Next Vision Display
Brighten The Future

NEXT VISION DISPLAY

SPECIFICATION

CUSTOMER : _____

MODULE NO.: NG12864BN001WS

Version	K
Engineer	
Date	2021/01/06

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Customer:
Approved by

NEXT VISION DISPLAY CO., LTD.

地址: 中國上海小木橋路600號
ADD: 600 XIAO MU QIAO ROAD, SHANGHAI, CHINA

WEB: www.nextvisiondisplay.com

TECHNICAL: technical@nextvisiondisplay.com
MARKETING: marketing@nextvisiondisplay.com
SALES: sales@nextvisiondisplay.com

Represented by:

first FC components
FIRST Components s.r.l.
www.first-components.com
sales@first-components.com
+39 0332 1888005

General Specification

Item	Dimension	Unit
Number of dots	128 x 64	—
Module dimension	75.0 x 52.7 x 8.9 (MAX)	mm
View area	58.8 x 31.4	mm
Active area	55.01 x 27.49	mm
Dot size	0.40 x 0.40	mm
Dot pitch	0.43 x 0.43	mm
LCD type	STN Positive, Yellow Green Transflective (In LCD production, It will occur slightly color difference. We can only guarantee the same color in the same batch.)	
Duty	1/64	
View direction	6 o'clock	
Backlight Type	LED, Yellow Green	
IC	NT7107, NT7108	
Interface	68 series	

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Absolute Maximum Ratings

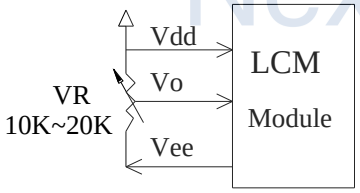
Item	Symbol	Min	Typ	Max	Unit
Operating Temperature	T_{OP}	-20	—	+70	℃
Storage Temperature	T_{ST}	-30	—	+80	℃
Supply Voltage For Logic	V_{DD}-V_{SS}	-0.3	—	7.0	V
Driver Supply Voltage	V_{LCD}	V_{EE}-0.3	—	V_{DD}+0.3	V

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Electrical Characteristics

ITEM	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Voltage For Logic	V_{DD}-V_{SS}	—	4.5	5.0	5.5	V
Supply Voltage For LCD *Note	V_{DD}-V_O	Ta=-20℃	—	—	9.6	V
		Ta=25℃	7.8	8.0	8.2	V
		Ta=70℃	7.6	—	—	V
Input High Volt.	V_{IH}	—	0.7 V_{DD}	—	V_{DD}	V
Input Low Volt.	V_{IL}	—	0	—	0.8	V
Output High Volt.	V_{OH}	—	2.4	—	—	V
Output Low Volt.	V_{OL}	—	—	—	0.4	V
Supply Current	I_{DD}	V_{DD}=5.0V	3.0	4.0	5.0	mA

* Note: Please design the VOP adjustment circuit on customer's main board

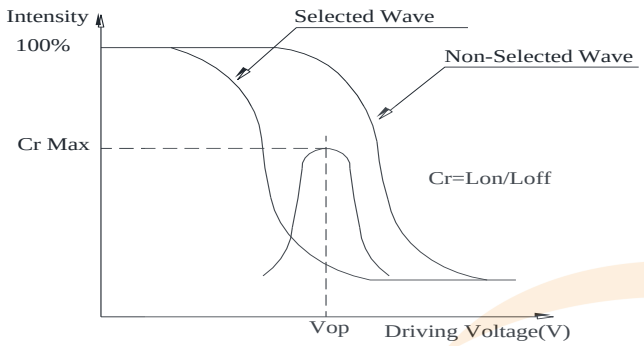


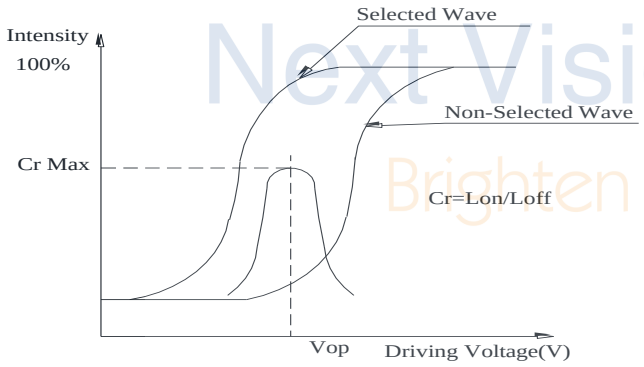
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Optical Characteristics

