






Mitsubishi TFT LCD replacement

We offer a series of new display modules to replace the Mitsubishi TFT LCD, they have the same size and resolution and the same mechanical structure.
AA104XN,AA106TA,AA121XN,AA121XP,AA121TJ,AA150AC01

inch	Display Format	Model No.	Outline Dimension (mm)	Active Area (mm)	Typ.Brightness (cd/m2)	View Angle	Interface	Panel	Replace Misubishi No.	Download Flyer
10,4	1024x768	BTM104A-CSN\$	230 x 180.2 x 9.5	211.2 x 158.4	1300	ALL	LVDS 20pins	IPS	AA104XN	
10,6	1280x768	BTM106A-CSN\$	250 x 157.0 x 8.9	231.36 x 138.816	1000	ALL	LVDS 20pins	IPS	AA106TA	
12,1	1024x768	BTM121A-CSN\$	260.5 x 203.0 x 9.5	245.76 x 184.32	1000	ALL	LVDS 20pins	IPS	AA121XN AA121XP	
12,1	1280x800	BTM121B-CSN\$	283.0 x 185.1 x 9.7	261.12 x 163.2	1500	ALL	LVDS 20pins	IPS	AA121TJ	
15,0	1920x720	BTM150A-CSN\$	374.5 x 154.5 x18.15	355.68 x 133.38	1000	ALL	LVDS 60pins	IPS	AA150AC01	

For more information please don't hesitate to contact us !

