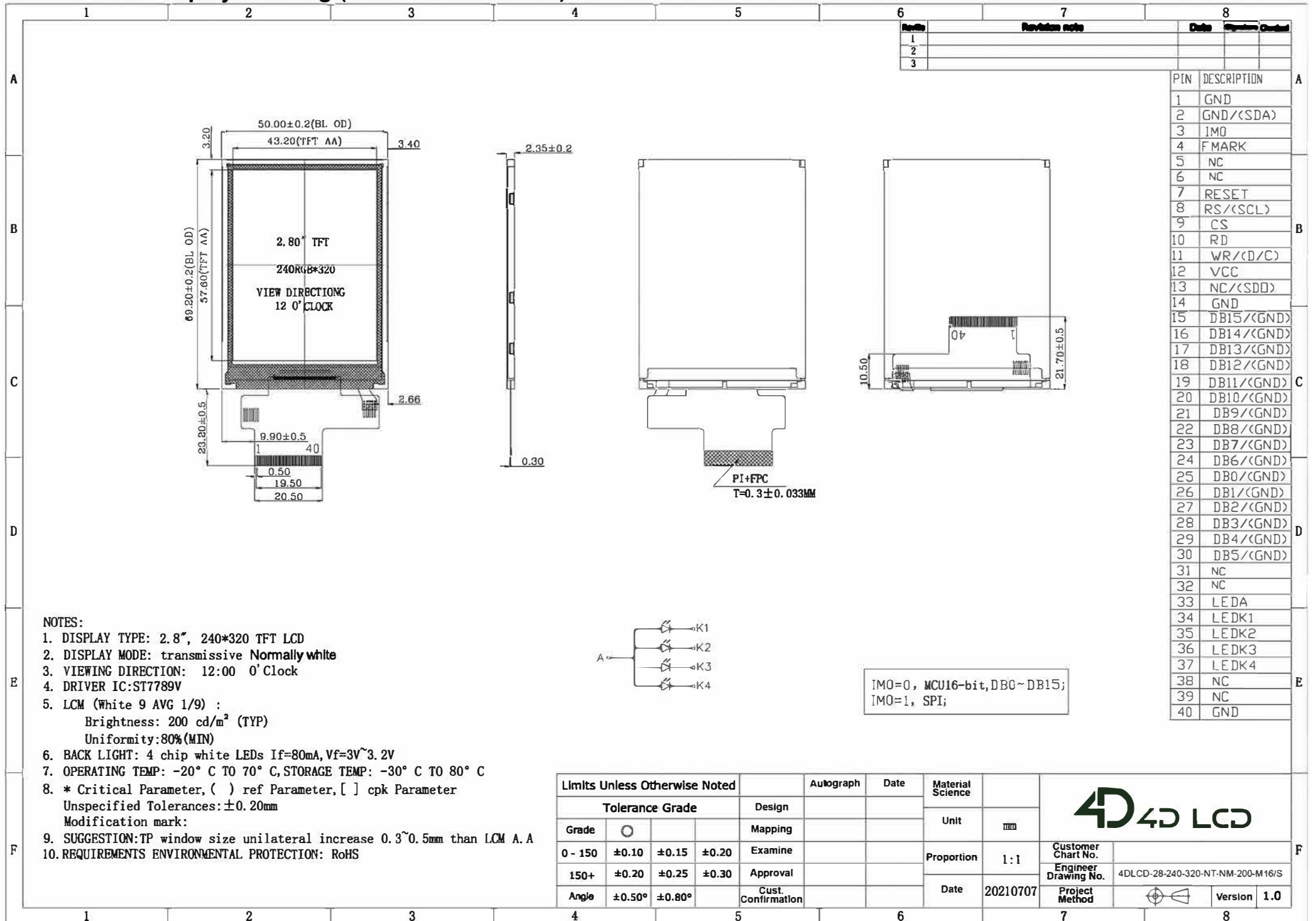
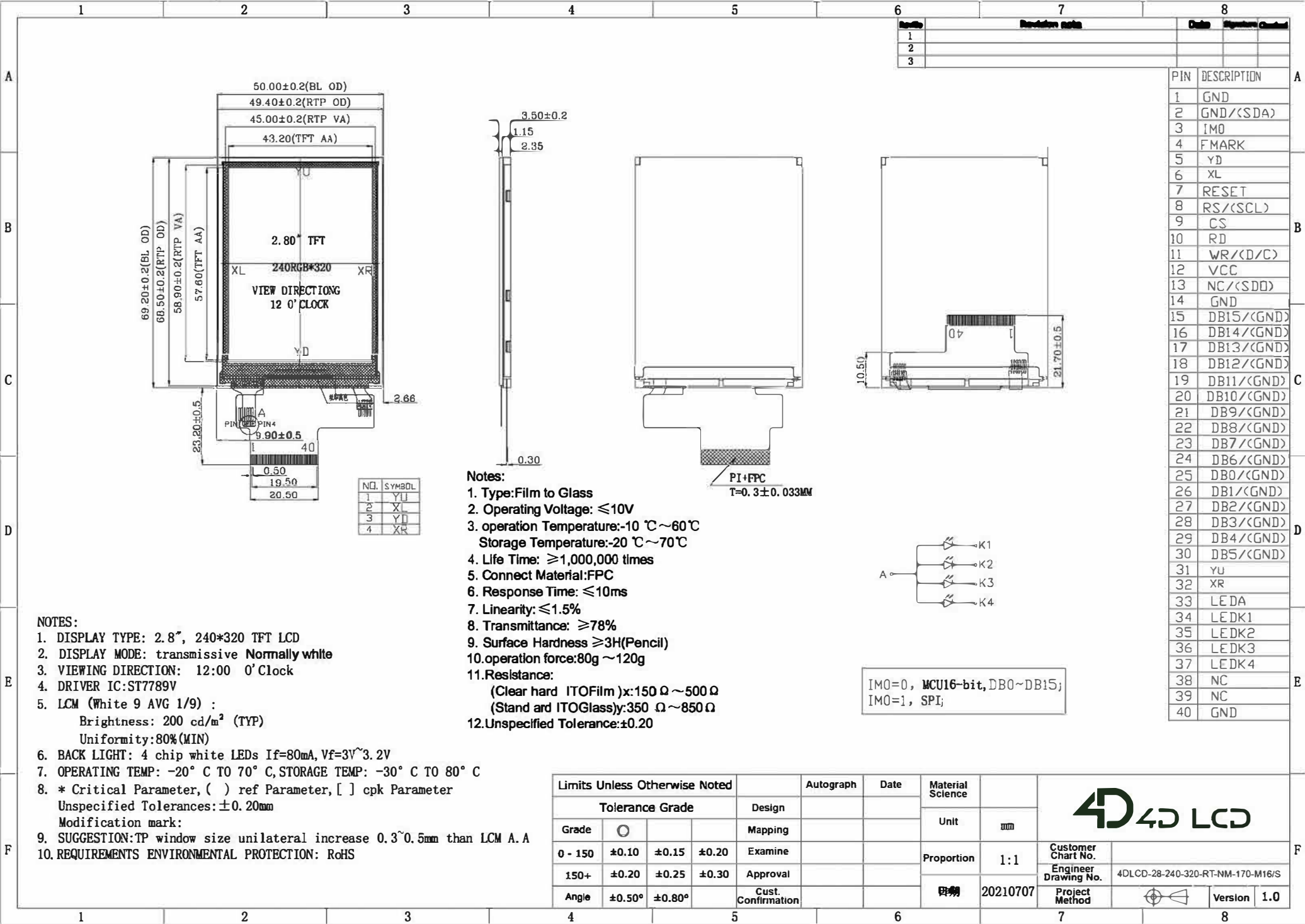


