

SPECIFICATION

Customer : _____
Basic Model : _____
Model Name : SAT043CP40D08B2-30671T051ZN
ERP NO. : _____
Spec Vision : _____
Date : _____

Preliminary Specification

Final Specification

Approved by	Comment

Prepared by	Reviewed by	Approved by

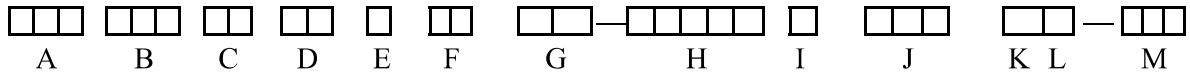
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1. Product List

NO.	ERP NO.	Mode Name	Remark
<input type="checkbox"/> 1	1010430096	SAT043CP40D08B2-30671T051ZN	Basic Model
<input type="checkbox"/> 2			
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2.Numbering System



No.	Definition	Specifications											
A	TFT LCM Productor No.	SAT-SAT INTERNATIONAL CO.LTD.											
B	Display monitor opposite angle linesize	Unit:mm(size<10inch:takes two integers;size>=10inch:takes three integers)											
C	LCD Brands	CP--CPT; AU--AUO; PV--PVI; TM--TIANMA; HS--HSD; CM--CMO; IV--IVO; BO--BOE; AT--INNOLUX											
D	Interface PIN Numbers	By two figures characters expression from 01 to 99											
E	LCD Type	A--Alternated Viode Signal; D--Data Viode Signal; H--High Definition ; I--IPS											
F	Back Light Circuit Diagram	07								22.4V,20mA*1			
		08								13.2V,20mA*2			
		09								9.6V,20mA*3			
G	The Back Light Color Area Definition	R2	X=0.282		Y=0.335								
		Y0	X=0.268		Y=0.296								
		Y1	X=0.281		Y=0.312								
		B1	X=0.270		Y=0.291								
		B2	X=0.257		Y=0.301								
H	Structure Size	4.3inch	30671		Thick:3.0mm		Width:67.1mm						
I	Interface Mode	T: TTL L: LVDS M: MIPI											
J	FPC Length	It represents the length of FPC with three figures, divided into long rows , middle rows and short rows.											
K	View Angles (CR≥10)	Symbol	Condition	Values									Unit
				Z			K			I			
				Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Degree
		θ_L	$\Phi=180^\circ(9\text{ o'clock})$..	40	60	85	..	
		θ_R	$\Phi=0^\circ(3\text{ o'clock})$..	50	70	85	..	
θ_T	$\Phi=90^\circ(12\text{ o'clock})$	..	50	..	..	70	..	..	85	..	
	θ_B	$\Phi=270^\circ(6\text{ o'clock})$	..	50	..	..	70	..	..	85	..
L:	Operating Mode	D: DE mode V: VSD mode F: Inverting mode N: No mode requirements											
M	Suffix	1.NULL ; 2.TP-- Touch panel; 3.other--Insignificance											

Remark : Will be subject to actual sample

3. General Specifications

No.	Item	Specification	Remark
1	LCD size	4.3 inch(Diagonal)	
2	Driver element	a-Si TFT active matrix	
3	Resolution	480 × 3(RGB) × 272	
4	Display Mode	Normally White	
5	Pixel pitch	0.198(W) X 0.198(H) mm	
6	Active area	95.04(W) X 3(RGB) X 53.856(H) mm	
7	Color arrangement	RGB-stripe	
8	Interface	TTL	
9	Backlight Power consumption	TBD	
10	Panel Power consumption	TBD	
11	Weight	TBD	

