



Japan Display Inc.

13.3" UHD Rugged+ Short Specification

Jul 2026



Short Spec. of 13.3”UHD (Rugged+)

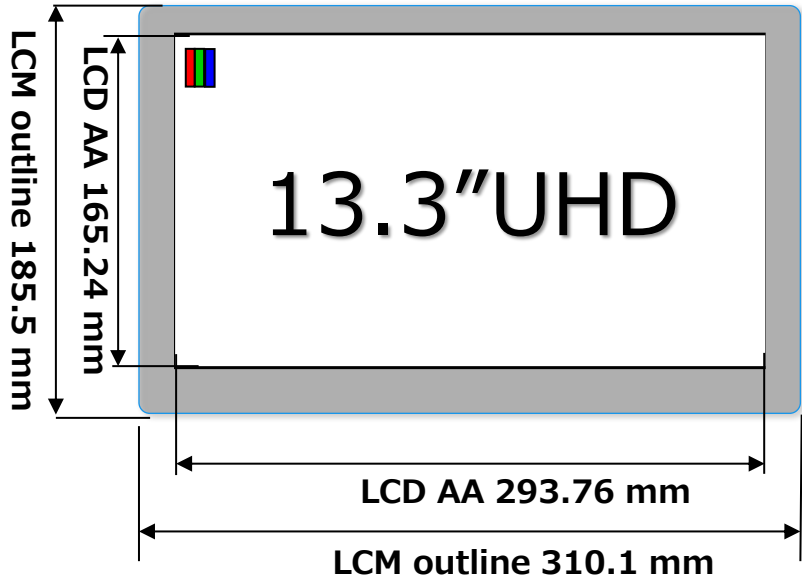
Part Name		LPM133N320A
Display Mode		LTPS TFT, Transmissive, Normally Black
Outline Dimensions(mm)		310.1(W) x 185.5(H) x 13.2(D)(typ.) (Included PCBA)
Active Display Area (mm)		293.76(W) x 165.24(H)
Resolution		3840(W) x 3(RGB) x 2160(H)
Number Of Colors		1.07 Billion (10bits)
Interface		eDP1.2 ; 40pin
Brightness(nits)		Typ. 1200
Contrast		Typ. 1000
NTSC		Typ. 80%
LED lifetime		Typ. 70Khrs
Viewing Angle	Viewing Direction	IPS (Super Wide View)
	CR>10	H:170 ; V:170
Power Supply		LCD: 3.3V ; B/L: 30V
Surface treatment		Anti-Glare
Operating Temp.		-40~ +85 °C
Storage Temp.		-40~ +90 °C

Features:

