	北京振中致远显示技术有限公司	型号: TNS-G12864FTDLY-12W
	BEIJING ZHENZHONG ZHIYUAN DISP-TECH. CO.,LTD.	

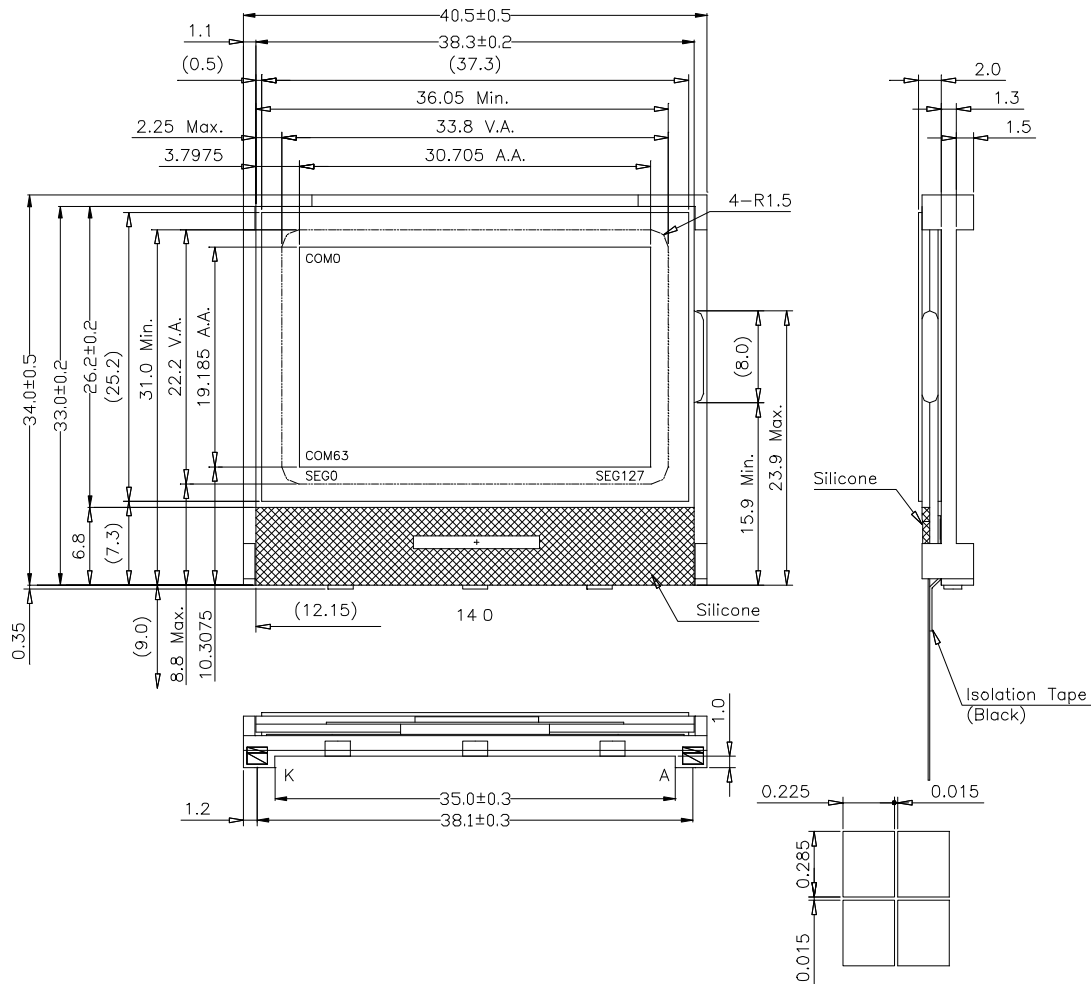
PRODUCT SPECIFICATIONS

TNS-G12864FTDLY-12W

- EXTERNAL DIMENSIONS
- PHYSICAL DATA
- BLOCK DIAGRAM
- ABSOLUTE MAXIMUM RATINGS
- ELECTRO-OPTICAL CHARACTERISTICS
- INTERFACE PIN CONNECTIONS