BTM104A-CSN\$

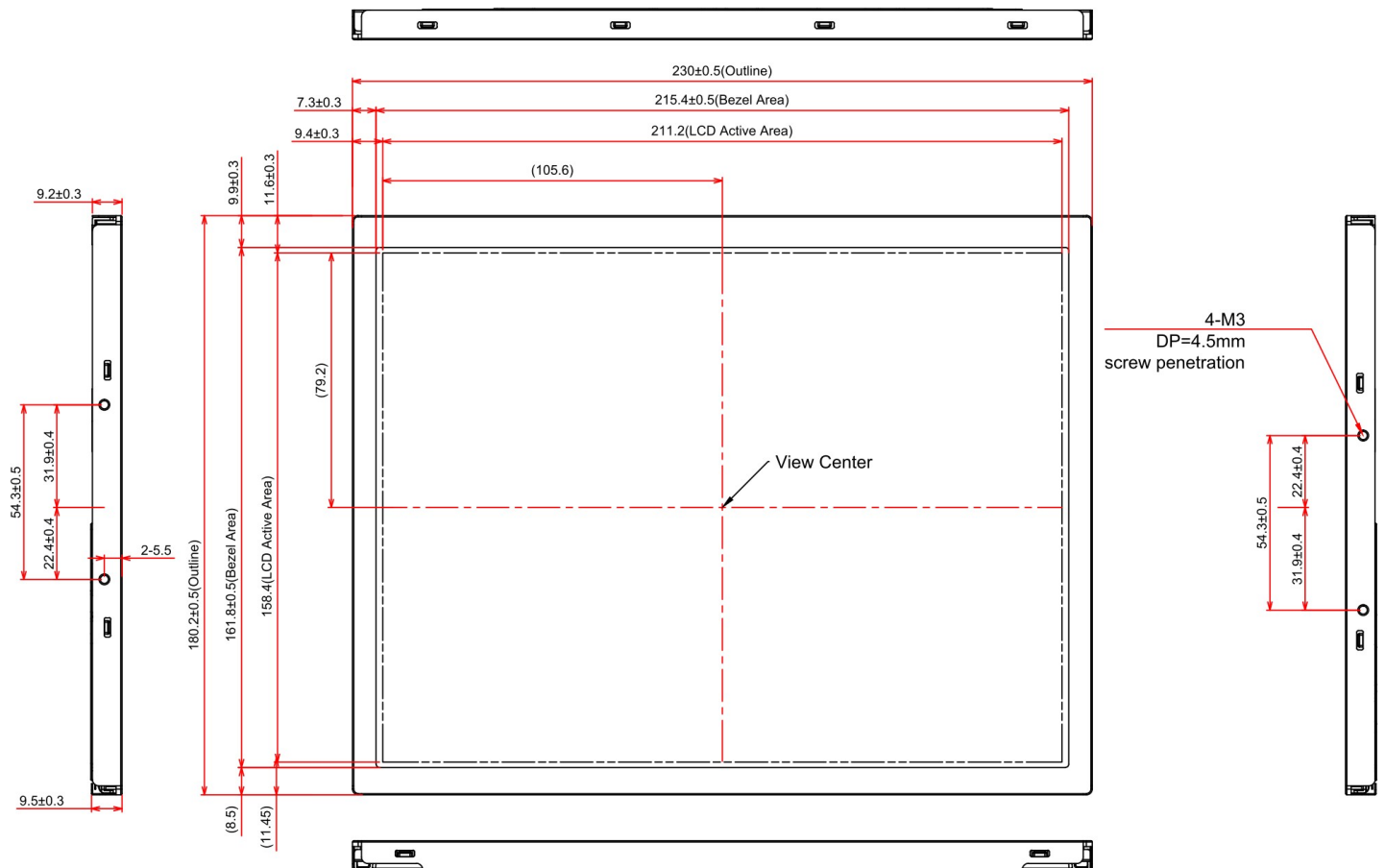
● Feature

1. 10.4" TFTLCD Module
2. Resolution:1024*3(RGB)*768
3. DisplayType:TFT/Transmissive/Normally Black
4. InterfaceType:LVDS
5. Surface Luminance:1300cd/m²
6. Top:-30°C~80°C

● Mechanical Data

1. Module(WxHxT)(mm):230*180.2*9.5 mm
2. Active Area(mm):211.2*158.4 mm
3. LED Driving current: 720mA

● Mechanical Drawing



● Interface Pin Function

No.	Signal	Signal
1	V _{DD}	Power supply for LCD
2	VDD	Power supply for LCD
3	GND	GND
4	GND	GND
5	IN0-	R0~R5, G0
6	IN0+	R0~R5, G0
7	GND	GND
8	IN1-	G1~G5, B0~B1
9	IN1+	G1~G5, B0~B1
10	GND	GND
11	IN2-	B2~B5, DE
12	IN2+	B2~B5, DE
13	GND	GND
14	CLK IN-	Pixel Clock
15	CLK IN+	Pixel Clock
16	GND	GND
17	IN3-	R6~R7, G6~G7, B6~B7
18	IN3+	R6~R7, G6~G7, B6~B7
19	NC	No Connection
20	SC	Scan direction control (Normal : Low or Default. Reverse : High)

● Electrical Characteristics

Module

Item	Symbol	Condition	Standard Value			Unit
			Min.	Typ.	Max.	
Power supply voltage	V _{DD1}	-	3.0	3.3	3.6	V
Power supply current	I _{DD1}	V _{DD} =3.3V	-	300	400	mA
Input signal voltage	V _{IH1}	-	0.7V _{DD}	-	V _{DD}	V
	V _{IL1}	-	V _{SS}	-	0.3V _{DD}	V
Differential Input High Threshold	V _{TH}	V _{ICM} =1.2V	-	-	100	mV
Differential Input Low Threshold	V _{TL}	V _{ICM} =1.2V	-100	-	-	mV

Backlight

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
LED Input Voltage	V _{LED}	I _{LED} = 720mA	10.8	12	13.2	V
LED Forward Current	I _{LED}	100% duty	-	720	-	mA
		0% duty	-	0.01	-	
LED Lifetime	-	I _{LED} = 720 mA	-	100K	-	hrs