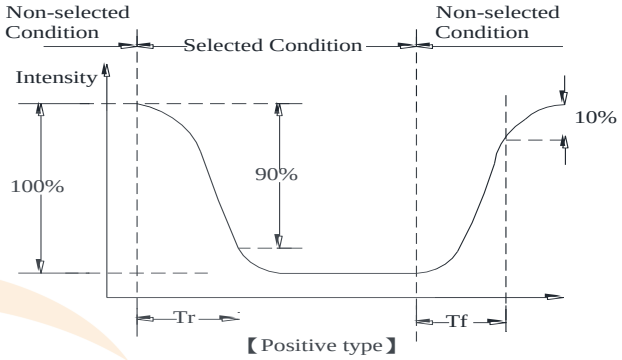
Item	Symbol	Condition	Min	Typ	Max	Unit
View Angle	θ	CR≧2	0	—	20	ϕ = 180°
	θ	CR≧2	0	—	40	ϕ = 0°
	θ	CR≧2	0	—	30	ϕ = 90°
	θ	CR≧2	0	—	30	ϕ = 270°
Contrast Ratio	CR	—	—	3	—	—
Response Time	T rise	—	—	200	300	ms
	T fall	—	—	250	350	ms

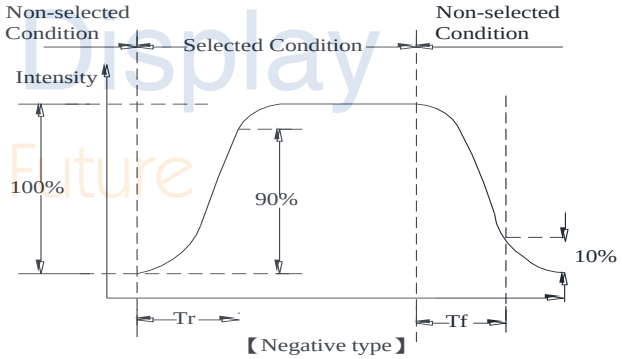
Definition of Operation Voltage (Vop)





Definition of Response Time (Tr , Tf)





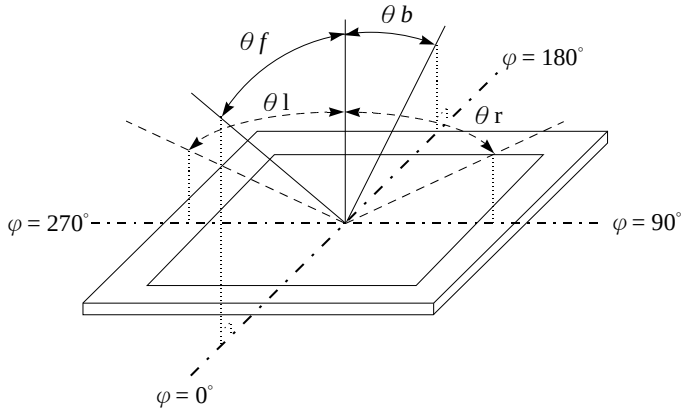
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Conditions :

Operating Voltage : Vop　　Viewing Angle(θ ， φ) : 0°， 0°

Frame Frequency : 64 HZ　　Driving Waveform : 1/N duty , 1/a bias

Definition of viewing angle(CR≧2)