2.8 TFT LCD Display Drawing (Non-Touch Version)



2.8 TFT LCD Display Drawing (Resistive Touch Version)



Technical drawing of a 2.8" TFT LCD module, showing front, side, and detail views, along with a pin list and technical requirements.

Front View Dimensions:

- Overall width: 50.00 ± 0.2 (BL/CTP OD)
- Inner width: 44.00 ± 0.15 (CTP VA), 43.20 (TFT AA)
- Height: 69.20 ± 0.2 (BL/CTP OD), 58.40 ± 0.15 (CTP VA), 57.60 (TFT AA)
- Display area: $2.80"$ TFT, 240×320 pixels
- Viewing direction: 12 O'Clock
- Bottom mounting: 28.20 ± 0.5 , 9.90 ± 0.5 , 40 , 0.50 , 19.50 , 20.50
- Bottom edge: 2.66

Side View Dimensions:

- Top thickness: 3.60 ± 0.2
- Top edge: 0.95
- Top edge: 2.35 ± 0.2
- Top edge: 0.30
- Bottom edge: 0.30

Detail View Dimensions:

- Bottom edge: 10.50
- Bottom edge: 21.70 ± 0.5

Technical requirements:

- Structure type: G+F, single gesture
- IC: FT6236U/FT6336U
- The edges of CNC tempered glass need to be chamfered, no chipping, and the surface hardness is 6H; The 64g steel ball does not break when it falls 50cm in the middle, and the surface hardness is >6H;
- Curvature is less than 0.2, transmittance: 85% MIN;
- Black silk screen printing, no oil deposits, no light transmission;
- There is no obvious residual glue on the edge of ITO;
- FPC adopts glue-free electrolytic copper, which has no obvious bending or deformation, and there are no burrs on the edges of the reinforcing plate.;
- Working temperature and humidity range: $-20^{\circ}\text{C} \sim +60^{\circ}\text{C}$, 10%~90% RH
- Storage temperature and humidity range: $22^{\circ}\text{C} \pm 3^{\circ}\text{C}$, 40%~65% RH;
- ESD requirements: contact $\pm 6\text{K}$, air $\pm 10\text{K}$
- Comply with ROHS standards;
- Unmarked tolerance: $\pm 0.2\text{mm}$ "*" is the control size.