BTM106A-CSN\$

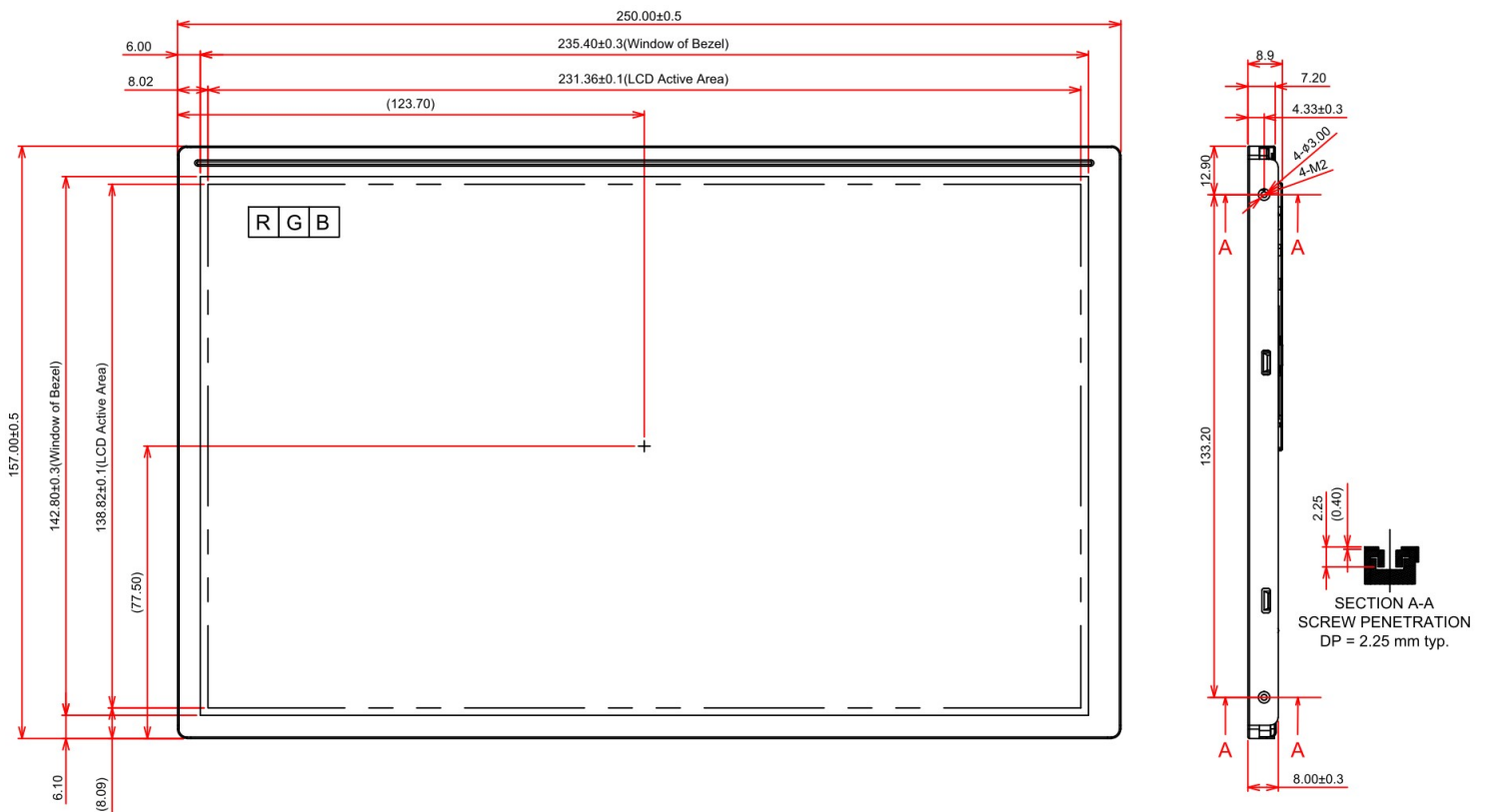
● Feature

1. 10.6" TFTLCD Module
2. Resolution:1280*3(RGB)*768
3. DisplayType:TFT/Transmissive/Normally Black
4. InterfaceType:LVDS
5. Surface Luminance:1000cd/m²
6. Top:-40°C~85°C

● Mechanical Data

1. Module(WxHxT)(mm):250*157*8.9 mm
2. Active Area(mm):231.36*138.816 mm
3. LED Driving current: 690mA

● Mechanical Drawing



● Interface Pin Function

Pin No.	Signal	Function (MODE = Low)		Function (MODE = High)
		6 bit input	8 bit input	8 bit input
1	V _{DD}	+3.3V Power Supply for Logic		+3.3V Power Supply for Logic
2	V _{DD}	+3.3V Power Supply for Logic		+3.3V Power Supply for Logic
3	V _{SS}	GND		GND
4	V _{SS}	GND		GND
5	Link 0-	R0~R5, G0	R2~R7, G2	R0~R5, G0
6	Link 0+	R0~R5, G0	R2~R7, G2	R0~R5, G0
7	V _{SS}	GND		GND
8	Link 1-	G1~G5, B0~B1	G3~G7, B2~B3	G1~G5, B0~B1
9	Link 1+	G1~G5, B0~B1	G3~G7, B2~B3	G1~G5, B0~B1
10	V _{SS}	GND		GND
11	Link 2-	B2~B5, DE	B4~B7, DE	B2~B5, DE
12	Link 2+	B2~B5, DE	B4~B7, DE	B2~B5, DE
13	V _{SS}	GND		GND
14	CLK IN-	Pixel Clock -		Pixel Clock -
15	CLK IN+	Pixel Clock +		Pixel Clock +
16	V _{SS}	GND		GND
17	Link 3-	See:*2)	R0~R1, G0~G1, B0~B1	R6~R7, G6~G7, B6~B7
18	Link 3+	See:*2)	R0~R1, G0~G1, B0~B1	R6~R7, G6~G7, B6~B7
19	MODE	Low= 6bit / 8bit		High= 8bit
20	SD	Scan direction control (Low, Default = Normal, High = Reverse)		