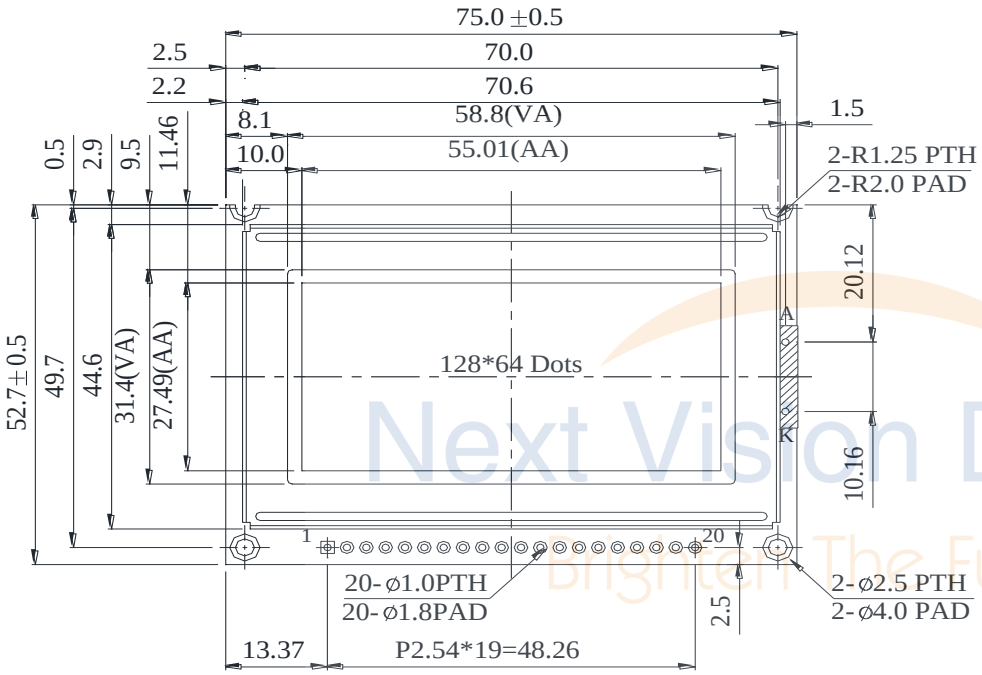


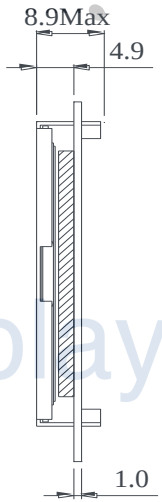
Interface Pin Function

Pin No.	Symbol	Level	Description
1	V_{DD}	5.0V	Supply voltage for logic
2	V_{SS}	0V	Ground
3	V_o	(Variable)	Contrast Adjustment
4	DB0	H/L	Data bus line
5	DB1	H/L	Data bus line
6	DB2	H/L	Data bus line
7	DB3	H/L	Data bus line
8	DB4	H/L	Data bus line
9	DB5	H/L	Data bus line
10	DB6	H/L	Data bus line
11	DB7	H/L	Data bus line
12	CS1	L	Select Column 1~ Column 64
13	CS2	L	Select Column 65~ Column 128
14	/RST	L	Reset signal
15	R/₩	H/L	H: Read (MPU←Module) , L: Write (MPU→Module)
16	D/I	H/L	H: Data , L : Instruction
17	E	H	Enable signal
18	Vee	—	Negative Voltage output
19	A	—	Power Supply for LED backlight (+)
20	K	—	Power Supply for LED backlight (-)

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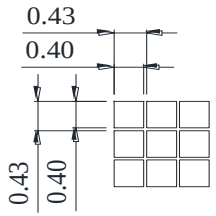
Contour Drawing &Block Diagram