EXTERNAL DIMENSION



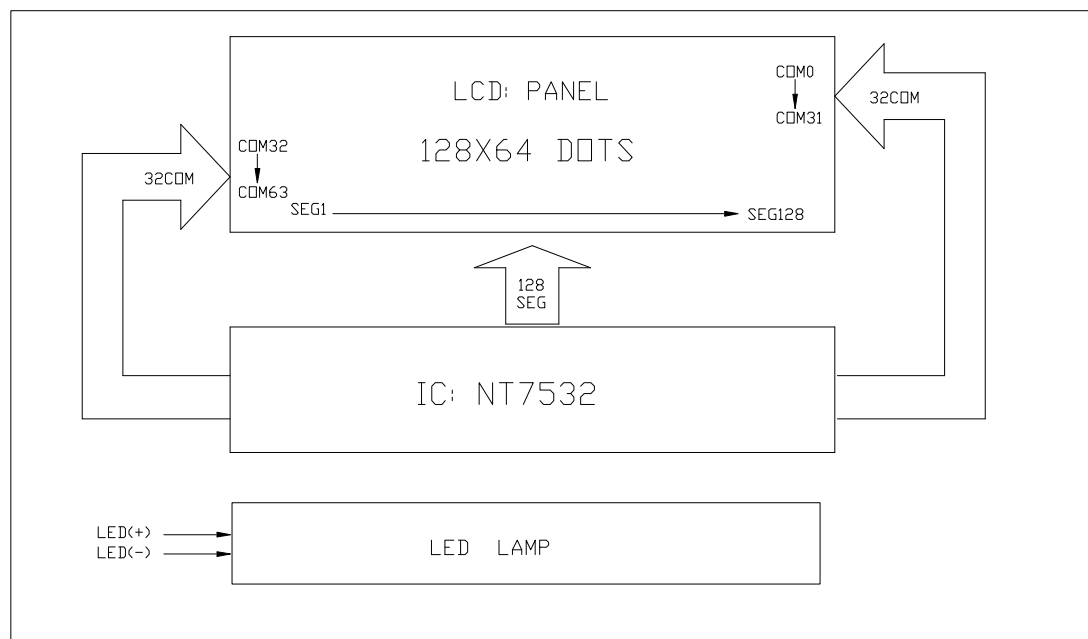
PHYSICAL DATA

Item	Contents	Unit
DIMENSIONAL OUTLINE	40.5(W)×34.0(H)×5.8(MAX)(T)	mm
VIEWING AREA	33.8(W)X22.2(H)	mm
EFFECTIVE AREA	30.705(W)×19.165(H)	mm
LCD TYPE	FSTN	---
LCD DUTY	1/65	---
LCD BIAS	1/9	---
VIEWING DIRECTION	6	o'clock

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NUMBER OF DOTS	128×64	dots
DOT SIZE	0.255(W)×0.225(H)	mm
DOT PITCH	0.275(W)×0.245(H)	mm

■ BLOCK DIAGRAM



PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
SYMBOL	VSS	VBAK	/RESET	D0	m	D2	D3	D4	D5	D6	D7	AD	CSLCD	RD	VR	VCC	VSS	NC

■ ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

ITEM	SYMBOL	MIN	MAX	UNIT
SUPPLY VOLTAGE FOR LOGIC	V _{DD}	-0.3	7.0	V
SUPPLY VOLTAGE FOR LCD	V _{LCD}	+0.3	17.0	V
INPUT VOLTAGE	V _{IN}	-0.3	V _{DD} + 0.3	V
OPERATING TEMPERATURE	T _{OP}	-20	70	°C
STORAGE TEMPERATURE	T _{ST}	-30	80	°C

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■ ELECTRO-OPTICAL CHARACTERISTICS


Condition:TEMP=(23±3)℃ Hum=(70±5)%RH

NO	Item		Symbol	Min	Typ.	Max	Unit	Condition
1	LCD Operating Voltage		Vop	8.7	9.2	9.7	V	-20℃
				8.5	9.0	9.5	V	25℃
				8.3	8.8	9.3	V	70℃
2	Response Time		Ton		298		ms	
			Toff		118		ms	
3	Contrast		CR		8.5			
4	Viewing Angel	3H	θ 1	32			Deg.	(CR≥2.0)
		9H	θ 2	31				
		12H	θ 3	50				
		6H	θ 4	34				

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■ INTERFACE PIN CONNECTION

Pin No.	Symbol	Level	Function
1	VSS	0V	Ground
2	VBAK	2.1V	LED anode
3	RES	L	Reset signal input
4-11	D0-D7	H/L	The 8-bit bi-directional data bus to be connected to the MCU in parallel interface mode
12	A0	H/L	A0="H" indicating that D0 to D7 are display data and A0="L" indicating that D0 to D7 are control data.
13	/CS	L	LCD select signal
14	RD	L	Read mode
15	WR	L	Writr mode

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16	VCC	5V	Supply voltage for logic
17	VSS	0V	Ground
18	NC	---	No Connect