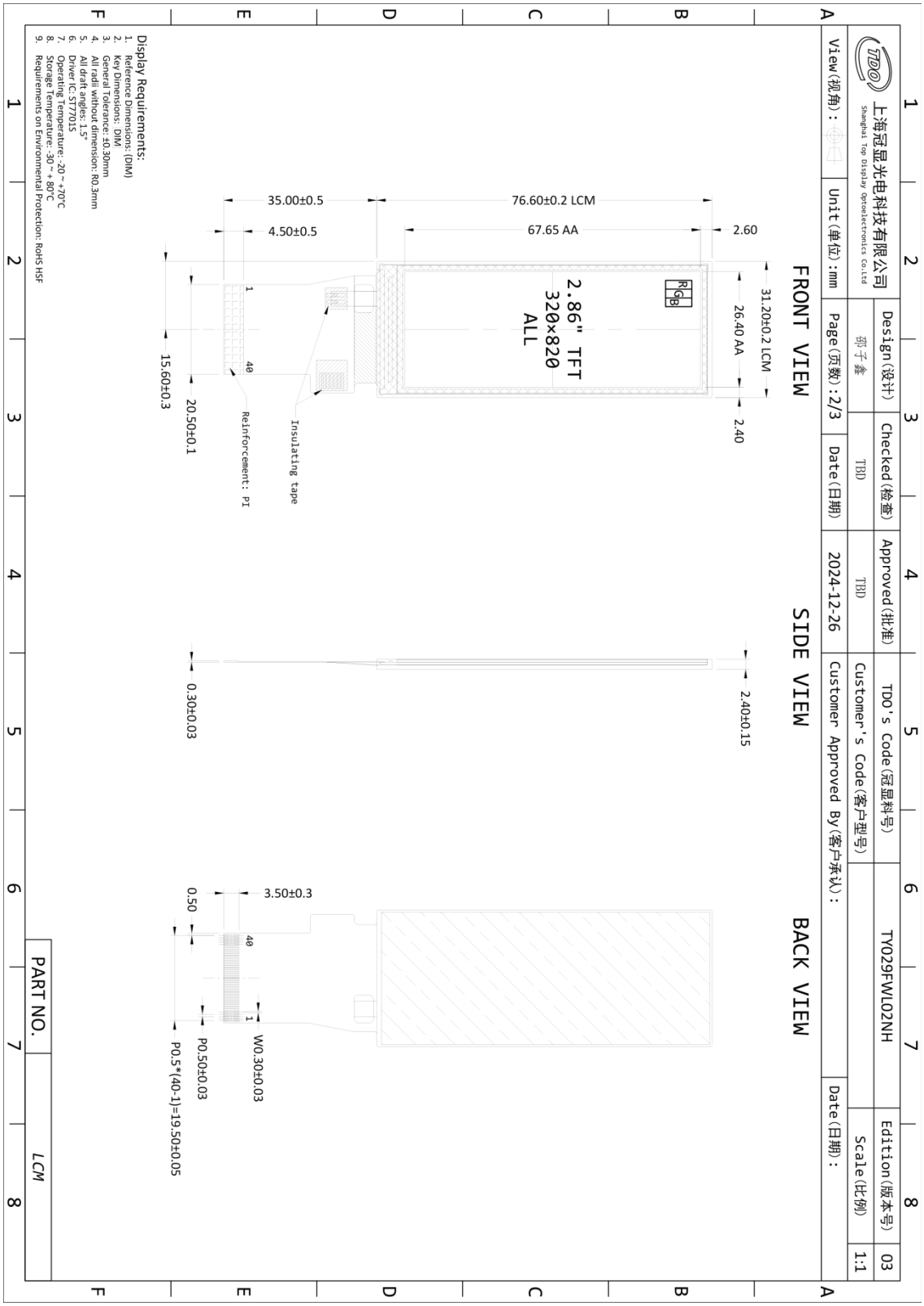
2. Product Specifications

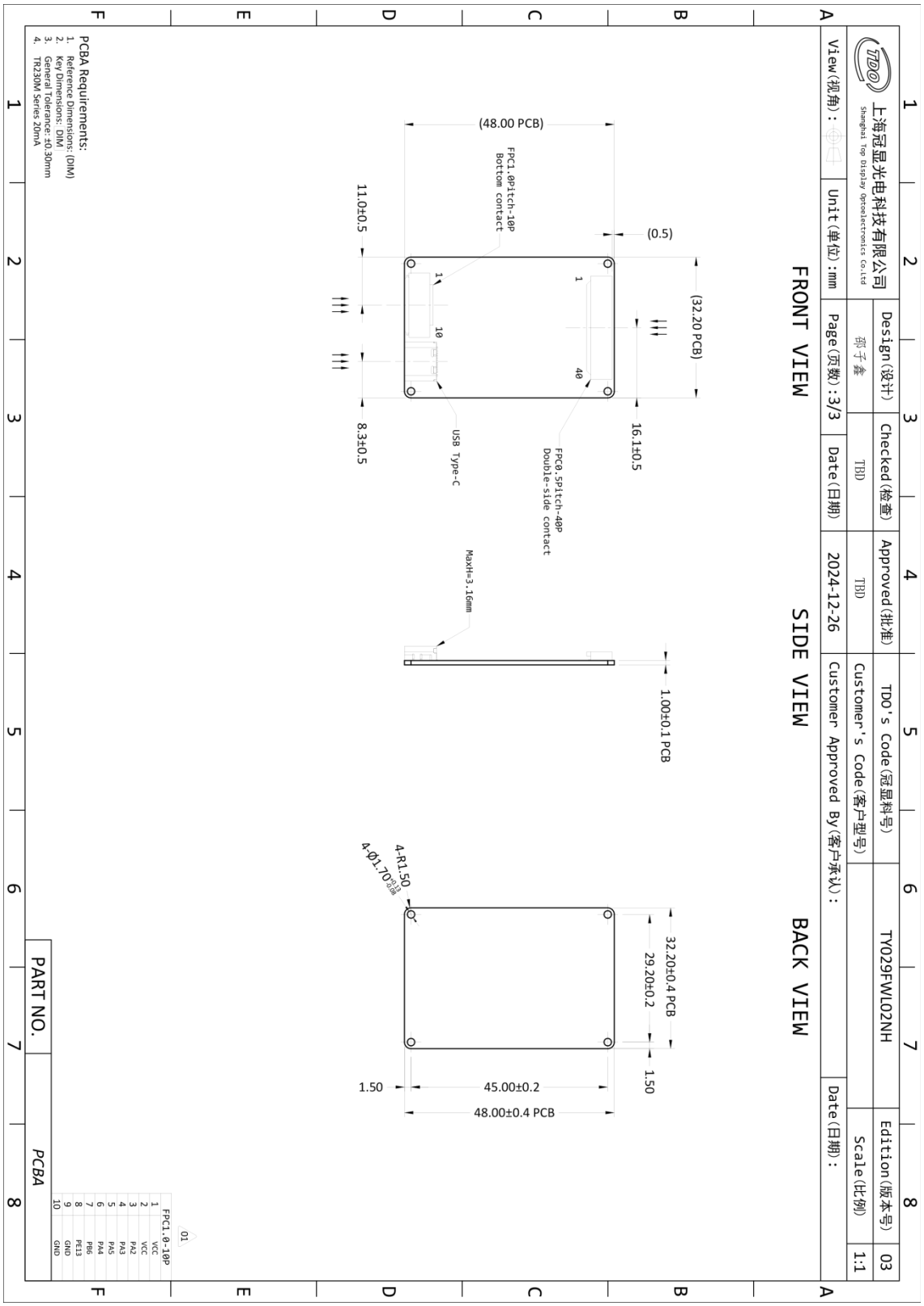
● Product parameter	
Model	TY029FWL02NH
Product serial	MINI board
Core processor	TR230M
Size	2.86 inch
Resolution	320RGB×820
Active area(mm)	26.40(W)×67.65(H)
Product size(mm)	Screen: 31.20(W)×111.60(H)×2.40(T) Board: 32.20(W)×48.00(H)×4.16(T)
Color	262K
Storage	Customer available 16 M
Pictures format	JPG/PNG
Download pictures	TF Card (Needs to be combined with a debugging tool)
Firmware update	TF Card (Needs to be combined with a debugging tool)
● LCD screen	
Display type	TFT LCD IPS
Back light	LED
Brightness(cd/m²)	300

Backlight life(hour)	20000
Contrast	900
Perspective(T/B/L/R)	(80/80/80/80)
● Touch panel	
Touch mode	None
● Environmental electrical parameters	
Voltage	4.0~15V, typical 5V DC
Power consumption	5V/100mA (Max brightness) 5V/26mA (Backlight off)
Working temperature	-20℃ ~ 70℃
Storage temperature	-30℃ ~ 80℃
Working humidity	10%~90%RH
Storage humidity	10%~90%RH
● Communication interface parameters	
Communication mode	3.3V TTL
Baud	2400~3Mbps, typical value is 115200
Data frame format	8N1
Communication plug-in specification	10Pin_FPC_1.0mm

