

PREPARED BY : (制作人 :) QHQ	 EASYQUICK TECHNOLOGY SPECIFICATION 深圳市易快来科技股份有限公司	SPEC No: (规格型号:) EQT686DKU002P
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		APPLICABLE DIVISION (适用范围) ☒ LCD DIVISION ☒ 液晶模组 LCM

For **HD-** TFT LCD Module& CTP Model No

EQT686DKU002P SPEC

Customer side signature (客户方签名)			
部门 \ 签名	Acknowledge (承认人)	Date (日期)	Remarks (备注)
Structure (结构)			
Electronics (电子)			
PM (项目)			
Quality (品质)			

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1. Application（应用）

This data sheet is to introduce the specification of **EQT686DKU002P** active matrix **16.7M** color TFT LCD module.

Main color LCD module is controlled by Driver IC **ICNL9707**.

If any problem occurs concerning the items not stated in this specification, it must be solved sincerely by both parties after deliberation.

As to basic specification of driver IC refer to the IC specification and handbook.

本规格书是为了介绍 **EQT686DKU002P** 有源矩阵 **16.7M** 彩色 TFT LCD 模块的规格。

主彩色液晶显示模块由驱动芯片 **ICNL9707** 控制

本规范未尽事宜如有问题，双方必须认真协商解决。

驱动 IC 的基本规格参照《IC 规格书》和相关《手册》。

2. Construction and Outline（结构与大纲）

Construction: LCD panel, Driver (COG), FPC with electric components, **12** LED lump, prism sheet, diffuser, light guide and reflector, plastic frame to fix them mechanically.

There shall be no scratches, stains, chips, distortions and other external drawbacks that may affect the display function.

In order to realize thin module structure, double-sided adhesive tapes are used to fix LCD panels. As these tapes do not guarantee to permanently fix the panels, LCD panel may rise from the module when shipped from factory.

So please make sure to design the system to hold the edges of LCD panel by the soft material such as sponge when LCD module is assembled into the cabinet.

结构:液晶面板，驱动或 COG，带电子元件的 FPC, **12** 个白光 LED 块，棱镜片，扩散器，导光器和反射器，塑料框架机械固定。

不应有可能影响显示功能的划痕、污迹、芯片、畸变等外部缺陷。

为了实现薄型模块结构，采用双面胶带固定液晶面板。由于这些胶带不能保证永久有效固定面板，LCD 面板在出厂时可能会从模块内移动。

所以在液晶模块组包装和进柜时，请务必将包装设计成用海绵等软材料支撑液晶面板的边缘。

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3. Mechanical Specification（参数规格）

Table 1（表 1）

Item(项目)	Specifications(规格)	Unit（单位）
Screen size（屏幕尺寸）	6.86	inch
Display mode（显示模式）	MIPI	-
Active area（显示范围）	160.512(H)×60.192(V)	mm
Display format（分辨率）	480×RGB×1280	-
Pixel Size（像素尺寸）	0.1254(H) X0.1254(V)	mm
Pixel Arrangement（像素）	R. G. B. strip	-
Outline Dimensions（外形尺寸）	66.8(W)×181.2 (H)×6.75(D)	Note 1
View Angle（视角）	FULL VIEW	
Base color Notes（基色）	Normal Black	-
Weight（重量）	TBD	
Driver/ CTP IC（驱动/触摸 IC）	ICNL9707	

Note 1: Not include FPCs & Bezel extrude stucture.

备注 1: 不包括排线和面板构造

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4. Interface signals（接口信号）

Table 2 LCM PIN

Pin No.	LCD 接口 pin 定义	LCD 接口说明
1	NC	NC
2	VCC3V3	3.3V 电源
3	VCC3V3	3.3V 电源
4	GND	地
5	RESET	复位
6	VDD1V8	1.8V 电源（IOVCC）
7	GND	地
8	D0N	MIPI-D0N
9	D0P	MIPI-D0P
10	GND	地
11	D1N	MIPI-D1N
12	D1P	MIPI-D1P
13	GND	地
14	CLK-	MIPI-CLKN
15	CLK+	MIPI-CLKP
16	GND	地
17	D2N	MIPI-D2N
18	D2P	MIPI-D2P
19	GND	地
20	D3N	MIPI-D3N
21	D3P	MIPI-D3P
22	GND	地
23	NC	NC
24	NC	NC
25	GND	GND
26	ID1-3V3	ID1-3V3
27	ID-VCC-NC	ID-VCC-NC
28	ID0-3V3	ID0-3V3
29	NC	NC
30	GND	地
31	LED-	背光负极
32	LED-	背光负极
33	NC	NC
34	NC	NC

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35	NC	NC
36	NC	NC
37	NC	NC
38	NC	NC
39	LED+	背光正极
40	LED+	背光正极

Notes: 2.FPC Connector 40pin

备注: 2.40pin 排线连接器定义

Table 3（表 3）

Assembled on (组装)	Item（条目）	Description（描述）
Phone PWB (手机主板)	Connector Type (连接类型)	Connection（插接）
	Pin Amount（数量）	40
	Manufacturer (制造商)	/
	Part Number(零件号)	196532-40041-3

Notes: 3.FPC Connector Type

备注:3.排线连接器类型

5.LED back light (背光灯)

At main panel the back light uses 12 pcs edge light type white LED.