LED B/L

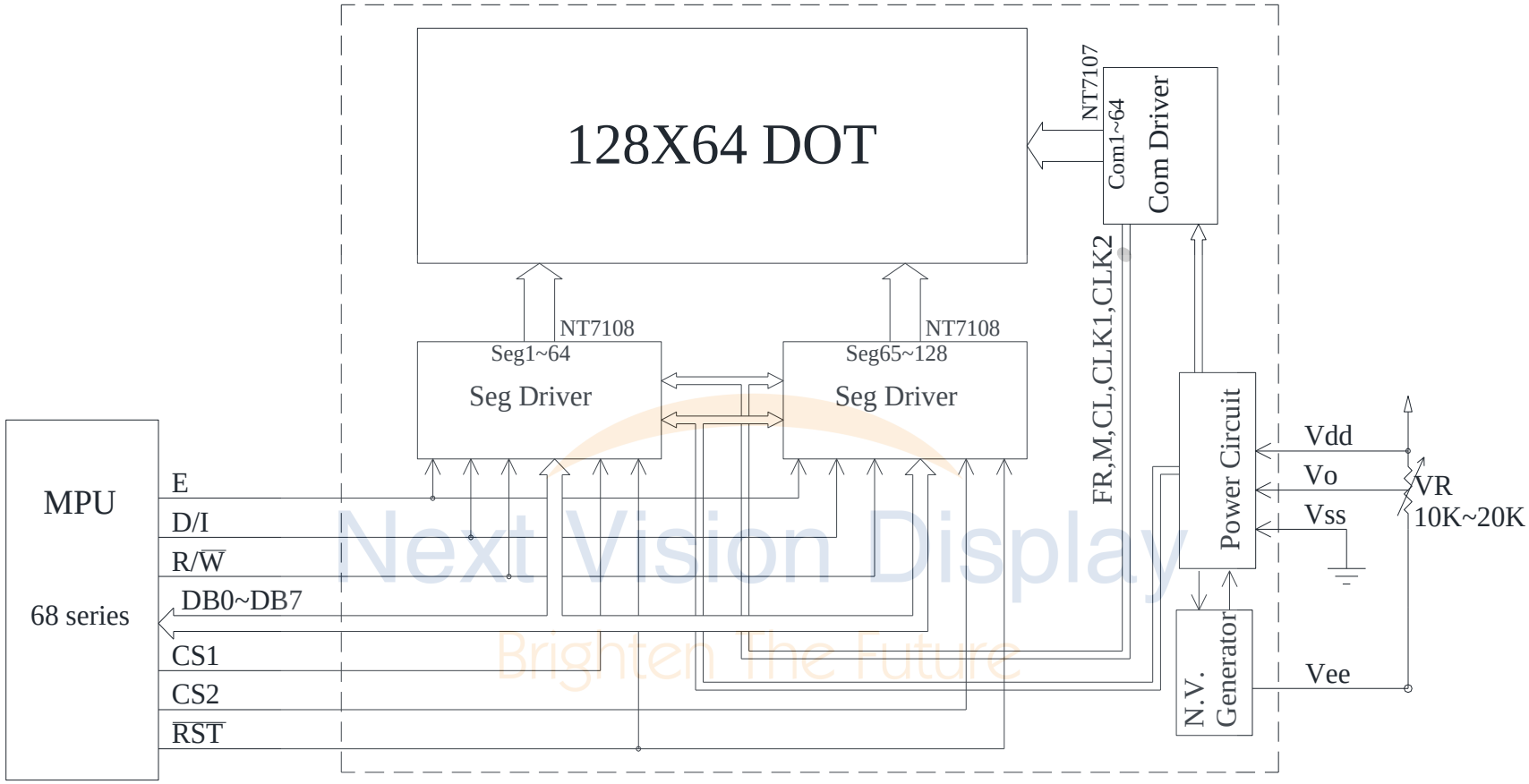
PIN NO.	SYMBOL
1	Vdd
2	Vss
3	Vo
4	DB0
5	DB1
6	DB2
7	DB3
8	DB4
9	DB5
10	DB6
11	DB7
12	CS1
13	CS2
14	$\overline{RST}$
15	R/$\overline{W}$
16	D/$\overline{I}$
17	E
18	Vee
19	A
20	K



DOT SIZE
SCALE 10/1

The non-specified tolerance of dimension is ±0.3 mm .

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External contrast adjustment.

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Backlight Information

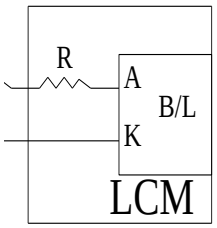
Specification

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITION
Supply Current	ILED	80	100	120	mA	V=4.2V
Supply Voltage	V	3.9	4.2	4.4	V	—
Reverse Voltage	VR	—	—	8	V	—
Luminance (Without LCD)	IV	34	42.5	—	CD/M^2	ILED=100mA
Wave Length	λp	569	571	574	nm	ILED=100mA
Life Time	—	—	50000	—	Hr.	ILED≦100mA 25℃,50-60%RH
Color	Yellow Green					

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Note: The LED of B/L is drive by current only, drive voltage is for reference only. drive voltage can make driving current under safety area (current between minimum and maximum).

.Drive from pin19,pin20



Recommendable Storage

1. Place the panel or module in the temperature 25°C±5°C and the humidity below 65% RH
2. Do not place the module near organics solvents or corrosive gases.
3. Do not crush, shake, or jolt the module.