4. Pin Assignment

No.	Symbol	I/O	Function
1	VLED-	P	Power for LED backlight cathode
2	VLED+	P	Power for LED backlight anode
3	GND	P	Power ground
4	VDD	P	Power voltage
5	R0	I	Red data (LSB)
6	R1	I	Red data
7	R2	I	Red data
8	R3	I	Red data
9	R4	I	Red data
10	R5	I	Red data
11	R6	I	Red data
12	R7	I	Red data (MSB)
13	G0	I	Green data (LSB)
14	G1	I	Green data
15	G2	I	Green data
16	G3	I	Green data
17	G4	I	Green data
18	G5	I	Green data
19	G6	I	Green data
20	G7	I	Green data (MSB)
21	B0	I	Blue data (LSB)
22	B1	I	Blue data
23	B2	I	Blue data
24	B3	I	Blue data
25	B4	I	Blue data
26	B5	I	Blue data
27	B6	I	Blue data
28	B7	I	Blue data (MSB)
29	GND	P	Power ground
30	DCLK	I	Pixel clock
31	DISP	I	Display on/ off
32	HSYNC	I	Horizontal sync signal
33	VSYNC	I	Vertical sync signal
34	DE	I	Data enable
35	NC	-	No connect
36	GND	P	Power ground
37	X_R(NC)	I/O	Right electrode - differential analog
38	Y_B(NC)	I/O	Bottom electrode - differential analog
39	X_L(NC)	I/O	Left electrode - differential analog
40	Y_T(NC)	I/O	Top electrode - differential analog

5. Operation Specifications

5.1. Absolute Maximum Ratings

Item	Symbol	Values		Unit	Remark
		Min.	Max.		
Supply voltage	V_{DD}	-0.3	4.6	V	
Operation Temperature	T_{OP}	-20	70	°C	
Storage Temperature	T_{ST}	-30	80	°C	

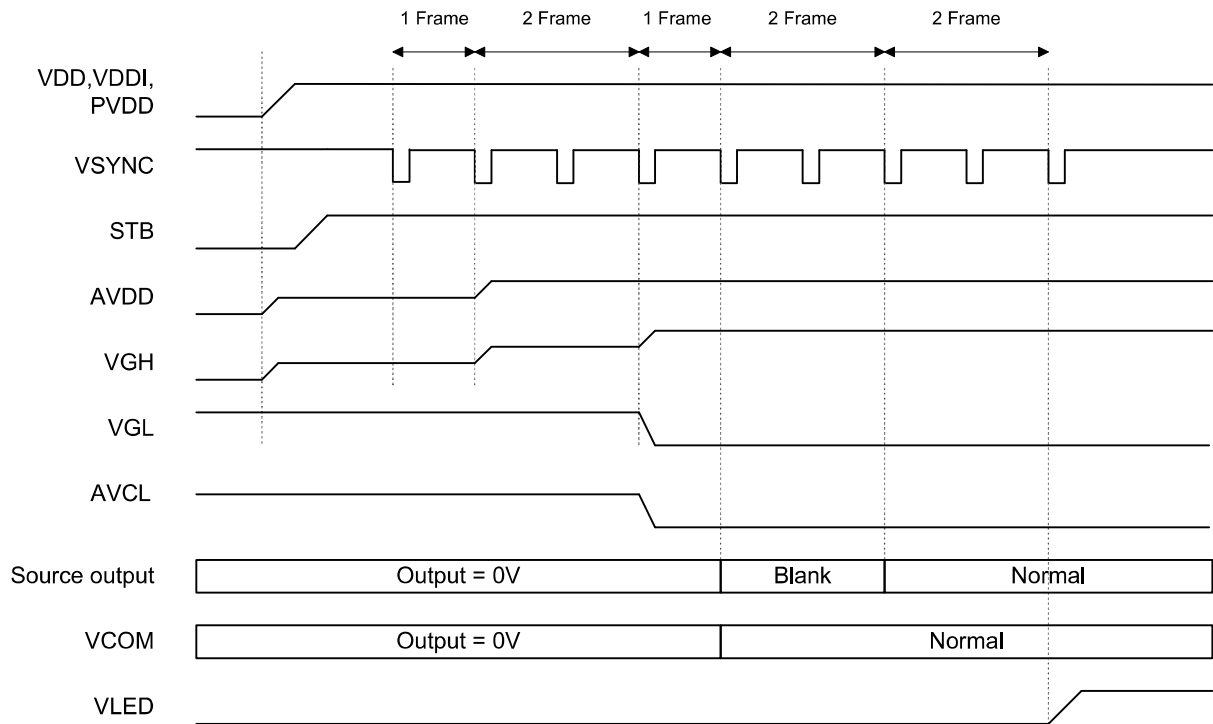
Note 1: The absolute maximum rating values of this product are not allowed to be exceeded at any times. Should a module be used with any of the absolute maximum ratings exceeded, the characteristics of the module may not be recovered, or in an extreme case, the module may be permanently destroyed.