● Electrical Characteristics

Module

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Power Supply Voltage	V _{DD}	-	3.0	3.3	3.6	V
Differential Input Voltage for LVDS Receiver Threshold	V _I	V _{IH}	-	-	+100	mV
		V _{IL}	-100	-	-	
Power Supply Current	I _{DD}	V _{DD} -V _{SS} =3.3V	-	350	440	mA
Frame Frequency	f_{Frame}	-	55	60	75	Hz
CLK Frequency	f_{CLK}	-	50	68.3	80	MHz
Logic Input Voltage	High	V _{IH}	0.8xV _{DD}	-	V _{DD}	V
	Low	V _{IL}	0	-	0.2xV _{DD}	V

Backlight

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
LED Input Voltage	V _{LED}	Backlight Unit	10.8	12	13.2	V
LED Forward Current (Dim Control)	I _{LED}	100% duty	-	690	860	mA
		0% duty	-	6.0	-	
Backlight Enable	BLEN	Backlight Unit	1.5	-	5.5	V
LED Lifetime	-	I _{LED} =690mA	-	100K	-	hrs

BTM121A-CSN\$

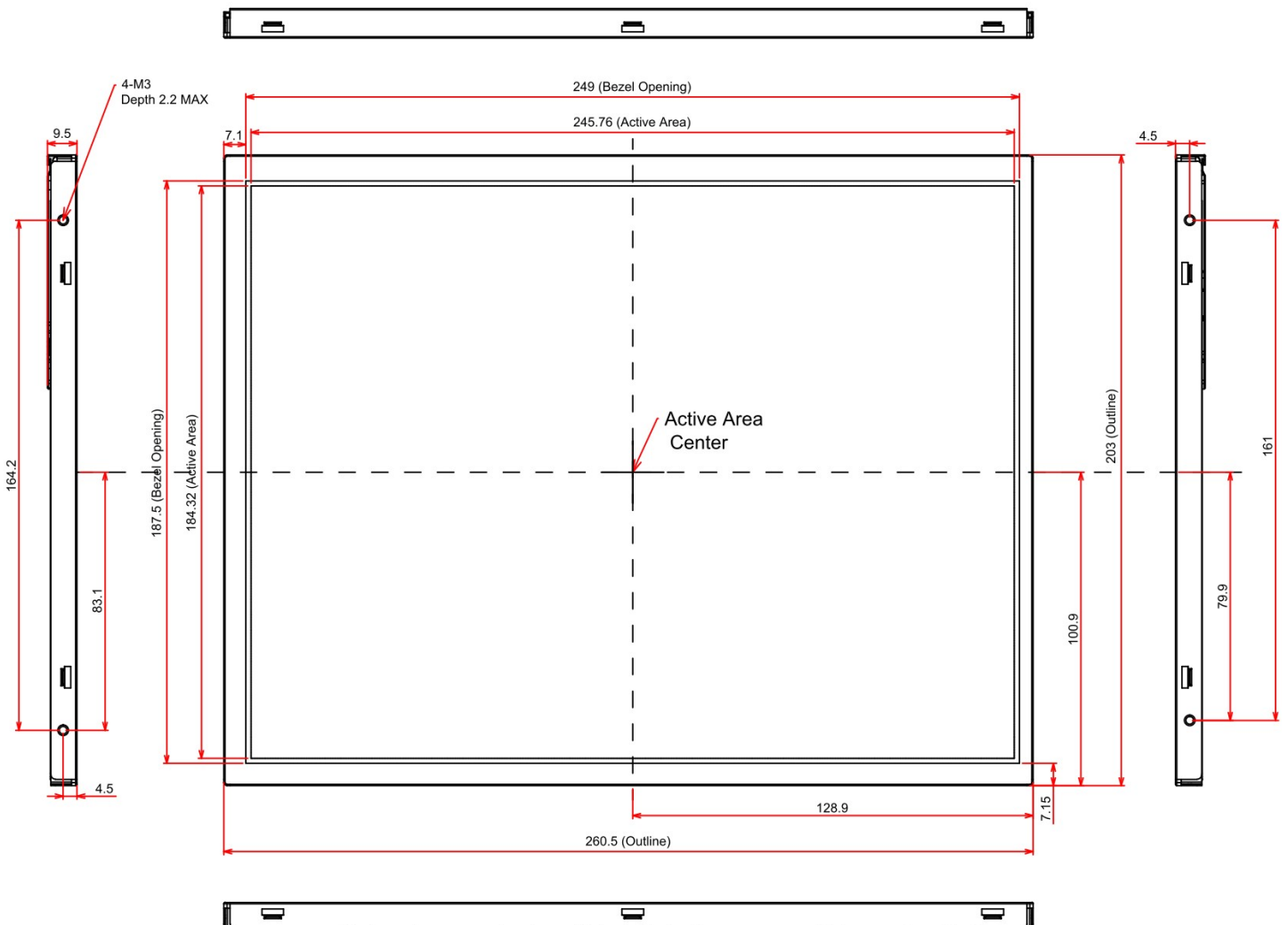
● Feature

1. 12.1" TFTLCD Module
2. Resolution:1024*3(RGB)*768
3. DisplayType:TFT/Transmissive/Normally Black
4. InterfaceType:LVDS
5. Surface Luminance:1000cd/m²
6. Top:-30°C~80°C

● Mechanical Data

1. Module(WxHxT)(mm):260.5*203*9.5 mm
2. Active Area(mm):245.76*184.32 mm

● Mechanical Drawing



● Interface Pin Function

Pin No.	Signal	Function (6 bit mode)		Function (8 bit mode)
		6 bit input	8 bit input	8 bit input
1	V _{DD}	Power Supply +3.3V		Power Supply +3.3V