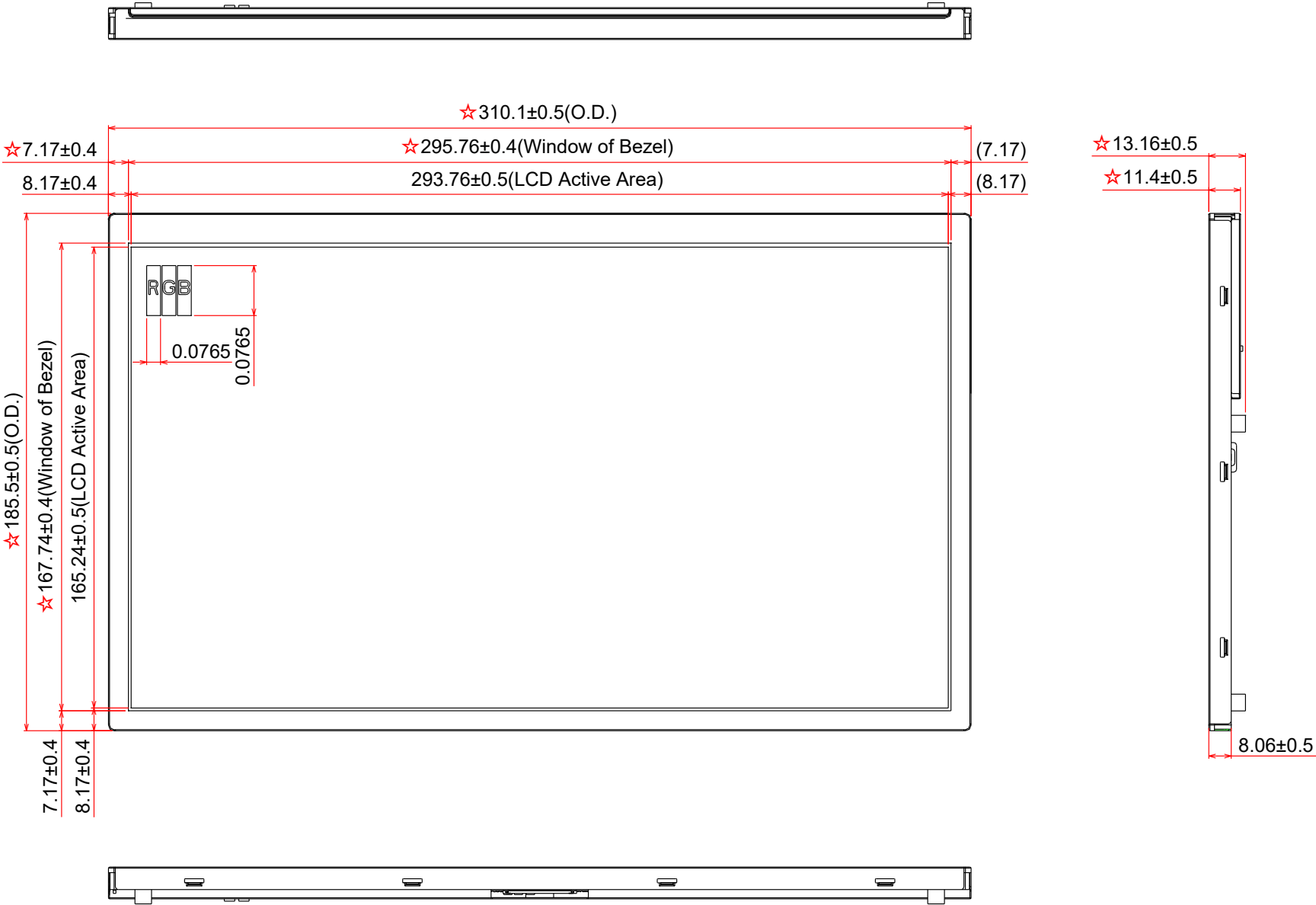
- LTPS LCD ; Rugged+ series (Top -40~85C)
- High brightness 1200nits ;
- 10bits colors (8bits+FRC) ; High NTSC 80%
- Long LED lifetime 70KHrs