5.1.1. Typical Operation Conditions

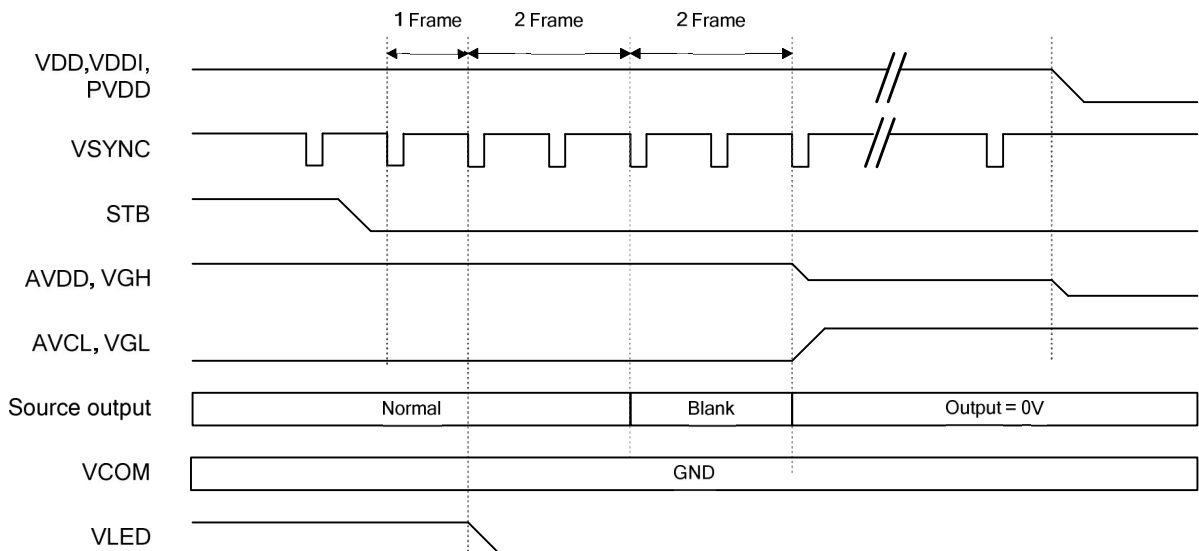
Item	Symbol	Values			Unit	Remark
		Min.	Typ	Max.		
Power voltage	V_{DD}	3.0	3.3	3.6	V	Note 2
Input logic high voltage	V_{IH}	$0.8 V_{DD}$	-	V_{DD}	V	Note 3
Input logic low voltage	V_{IL}	0	-	$0.2 V_{DD}$	V	