2	V _{DD}	Power Supply +3.3V		Power Supply +3.3V
3	V _{SS}	GND		GND
4	V _{SS}	GND		GND
5	IN0-	R0~R5, G0	R2~R7, G2	R0~R5, G0
6	IN0+	R0~R5, G0	R2~R7, G2	R0~R5, G0
7	V _{SS}	GND		GND
8	IN1-	G1~G5, B0~B1	G3~G7, B2~B3	G1~G5, B0~B1
9	IN1+	G1~G5, B0~B1	G3~G7, B2~B3	G1~G5, B0~B1
10	V _{SS}	GND		GND
11	IN2-	B2~B5, DE	B4~B7, DE	B2~B5, DE
12	IN2+	B2~B5, DE	B4~B7, DE	B2~B5, DE
13	V _{SS}	GND		GND
14	CLK IN-	Pixel Clock -		Pixel Clock -
15	CLK IN+	Pixel Clock +		Pixel Clock +
16	V _{SS}	GND		GND
17	IN3-	-	R0~R1, G0~G1, B0~B1	R6~R7, G6~G7, B6~B7
18	IN3+	-	R0~R1, G0~G1, B0~B1	R6~R7, G6~G7, B6~B7
19	SEL	Data selection (L : JEIDA, H : VESA)		
20	SC	Scan direction control (L : Normal, H : Reverse)		

● Electrical Characteristics

Module

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Power Supply Voltage	V _{DD}	-	3.0	3.3	3.6	V
Differential Input Voltage for LVDS Receiver Threshold	V _I	"H" level	-	-	+100	mV
		"L" level	-100	-	-	
Power Supply Current	I _{DD}	V _{DD} -V _{SS} =3.3V	-	123	179	mA
Frame Frequency	f_{Frame}	-	55	60	65	Hz
CLK Frequency	f_{CLK}	-	51.2	53.8	65	MHz

Backlight

Item	Symbol	Min.	Typ.	Max.	Unit	
Power Supply Input Voltage	V _L	10.8	12	13.2	V	
Power Supply Input Current	I _L	-	TBD	-	mA	
Backlight ON-OFF	High	BL _{EN}	2.5	-	V _L	V
	Low		0	-	0.4	V
LED Lifetime	LT	-	100,000	-	hrs	

