

NHD-7.0-800480WF-ATXI#-T

TFT (Thin-Film-Transistor) Color Liquid Crystal Display Module

NHD-	Newhaven Display
7.0-	7.0" Diagonal
800480-	800xRGBx480 pixels
WF-	Model
A-	Built-in driver / No Controller
T-	White LED backlight
X-	TFT
I-	6:00 view, Wide Temp
#-	RoHS Compliant
T-	Touch Panel

Newhaven Display International, Inc.

2511 Technology Drive, Suite 101

Elgin IL, 60124

Ph: 847-844-8795

Fax: 847-844-8796

www.newhavendisplay.com

nhtech@newhavendisplay.com

nhsales@newhavendisplay.com

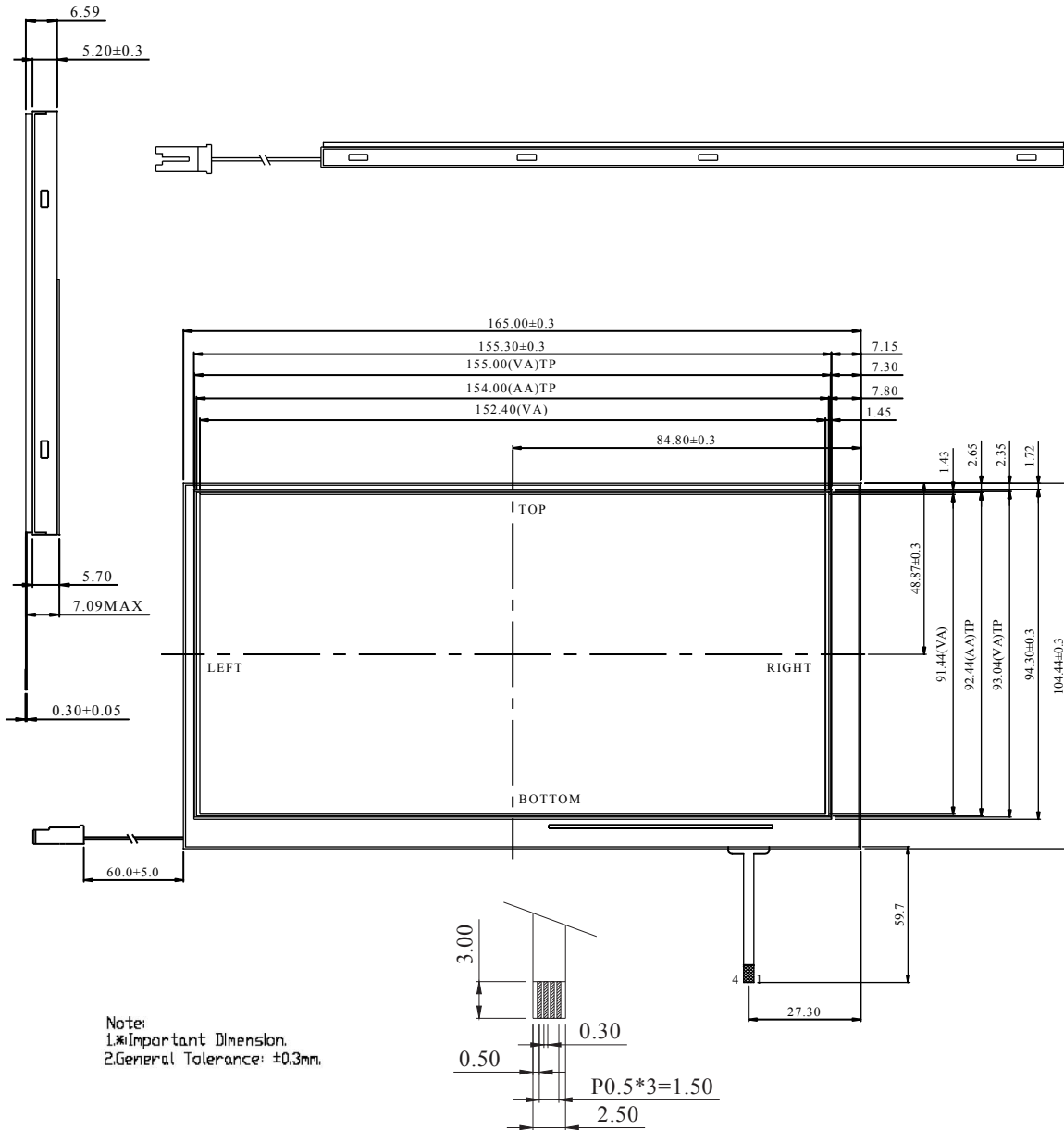
Document Revision History

Revision	Date	Description	Changed by
0	9/13/2011	Initial Release	-
1	10/7/2011	Backlight and Touch Panel pin descriptions added	AK