5.2. Power Sequence

5.2.1 Power On Sequence



5.2.2 Power Off Sequence



5.3. Timing Characteristics

5.3.1 RGB Timing Table

Parallel 24-bit RGB Timing Table

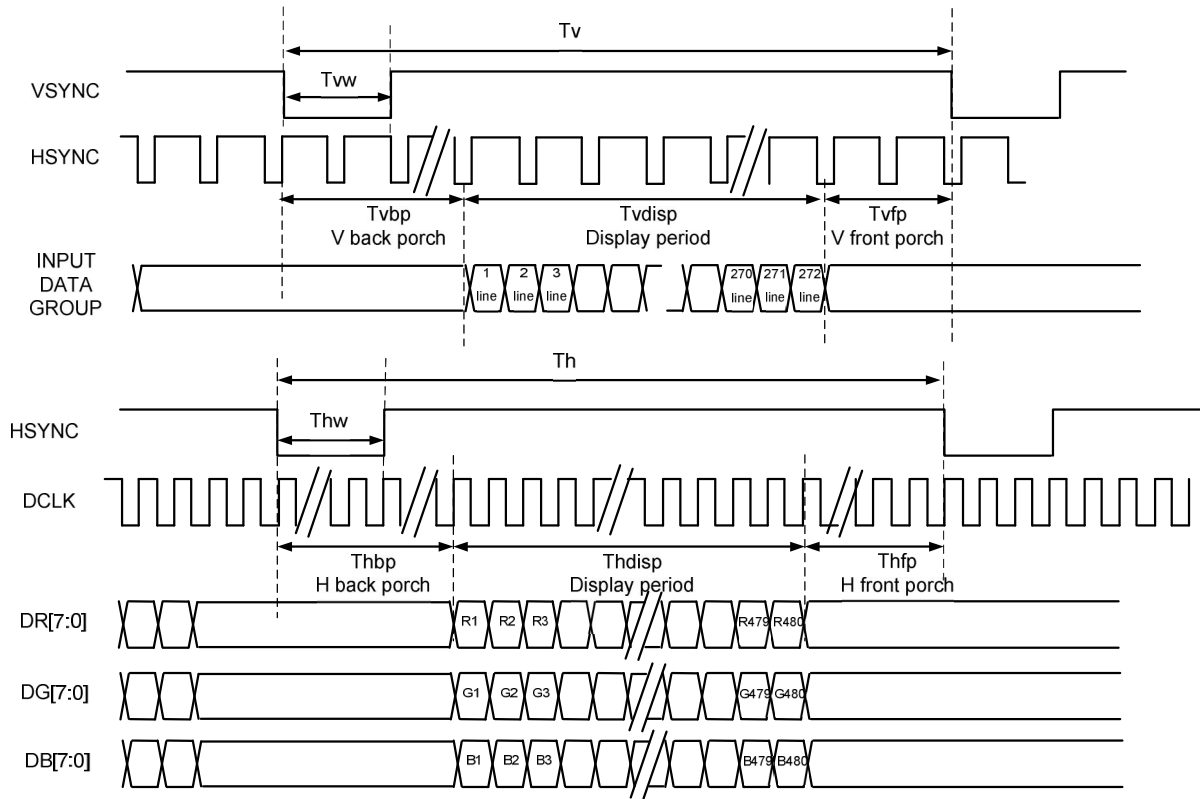
Item		Symbol	Min.	Typ.	Max.	Unit	Remark
DCLK Frequency		Fclk	9	12	15	MHz	
DCLK Period		Tclk	67	83	111	ns	
HSYNC	Period Time	Th	486	526	533	DCLK	
	Display Period	Thdisp		480		DCLK	
	Back Porch	Thbp	3	43	50	DCLK	By H_Blanking setting
	Front Porch	Thfp	2	2	2	DCLK	
	Pulse Width	Thw	1	1	1	DCLK	
VSYNC	Period Time	Tv	276	286	304	H	
	Display Period	Tvdisp		272		H	
	Back Porch	Tvbp	2	12	30	H	By V_Blanking setting
	Front Porch	Tvfp	1	1	1	H	
	Pulse Width	Tvw	1	1	1	H	