BTM121B-CSN\$

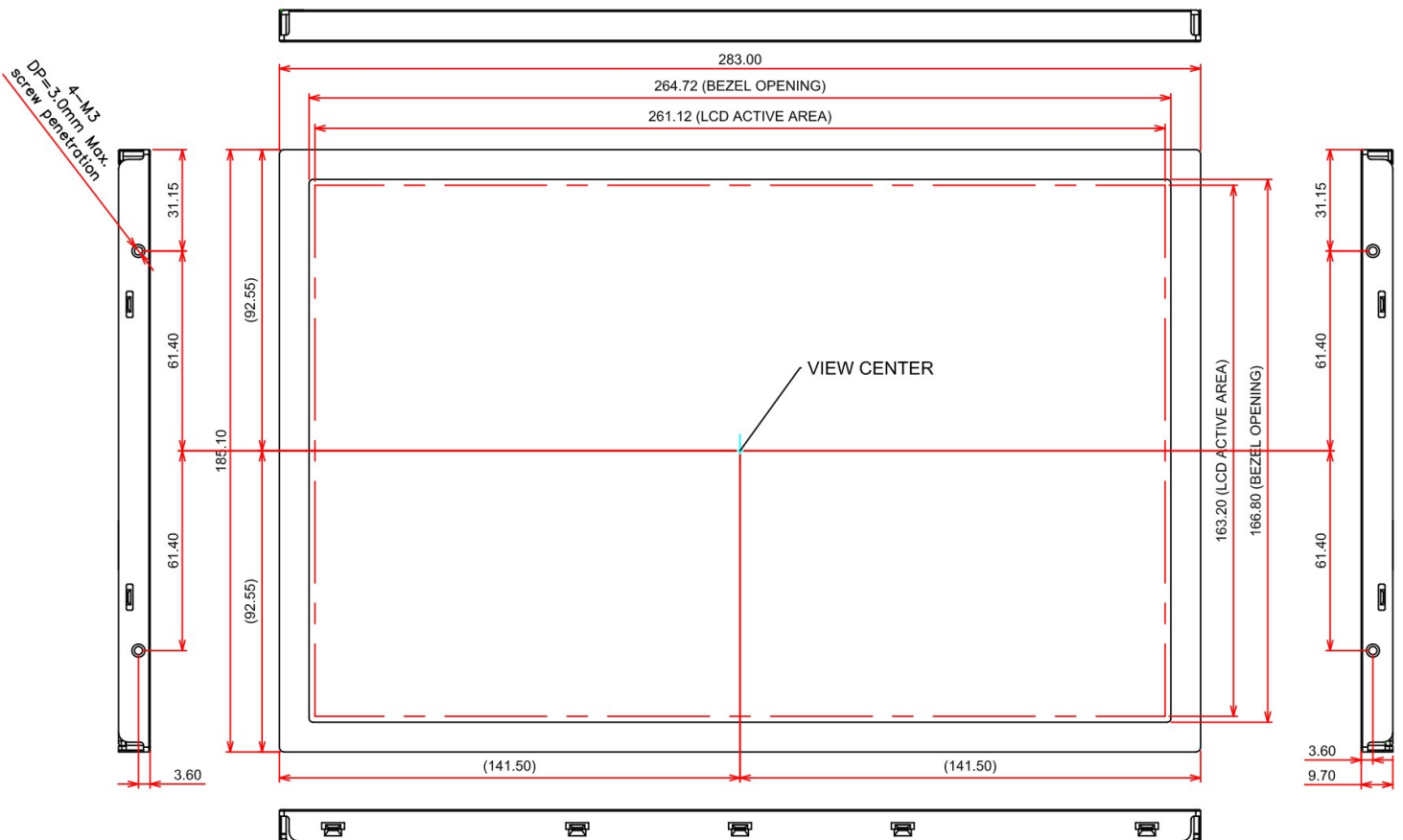
● Feature

1. 12.1" TFTLCD Module
2. Resolution:1280*3(RGB)*800
3. DisplayType:TFT/Transmissive/Normally Black
4. InterfaceType:LVDS
5. Surface Luminance:1500cd/m²
6. Top:-40°C~80°C

● Mechanical Data

1. Module(WxHxT)(mm):283*185.1*9.7 mm
2. Active Area(mm):261.12*163.2 mm
3. LED Driving current: 1000mA

● Mechanical Drawing



● Interface Pin Function

Pin No.	Signal	Function (MODE = Low)		Function (MODE = High)
		6 bit input	8 bit input	8 bit input
1	V _{DD}	+3.3V Power Supply for Logic		+3.3V Power Supply for Logic
2	V _{DD}	+3.3V Power Supply for Logic		+3.3V Power Supply for Logic
3	V _{SS}	GND		GND
4	V _{SS}	GND		GND
5	Link 0-	R0~R5, G0	R2~R7, G2	R0~R5, G0
6	Link 0+	R0~R5, G0	R2~R7, G2	R0~R5, G0
7	V _{SS}	GND		GND
8	Link 1-	G1~G5, B0~B1	G3~G7, B2~B3	G1~G5, B0~B1
9	Link 1+	G1~G5, B0~B1	G3~G7, B2~B3	G1~G5, B0~B1
10	V _{SS}	GND		GND
11	Link 2-	B2~B5, DE	B4~B7, DE	B2~B5, DE
12	Link 2+	B2~B5, DE	B4~B7, DE	B2~B5, DE
13	V _{SS}	GND		GND
14	CLK IN-	Pixel Clock -		Pixel Clock -
15	CLK IN+	Pixel Clock +		Pixel Clock +
16	V _{SS}	GND		GND
17	Link 3-	See:*2)	R0~R1, G0~G1, B0~B1	R6~R7, G6~G7, B6~B7
18	Link 3+	See:*2)	R0~R1, G0~G1, B0~B1	R6~R7, G6~G7, B6~B7
19	MODE	Low= 6bit / 8bit		High= 8bit
20	SD	Scan direction control (Low = Normal, High = Reverse=Default)		