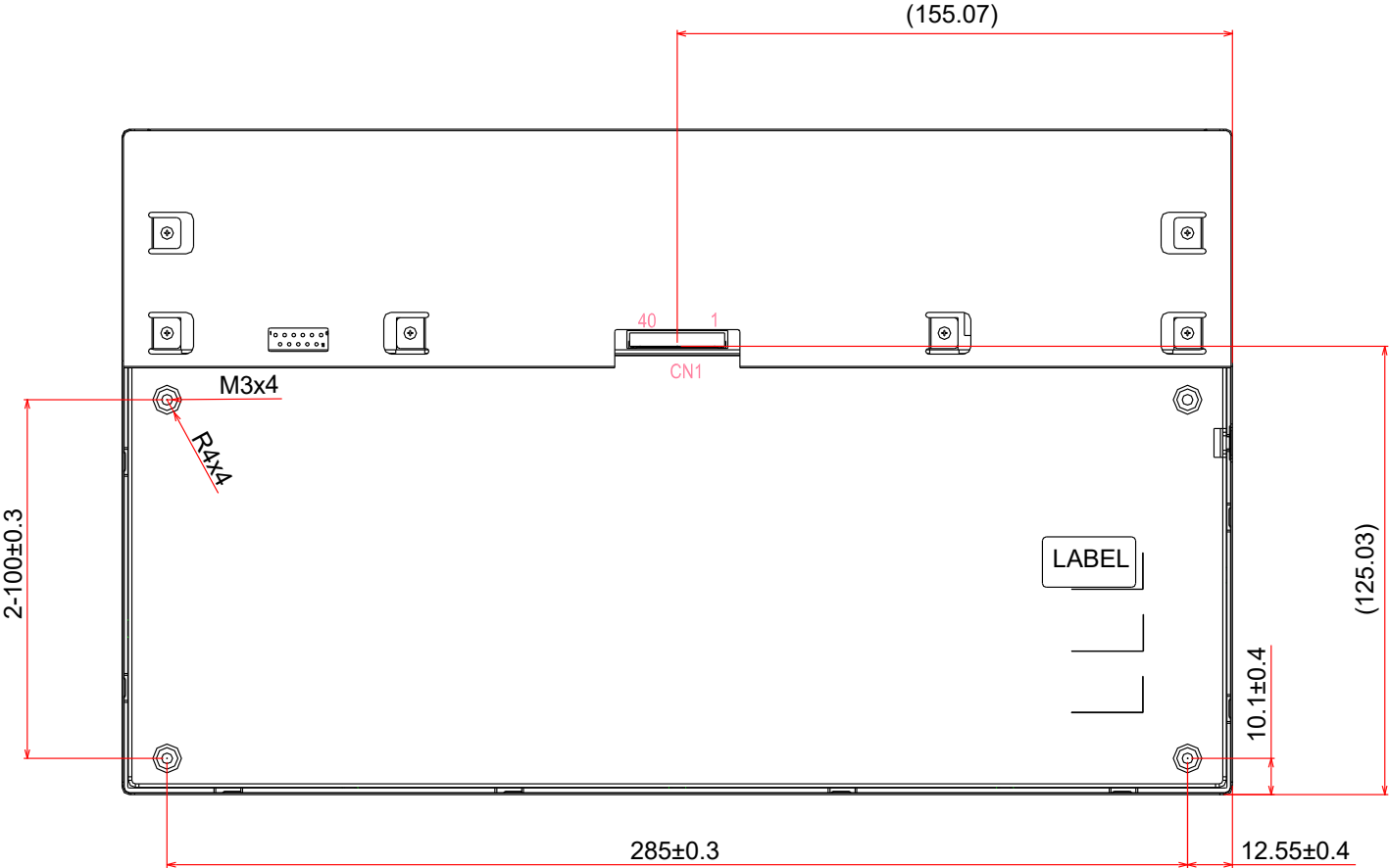
Development Schedule:

- Engineer Samples : Jul/2026
- Mass Production : Q1/2027 (Estimated)



Outline Dimension – Front View





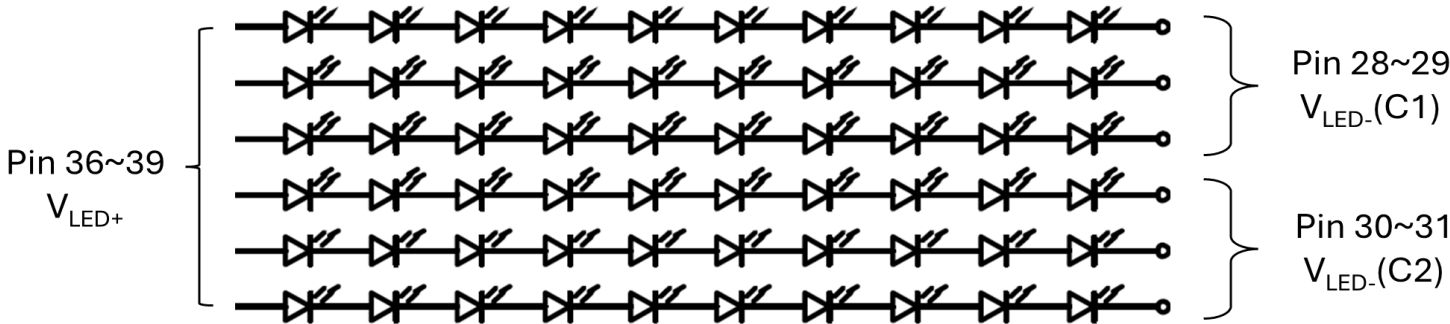
Interface Connector : IPEX 20455-040E or equivalent