Functions and Features

- 800xRGBx480 resolution
- LED backlight
- 18-bit digital RGB interface
- 262,144 colors
- Touch Panel

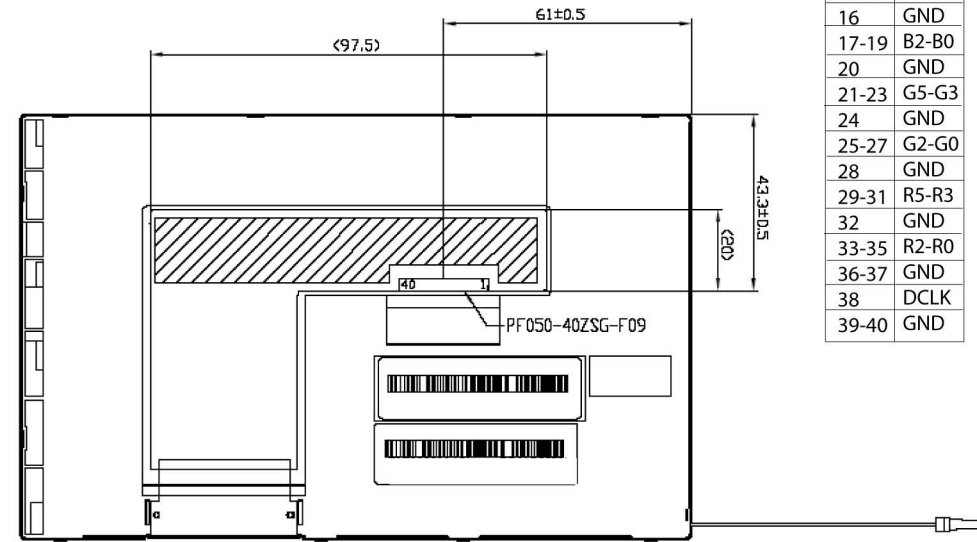
Mechanical Drawing



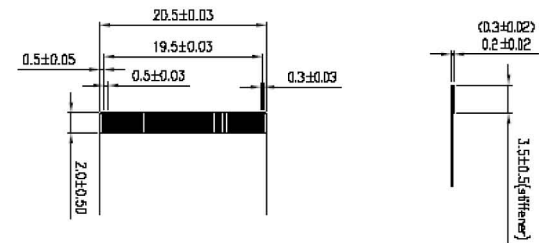
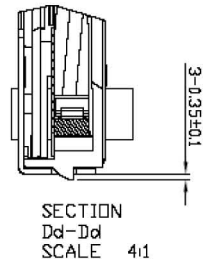
Note:
 1. *Important Dimension.
 2. General Tolerance: ±0.3mm.

Pin Assignment

1	GND
2	GND
3	NC
4-7	VDD
8	NC
9	DE
10-12	GND
13-15	B5-B3
16	GND
17-19	B2-B0
20	GND
21-23	G5-G3
24	GND
25-27	G2-G0
28	GND
29-31	R5-R3
32	GND
33-35	R2-R0
36-37	GND
38	DCLK
39-40	GND



Recommended FPC Outline Dimension
 (Suitable connector PF050-40ZSG-F09
 made by UJU Electronics or equivalent)



Newhaven Display
 NHD-7.0-800480WF-ATX1#-T

Pin Description

Pin No.	Symbol	Connection	Function Description
1	GND	Power Supply	Power Ground
2	GND	Power Supply	Power Ground
3	NC	-	No connect
4-7	VDD	Power Supply	Power Supply (+3.3V)
8	NC	-	No connect
9	DE	MPU	Data Enable signal
10-12	GND	Power Supply	Power Ground
13-15	B5-B3	MPU	Blue B5 (MSB) to B3
16	GND	Power Supply	Power Ground
17-19	B2-B0	MPU	Blue B2 – B0(LSB)
20	GND	Power Supply	Power Ground
21-23	G5-G3	MPU	Green G5 (MSB) to G3
24	GND	Power Supply	Power Ground
25-27	G2-G0	MPU	Green G2 – G0(LSB)
28	GND	Power Supply	Power Ground
29-31	R5-R3	MPU	Red R5 (MSB) to R3
32	GND	Power Supply	Power Ground
33-35	R2-R0	MPU	Red R2 – R0(LSB)
36-37	GND	Power Supply	Power Ground
38	DCLK	MPU	Clock (Falling edge triggered)
39-40	GND	Power Supply	Power Ground