● Electrical Characteristics

Module

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Power Supply Voltage	V _{DD}	-	3.0	3.3	3.6	V
Differential Input Voltage for LVDS Receiver Threshold	V _I	V _{IH}	-	-	+200	mV
		V _{IL}	-200	-	-	
Power Supply Current	I _{DD}	V _{DD} -V _{SS} =3.3V	-	150	250	mA
Frame Frequency	f_{Frame}	-	55	60	65	Hz
CLK Frequency	f_{CLK}	-	66	67	71	MHz
Logic Input Voltage	High	V _{IH}	0.8xV _{DD}	-	V _{DD}	V
	Low	V _{IL}	0	-	0.2xV _{DD}	V

Backlight

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
LED Input Voltage	V _{LED}	Backlight Unit	10.8	12	13.2	V
LED Forward Current (Dim Control)	I _{LED}	100% duty	-	1000	1400	mA
		0% duty	-	7.0	-	
Backlight Enable	BLEN	High	2.5	-	V _L	V
		Low	0	-	0.4	
LED Lifetime	-	I _{LED} =1000mA	-	100K	-	hrs

BTM150A-CSN\$

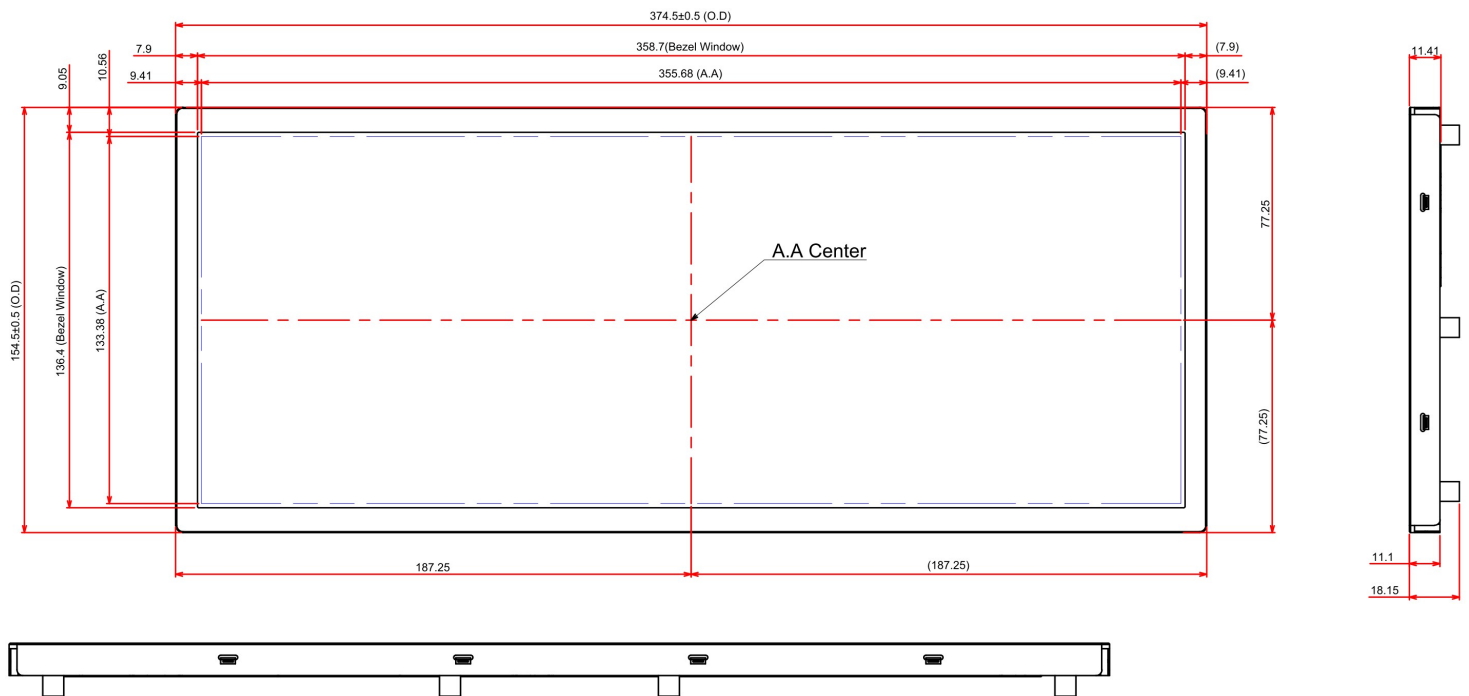
● Feature

1. 15.0" TFTLCD Module
2. Resolution:1920*3(RGB)*720
3. DisplayType:TFT/Transmissive/Normally Black
4. InterfaceType:LVDS
5. Surface Luminance:1000cd/m²
6. Top:-40°C~85°C

● Mechanical Data

1. Module(WxHxT)(mm):374.5*154.5*18.15 mm
2. Active Area(mm):355.68*133.38 mm

● Mechanical Drawing



● Interface Pin Function

Pin No.	Symbol	Signal	Pin No.	Symbol	Signal
1	LOOP1	Loop back1 → LOOP2(*2)	31	RX3-	LVDS Data3-
2	V _{CC}	Power Supply (3.3V)	32	GND	Ground
3	V _{CC}	Power Supply (3.3V)	33	RXC+	LVDS Clock+
4	V _{CC}	Power Supply (3.3V)	34	RXC-	LVDS Clock-
5	V _{CC}	Power Supply (3.3V)	35	GND	Ground
6	NC	No connecting	36	RX2+	LVDS Data2+
7	GND	Ground	37	RX2-	LVDS Data2-
8	GND	Ground	38	GND	Ground
9	GND	Ground	39	RX1+	LVDS Data1+
10	GND	Ground	40	RX1-	LVDS Data1-
11	LVMD	Input: : LVDS MAP (Low : JEIDA, High : VESA)	41	GND	Ground
12	SCAN	Input: : Scan direction (Low : Normal, High : Reverse)	42	RX0+	LVDS Data0+