Series 8-bit RGB Timing Table

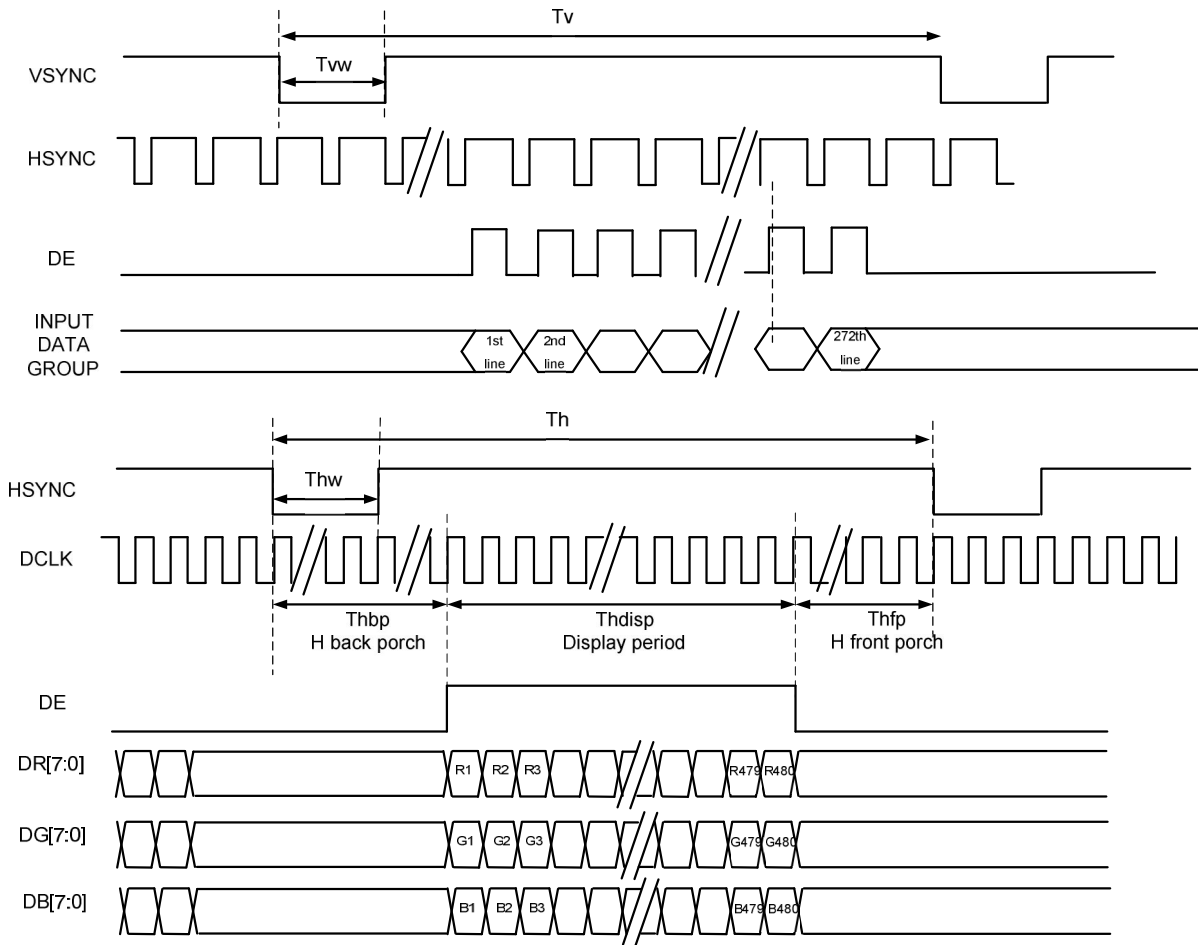
Item		Symbol	Min.	Typ.	Max.	Unit	Remark
DCLK Frequency		Fclk	24	27	30	MHz	
DCLK Period		Tclk	33	37	42	ns	
HSYNC	Period Time	Th	1560	1716	1900	DCLK	
	Display Period	Thdisp		1440		DCLK	
	Back Porch	Thbp	108	129	255	DCLK	By H_Blanking setting
	Front Porch	Thfp	12	147	205	DCLK	
	Pulse Width	Thw	1	1	50	DCLK	
VSYNC	Period Time	Tv	274	288	335	H	
	Display Period	Tvdisp		272		H	
	Back Porch	Tvbp	1	12	32	H	By V_Blanking setting
	Front Porch	Tvfp	1	4	31	H	
	Pulse Width	Tvw	1	10	30	H	

5.3.2 Timing Diagram

SYNC Mode Timing Diagram



SYNC-DE Mode Timing Diagram

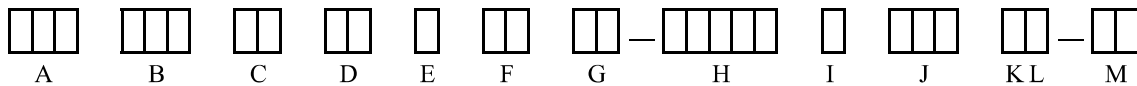


6. Optical Specifications

Ta=25°C

Item	Symble	Condition	Min.	Typ.	Max.	Unit	Remark	
Constrat ration	CR	$\theta=0^\circ$	250	350	..		The model shall prevail	
Responds Time	T_{on}	25°C	..	25	30	ms	..	
	T_{off}							
Color Chromaticity	White	Bcklight is on	x	0.250	0.280	0.310	..	Will be subject to actual sample
			y	0.290	0.320	0.360	..	
	Red		x	0.612	0.632	0.052	..	
			y	0.291	0.311	0.331	..	
	Green		x	0.277	0.297	0.317	..	
			y	0.516	0.536	0.556	..	
	Blue		x	0.12	0.14	0.16	..	
			y	0.134	0.154	0.174	..	
Uniformity	U		80	85	..	%	..	
NTSC			..	50	..	%	..	