LCD connector: UJU p/n: PF050-40ZSG-F09-S (or equivalent)

Backlight Pin-Out:

Pin No.	Symbol	Connection	Function Description
1	VDD	Power Supply	Power Supply (+9.9V)
2	GND	Power Supply	Power Ground

Backlight connector: JST p/n: BHSR-02VS-1

Recommended mating connector: JST p/n: SM 02B-BHSS-1

Touch Panel Pin-Out:

Pin No.	Symbol	Connection	Function Description
1	X-	Touch Panel	Touch Panel – RIGHT
2	Y-	Touch Panel	Touch Panel – BOTTOM
3	X+	Touch Panel	Touch Panel – LEFT
4	Y+	Touch Panel	Touch Panel – TOP

Electrical Characteristics

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Operating Temperature Range	Top	Absolute Max	-20	-	+70	°C
Storage Temperature Range	Tst	Absolute Max	-30	-	+80	°C
Power Supply for Logic	VDD		3.0	3.3	3.6	V
Input Logic HIGH	VIH		0.7VDD	-	VDD	V
Input Logic LOW	VIL		0	-	0.3VDD	V
Power Supply Current	IVDD	VDD=3.3V 25°C	-	200	260	mA
Backlight Supply Current	ILED		-	160	200	mA
Backlight Supply Voltage	VLED	ILED=160mA	-	9.9	-	V
Backlight Lifetime		Until half-brightness	10,000	20,000	-	Hr

Optical Characteristics

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Viewing Angle –Top		Cr ≥10	50	60	-	°
Viewing Angle –Bottom		Cr ≥10	60	70	-	°
Viewing Angle – Left		Cr ≥ 10	60	70	-	°
Viewing Angle – Right		Cr ≥ 10	60	70	-	°
Contrast Ratio	Cr	-	250	400	-	
Luminance	L	-	300	350	-	cd/m ²
Response Time (rise)	Tr	-	-	5	10	ms
Response Time (fall)	Tf	-	-	11	16	ms

Touch Panel Characteristics

Item	Min.	Typ.	Max.	Unit
Linearity	-	-	1.5	%
Circuit Resistance – X-Axis	450	800	1300	Ω
Circuit Resistance – Y-Axis	100	350	800	Ω
Insulation Resistance	10	-	-	MΩ
Operating Voltage	-	-	5	V
Chattering	-	-	10	ms
Transmittance	82	-	-	%
Activation Force	50	-	200	g
Pen Writing Durability	100,000	-	-	Characters
Pitting Durability	1,000,000	-	-	Touches
Surface Hardness	3	-	-	H
Haze	-	7	-	%

Driver Information

Built-in HX8262

For specific timing and color information, please download specification at

http://www.newhavendisply.com/app_notes/HX8262.pdf

Quality Information

Test Item	Content of Test	Test Condition	Note
High Temperature storage	Endurance test applying the high storage temperature for a long time.	+80°C , 200hrs	2
Low Temperature storage	Endurance test applying the low storage temperature for a long time.	-30°C , 200hrs	1,2
High Temperature Operation	Endurance test applying the electric stress (voltage & current) and the high thermal stress for a long time.	+70°C 200hrs	2
Low Temperature Operation	Endurance test applying the electric stress (voltage & current) and the low thermal stress for a long time.	-20°C , 200hrs	1,2
High Temperature / Humidity Operation	Endurance test applying the electric stress (voltage & current) and the high thermal with high humidity stress for a long time.	+60°C , 90% RH , 96hrs	1,2
Thermal Shock resistance	Endurance test applying the electric stress (voltage & current) during a cycle of low and high thermal stress.	-20°C,30min -> 25°C,5min ->70°C,30min = 1 cycle 10 cycles	
Vibration test	Endurance test applying vibration to simulate transportation and use.	10-55Hz , 1.5mm amplitude. 60 sec in each of 3 directions X,Y,Z For 15 minutes	3
Static electricity test	Endurance test applying electric static discharge.	VS=800V, RS=1.5kΩ, CS=100pF One time	

Note 1: No condensation to be observed.

Note 2: Conducted after 4 hours of storage at 25°C, 0%RH.

Note 3: Test performed on product itself, not inside a container.

Precautions for using LCDs/LCMs

See Precautions at www.newhavendisplay.com/specs/precautions.pdf

Warranty Information and Terms & Conditions

http://www.newhavendisplay.com/index.php?main_page=terms