Pin No.	Signal	I/O	Function	Remarks
1	NC	-	Reserved for LCD manufacture's use	Keep Open
2	H_GND	P	High Speed Ground	
3	Lane3_N	I	Complement Signal Link Lane 3	
4	Lane3_P	I	True Signal Link Lane 3	
5	H_GND	P	High Speed Ground	
6	Lane2_N	I	Complement Signal Link Lane 2	
7	Lane2_P	I	True Signal Link Lane 2	
8	H_GND	P	High Speed Ground	
9	Lane1_N	I	Complement Signal Link Lane 1	
10	Lane1_P	I	True Signal Link Lane 1	
11	H_GND	P	High Speed Ground	
12	Lane0_N	I	Complement Signal Link Lane 0	
13	Lane0_P	I	True Signal Link Lane 0	
14	H_GND	P	High Speed Ground	
15	AUX_CH_P	I	True Signal Auxiliary Channel	
16	AUX_CH_N	I	Complement Signal Auxiliary Channel	
17	H_GND	P	High Speed Ground	
18	V _{DD}	P	LCD Logic and Driver Power (3.3V)	
19	V _{DD}	P	LCD Logic and Driver Power (3.3V)	
20	V _{DD}	P	LCD Logic and Driver Power (3.3V)	

Pin No.	Signal	I/O	Function	Remarks
21	V _{DD}	P	LCD Logic and Driver Power (3.3V)	
22	LCD Self Test	I	LCD Panel Self Test Enable	
23	LCD_GND	P	LCD Logic and Driver GND	
24	LCD_GND	P	LCD Logic and Driver GND	
25	LCD_GND	P	LCD Logic and Driver GND	
26	LCD_GND	P	LCD Logic and Driver GND	
27	HPD	O	HPD signal pin	
28	V _{LED-} (C1)	-	LED cathode1	Pin assignment for LED
29	V _{LED-} (C1)	-	LED cathode1	
30	V _{LED-} (C2)	-	LED cathode2	
31	V _{LED-} (C2)	-	LED cathode2	
32	NC	-	NC	
33	NC	-	NC	
34	NC	-	Reserved for LCD manufacture's use	Keep Open
35	NC	-	Reserved for LCD manufacture's use	Keep Open
36	V _{LED+}	-	LED anode (30V)	
37	V _{LED+}	-	LED anode (30V)	
38	V _{LED+}	-	LED anode (30V)	
39	V _{LED+}	-	LED anode (30V)	
40	SD	-	Scan direction control	

Pin No.	Signal	Function	Remarks
28	VLED- (C1)	LED cathode1	
29	VLED- (C1)	LED cathode1	
30	VLED- (C2)	LED cathode2	
31	VLED- (C2)	LED cathode2	
32	NC	NC	
33	NC	NC	
34	NC	Reserved for LCD manufacture's use	Keep Open
35	NC	Reserved for LCD manufacture's use	Keep Open
36	VLED+	LED anode (30V)	
37	VLED+	LED anode (30V)	
38	VLED+	LED anode (30V)	
39	VLED+	LED anode (30V)	
40	SD	Scan direction control	

Pin assignment
for LED



1)TFT LCD Module

Item	Symbol	Min.	Typ.	Max.	Unit	Note
Supply Voltage	V_{DD}	3.0	3.3	3.6	V	-
Current of power supply	I_{DD}	-	575	757	mA	VDD =3.0V~3.6V
VDD Power	P_{DD}	-	1.9	2.5	W	VDD =3.3V

2)Backlight Unit

Item	Symbol	Min.	Typ.	Max.	Unit	Note
LED Current	IL	--	480	--	mA	Ta=25℃
LED Voltage	VF	27	30	32	V	Ta=25℃