3. Product Size




上海冠显光电科技有限公司
Shanghai Top Display Optoelectronics Co.Ltd
View(视角):
Unit(单位):mm
Design(设计)
邬子鑫
Checked(检查)
TBD
Approved(批准)
TBD
TDO's Code(冠显料号)
TY029FWL02NH
Customer's Code(客户型号)
Customer Approved By(客户承认):
Page(页数):2/3
Date(日期)
2024-12-26
Date(日期):
Edition(版本号)
03
Scale(比例)
1:1
FRONT VIEW
SIDE VIEW
BACK VIEW
35.00±0.5
4.50±0.5
76.60±0.2 LCM
67.65 AA
2.60
31.20±0.2 LCM
26.40 AA
2.40
2.86" TFT
320×820
ALL
RGB
15.60±0.3
20.50±0.1
Reinforcement: PI
Insulating tape
0.30±0.03
2.40±0.15
3.50±0.3
0.50
W0.30±0.03
P0.50±0.03
P0.5*(40-1)=19.50±0.05
Display Requirements:
1. Reference Dimensions: (DIM)
2. Key Dimensions: DIM
3. General Tolerance: ±0.30mm
4. All radii without dimension: R0.3mm
5. All draft angles: 15°
6. Driver IC: ST7701S
7. Operating Temperature: -20~+70°C
8. Storage Temperature: -30~+80°C
9. Requirements on Environmental Protection: RoHS HSF
PART NO.
LCM

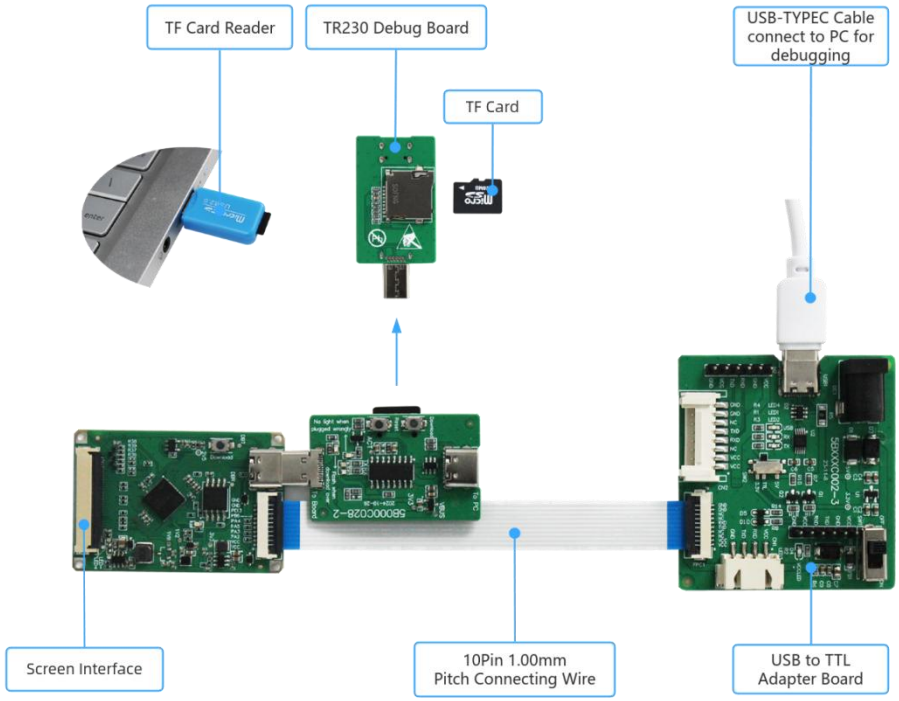


(Product drawings)

4. Debugging Tools

It is recommended for new users of TDO smart LCMs to purchase official accessories.

For more details, please refer to customer service center.



(Non-physical model, for reference only)

5. Model Definition

T Y 029 FW L 02 N H

1 2 3 4 5 6 7 8

① : 1 position--TDO abbreviation, fixed。

② : 1 position--U(U series serial port)/P(parallel port)/Y(Y series serial port)/H(HDMI interface type)/S(adapter board)/L

③ : 3 position--size,eg.029->2.86 inch

④ : 2 position--resolution abbreviation

⑤ : 1 position--H (standard series)/C (basic series)/L (MINI board series)/P (with housing series)/M (medical series)/A (AV series)

⑥ : 2 position---serial number

⑦ : 1 position---CT (with capacitive touch panel)/RT (with resistive touch panel)

⑧ : 1 position-----Platform: F-TR660 / G-TR540 / H-TR230M /J -TR240 / K-TR661 / DTR670 / 0-Android / 1-Linux

Note: There is no key structural process modification or major layout adjustment, only changes in product process or reliability. The company will not initiate changes to the outside world. The specific items are subject to the received items.

6. Packaging and Physical Dimensions

Single product weight					
Net weight (G)	TBD				
Packaging standard and total weight					
Packing box model	Packing box size (length*width*height, unit: mm)	Layers	Quantity (PCS)/layer	Total quantity (pieces)	Total weight (KG)

7. Sale and Service



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8. Disclaimer

This document provides product information about Shanghai Top Display Optoelectronics Technology Co., Ltd. (hereinafter referred to as Shanghai Top Display), which aims to assist customers to speed up product development progress, short development cycles, any routine programs provided in the service process or other channels , technical documents, data manuals, product drawings and other materials and information are for reference only, and customers have the right not to use or to modify and use for their own reference. The company does not provide any guarantee of completeness and reliability. If the customer causes special, incidental or indirect losses for any reason during the use process, the company does not assume any responsibility.