在背光的主面板用 12 颗白色 LED 灯

Table 8 (表 8)

Parameter (参数)	Symbol (样品)	Min. (最小值)	Typ. (标准值)	Max. (最大值)	Unit (单位)	Remark (备注)
LED Voltage (LED 电压)	VLED	8.4	9	9.6	V	[Note 5-2]
LED Current (LED 电流)	ILED	-	180	-	mA	
Power Consumption (电功率)	WLED	-	1620	-	mW	[Note 5-2]
Number of LED components (LED 组成部件数量)		12			PCS (片)	
Connection Type(Serial/Parallel/Other) 连接类型(串联/并联/其他)		3x4 LEDs				

Note:

*12 pcs of LED

*Please consider Allowable Forward Current on used temperature

*12 颗灯

* 请考虑允许范围内的正向电流的使用温度

■ Ambient Temperature vs. Allowable Forward Current

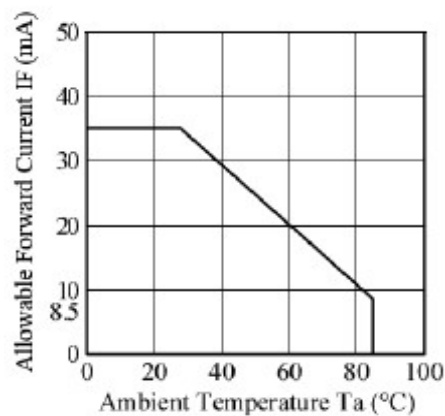
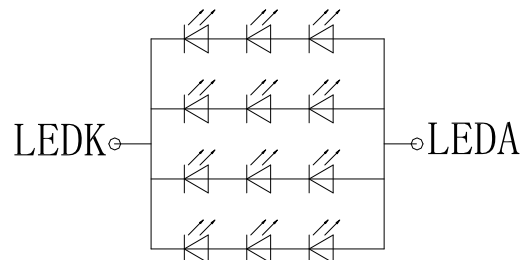


Fig.1 (图 1)



LED CIRCUIT DIAGRAM:

3S4P=12LED

VF=9.0V ± 0.6 ; IF=180mA

Fig.2*Schematics drawing of lighting (绘制照明图 图.2)

Note: Logic high and low levels are specified as 30% and 70% of IOVCC for Input signals.

Note: Ta = -30 to 70 °C, IOVCC=1.65V to 3.3V, VCI=2.5V to 3.3V, GND=0V

备注: 指定逻辑高和低电平作为输入信号IOVCC的70%和30%。

备注: Ta = -30 to 70 °C, IOVCC=1.65V to 3.3V, VCI=2.5V to 3.3V, GND=0V

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6. Optical Characteristics (光学特征)