13	FAIL	Output: : Fail detect signal (Normal : High, Fail : Low)	43	RX0-	LVDS Data0-
14	GND	Ground	44	I2C_SCL	I2C (Serial Clock) Internal pull-High
15	Reserved	Keep to V _{CC} level	45	I2C_SDA	I2C (Serial Data) Internal pull-High
16	Reserved	Keep to V _{CC} level	46	LOOP2	Loop back2 → LOOP1(*2)
17	GND	Ground	47	NTC1	Backlight temperature Sensor pin 1 (*4)
18	Reserved	Keep to V _{CC} level	48	NTC2	Backlight temperature Sensor pin 2 (*4)
19	Reserved	Keep to V _{CC} level	49	BL_C6	Backlight cathode 6
20	GND	Ground	50	BL_C5	Backlight cathode 5
21	Reserved	Keep to V _{CC} level	51	BL_C4	Backlight cathode 4
22	Reserved	Keep to V _{CC} level	52	BL_C3	Backlight cathode 3
23	GND	Ground	53	BL_C2	Backlight cathode 2
24	Reserved	Keep to V _{CC} level	54	BL_C1	Backlight cathode 1
25	Reserved	Keep to V _{CC} level	55	NC	No connecting
26	GND	Ground	56	NC	No connecting
27	Reserved	Keep to V _{CC} level	57	NC	No connecting
28	Reserved	Keep to V _{CC} level	58	NC	No connecting
29	GND	Ground	59	BL_A1	Backlight anode1 common (For cathode 1,2,3)
30	RX3+	LVDS Data3+	60	BL_A2	Backlight anode1 common (For cathode 4,5,6)

● Electrical Characteristics

Module

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Power Supply Voltage	V_{DD}	-	-	3.3	-	V
Differential Input Voltage for LVDS Receiver Threshold	V_I	"H" level	-	-	+50	mV
		"L" level	-50	-	-	
Power Supply Current	I_{DD}	$V_{DD}=3.3V$	-	TBD	-	mA
Frame Frequency	f_{Frame}	-	-	60	62	Hz
CLK Frequency	f_{CLK}	-	85	-	104	MHz

Backlight

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
LED Input Voltage	V_{LED}	-	-	24.2	27.2	V
LED Forward Current	I_{LED}	-	-	(80)	-	mA
LED lifetime	-	$I_{LED}=480\text{ mA}$	-	70K	-	hrs
Thermistor type	-	-	NTC 10K			-