NOTES:

- DISPLAY TYPE: 2.8", 240*320 TFT LCD
- DISPLAY MODE: transmissive Normally white
- VIEWING DIRECTION: 12:00 O'Clock
- DRIVER IC: ST7789V
- LCM (White 9 AVG 1/9) :
Brightness: 200 cd/m^2 (TYP)
Uniformity: 80% (MIN)
- BACK LIGHT: 4 chip white LEDs $I_f=80\text{mA}$, $V_f=3\text{V} \sim 3.2\text{V}$
- OPERATING TEMP: -20°C TO 70°C , STORAGE TEMP: -30°C TO 80°C
- * Critical Parameter, () ref Parameter, [] cpk Parameter
Unspecified Tolerances: $\pm 0.20\text{mm}$
Modification mark:
- SUGGESTION: TP window size unilateral increase $0.3 \sim 0.5\text{mm}$ than LCM A. A
- REQUIREMENTS ENVIRONMENTAL PROTECTION: RoHS

Pin List:

PIN	DESCRIPTION
1	GND
2	GND/(SDA)
3	IMO
4	F MARK
5	CTP_INT
6	CTP-SCL
7	RESET
8	RS/(SCL)
9	CS
10	RD
11	WR/(D/C)
12	VCC
13	NC/(SDO)
14	GND
15	DB15/(GND)
16	DB14/(GND)
17	DB13/(GND)
18	DB12/(GND)
19	DB11/(GND)
20	DB10/(GND)
21	DB9/(GND)
22	DB8/(GND)
23	DB7/(GND)
24	DB6/(GND)
25	DB0/(GND)
26	DB1/(GND)
27	DB2/(GND)
28	DB3/(GND)
29	DB4/(GND)
30	DB5/(GND)
31	CTP_RST
32	CTP_SDA
33	LEDA
34	LEDK1
35	LEDK2
36	LEDK3
37	LEDK4
38	NC
39	NC
40	GND

Technical Requirements:

IMO=0, MCU16-bit, DB0~DB15;
IMO=1, SPI;

Limit Unless Otherwise Noted

Limit Unless Otherwise Noted				Autograph	Date	Material Science	
Tolerance Grade				Design		Unit	
Grade	Symbol			Mapping			
0 - 150	± 0.10	± 0.15	± 0.20	Examine		Proportion	1:1
150+	± 0.20	± 0.25	± 0.30	Approval		Date	20210707
Angle	$\pm 0.50^{\circ}$	$\pm 0.80^{\circ}$		Cust. Confirmation			

Customer Chart No. 4DLCD-28-240-320-CT-NM-170-M8/M16

Project Method

Version 1.0

Revista	Revisión por	Fecha	Firma	Control
1				
2				
3				

PIN	DESCRIPTION
1	GND
2	GND/(SDA)
3	IMO
4	F MARK
5	CTP_INT
6	CTP_SCL
7	RESET
8	RS/(SCL)
9	CS
10	RD
11	WR/(D/C)
12	VCC
13	NC/(SDO)
14	GND
15	DB15/(GND)
16	DB14/(GND)
17	DB13/(GND)
18	DB12/(GND)
19	DB11/(GND)
20	DB10/(GND)
21	DB9/(GND)
22	DB8/(GND)
23	DB7/(GND)
24	DB6/(GND)
25	DB0/(GND)
26	DB1/(GND)
27	DB2/(GND)
28	DB3/(GND)
29	DB4/(GND)
30	DB5/(GND)
31	CTP_RST
32	CTP_SDA
33	LEDA
34	LEDK1
35	LEDK2
36	LEDK3
37	LEDK4
38	NC
39	NC
40	GND

Limits Unless Otherwise Noted					Autograph	Date	Material Science					
Tolerance Grade				Design			Unit			mm		
Grade				Mapping								
0 - 150	±0.10	±0.15	±0.20	Examine			Proportion	1 : 1	Customer Chart No.	4DLCD-28-240-320-CT-NM-170-M8/M16		
150 +	±0.20	±0.25	±0.30	Approval					Engineer Drawing No.			
Angle	±0.50°	±0.80°		Cust. Confirmation			Date	20210707	Project Method		Version	1.0

2.8 TFT LCD Display Drawing (Cover Lens Bezel)

