

Product Transition Guide

TN (OLD): NHD-4.3-480272EF-Axxx | IPS (NEW): NHD-4.3-480272EF-ASXP

The new 4.3" IPS TFT display has been designed with the same mechanical footprint and pinout as the older TN display. This makes the IPS display compatible with controller boards, assemblies, enclosures, and other components that are presently used with the TN display.

The purpose of this document is to highlight and explain the key differences that need to be accounted for when transitioning from our 4.3" TN TFT display to our new 4.3" IPS TFT display.

Design Improvements

- Better EMC with built-in EMI shielding
- Better color reproduction throughout the color gamut
- Better color and image consistency when viewed from various angles
- Better optical characteristics (higher contrast, higher brightness, wider viewing angles)
- Better FPC design (less susceptible to nicks/tears, larger bendable area)

Display Models

	NHD-4.3-480272EF-ATXL#	NHD-4.3-480272EF-ASXV#	NHD-4.3-480272EF-ASXN#	NHD-4.3-480272EF-ASXP
Display type	TN + Standard	TN + Premium	TN + Sunlight Readable	IPS + Sunlight Readable
Resolution	480 x 272	480 x 272	480 x 272	480 x 272
Outer dimensions	105.5 x 67.2 x 2.95 mm			
Viewing area	98.7 x 56.2 mm			
Active area	95.04 x 53.86 mm			
EMI Shielding	No	No	No	Yes
FPC size & shape	See datasheet	See datasheet	See datasheet	Identical
Pinout	See datasheet	See datasheet	See datasheet	Identical
Driver IC	ST7282T2	ST7282T2	ST7282T2	SC7283
Software timing	See datasheet	See datasheet	See datasheet	Compatible
Interface	24-bit Parallel RGB	24-bit Parallel RGB	24-bit Parallel RGB	24-bit Parallel RGB
LCD Voltage	3.3V	3.3V	3.3V	3.3V
Backlight	40mA @ 19.2V	40mA @ 25.6V	40mA @ 25.6V	40mA @ 25.6V
Brightness	500 cd/m ²	850 cd/m ²	1000 cd/m ²	1000 cd/m ²
Contrast	500	500	500	800
Optimal view	6:00	MVA	6:00	Full View
Touchscreen Options	No-touch Capacitive Resistive	No-touch Capacitive Resistive	No-touch Capacitive Resistive	No-touch Capacitive Resistive



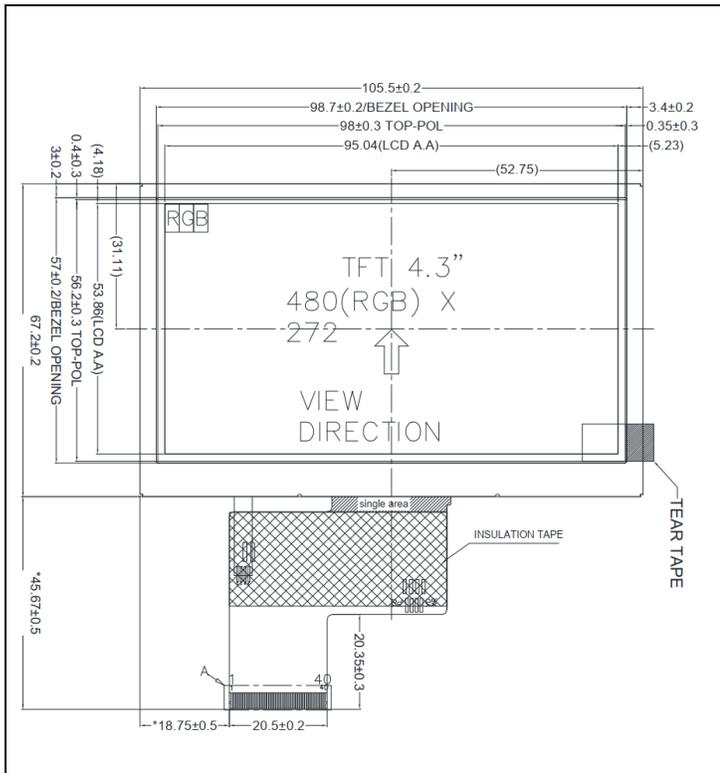
Pinout Comparison

	NHD-4.3-480272EF-Axxx	NHD-4.3-480272EF-ASXP
Pin #	Signal	Signal
1	LED-	LED-
2	LED+	LED+
3	GND	GND
4	VDD	VDD
5-12	R0-R7	R0-R7
13-20	G0-G7	G0-G7
21-28	B0-B7	B0-B7
29	GND	GND
30	CLK	CLKIN*
31	DISP	STBYB*
32	HSYNC	HSD*
33	VSYNC	VSD*
34	DEN	DEN
35	NC	NC
36	GND	GND
37	NC	NC
38	NC	NC
39	NC	NC
40	NC	NC

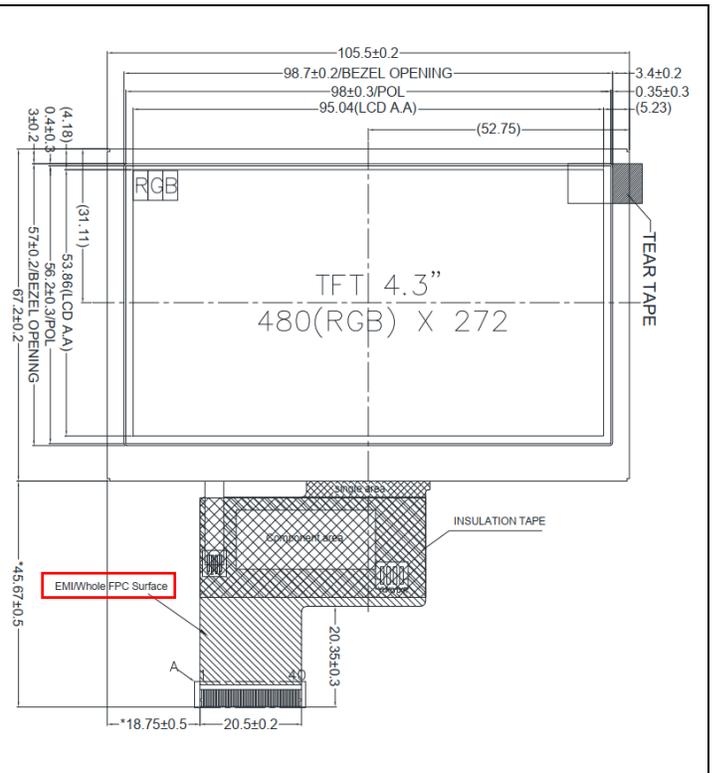
*Symbols have been updated for the new IPS model; however, the same electrical function can be expected.

Mechanical Comparison

NHD-4.3-480272EF-Axxx



NHD-4.3-480272EF-ASXP



Software

The new 4.3" IPS TFT display can be driven using the same 24-bit RGB input timing as the 4.3" TN TFT display. Our testing has indicated the new IPS display is fully backwards compatible, and no software updates are required. As drive conditions may not be the same for all customers, we recommend you test samples to verify compatibility within your application.

For additional support on transitioning to our new 4.3" IPS TFT display, or questions about other products, please contact us through any of our technical support channels listed below:

Email: nhtech@newhavendisplay.com

Online Support Center: [Contact an Engineer](#)

Forum: [Community Forum](#)

Phone: (847) 844-8795