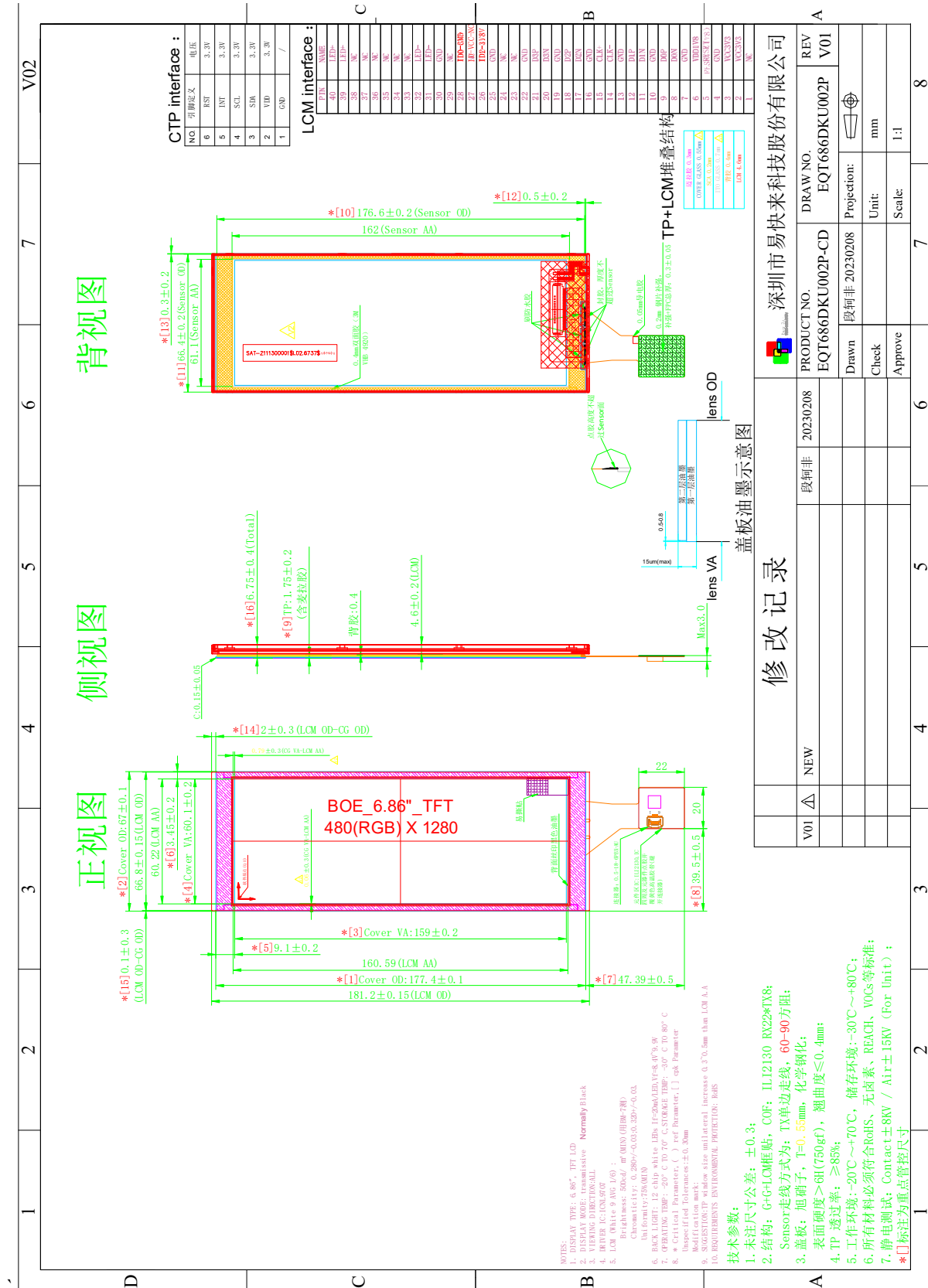
Table 9 (表 9)

Item 项目		Symbol (样品)	Condition (条件)	Min. (最小值)	Typ. (标准值)	Max. (最大值)	Unit (单位)	Remark (备注)
Response time (响应时间)	Rise (上升) +Fall (下降)	Tr+Tf	$\theta=0^\circ$	-	-	40	ms	
Brightness (亮度)		Br	$\theta=0^\circ$	500	-	-	Cd/m ²	
Contrast ratio (对比度)		CR	$\theta=0^\circ$	1000	1500	-	-	
Viewing angle(with Polarizer) (视角)	Top (顶部)		90°	70	85	-	degree	
	Bottom (底部)		270°	70	85	-		
	Left (左边)		180°	70	85	-		
	Right (右边)		0°	70	85	-		
White Chromaticity (白色色度)		X	$\theta=0^\circ$	0.25	0.28	0.31	-	
		Y		0.29	0.32	0.35	-	
NTSC (色彩饱和度)			-	65	70	-	%	

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7. LCD Module Outline dimensions (模组外形图)

Fig.3 (图3)



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8. Packaging Specification

1.1 Package quantity in one Box :(TBD)

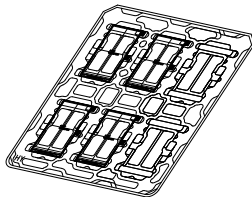
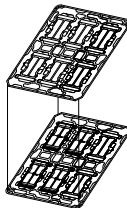
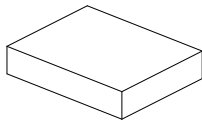
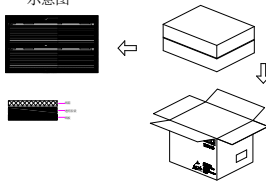
1.2 Box Size : 380cm*330cm*210cm

1.3 1 BOX = 2 CARTON

1.4 1 CARTON = 10(Full tray) + 1 (dummy / top tray) =11 tray

1.5 1 TRAY =(TBD) PCS LCM

注：此为示意图

(1) 模块平放入吸塑盘内， 每盘放6PCS产品 	(2) 吸塑盘交叉叠放 	(3) 十盘加一个空盘共10x6=60pcs 吸塑盘交叉叠放后用胶袋和胶 纸打包 叠放次序 B C A C B C A 
(4) 真空包装 将打包好的产品装进包装袋并抽真空密封， 	(5) 产品装箱 先在纸箱底下放一个纸板，让后放一小包产品进去， 在放一个纸板在上面，最后在放一个纸板在上面， 二包叠加装箱 示意图 	(6) 封箱 外箱标签中须体现供应 商名称、EQ料号及包装 数量。  外箱标签贴于侧面 数量：2x60=120 PCS/箱

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