6.1 Backlight Driving Table

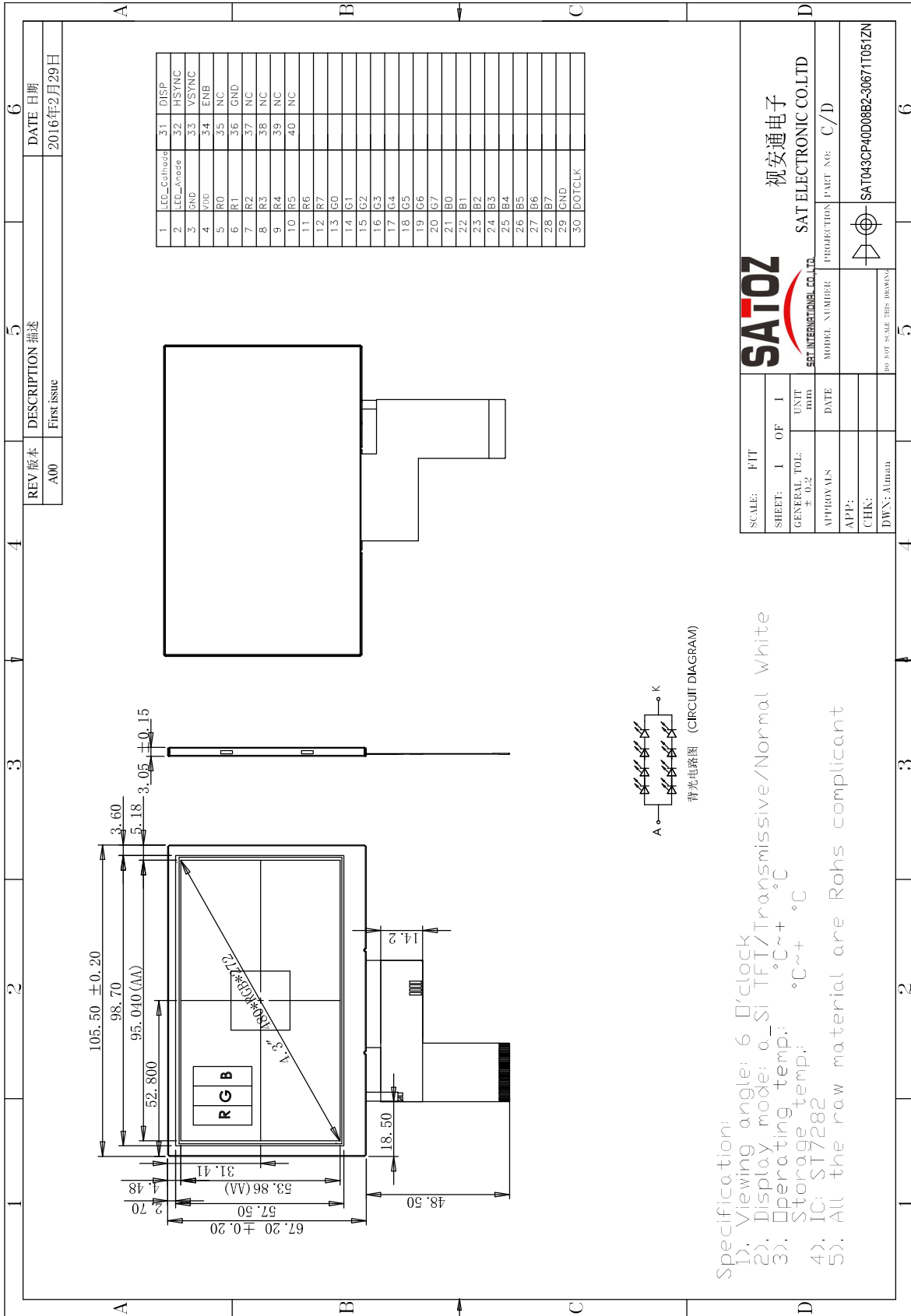


B	E	H	F		
			07	08	09
Luminance(BM-7 cd/m ²)					
4.3	D	30671		250 ± 15%	

Test Conditions:

1. VDD3.3V;Backlight current Reference model(note4)
- 2.The ambient temperature is 25°C
- 3.Will be subject to actual sample

7. Mechanical Drawing



REV 版本	A00
DESCRIPTION 描述	First issue
DATE 日期	2016年2月29日

SCALE: FIT	SHEET: 1 OF 1	UNIT: mm
GENERAL TOL: ± 0.2	DATE:	DATE:
APPROVALS:	MODEL NUMBER:	PROJECTION: PART NO: C/D
APP:		
CHK:		
DWN: Alimuh		
SAT043CP40D08B2-30671T051ZN		