Transmissive Reflective Illuminations Optimized

TRIO-121-CMTF
Product Specification
Low Power Consumption, No Extra Heat Generation.

TRIO-121-CMTF : 12.1" Direct Sunlight Readable TFT LCD

General Specifications

Module Size	249.0 x 187.5mm
Effective Display Area	245.76(H) x 184.32(V)mm
Driver Element	a-si TFT active matrix
Dor Number	1024 x R.G.B. x 768
Dot Pitch	0.240(H) x 0.240(V)mm
Interface Mode	LVDS (Low Voltage Differential Signaling)
Pixel Arrangement	Stripe
Display Colors	262k/16.2M
Surface Treatment	High Efficiency AR coating (Haze <15)
Operating Temp	-30 °C - 70 °C
Storage Temp	-40 °C - 80 °C
Weight	435g
RoHS Compliant	RoHS Compliance

INTERFACE SIGNALS

Pin	Symbol	Description
1	RX3+	Differential Data Input, CH3 (Positive)
2	RX3-	Differential Data Input, CH3 (Negative)
3	NC	NC
4	SEL68	LVDS 6/8 bit select function control, Low or NC ⇒ 6 bit Input Mode High ⇒ 8bit Input Mode
5	GND	Ground
6	RXC+	Differential Clock Input (Positive)
7	RXC-	Differential Clock Input (Negative)
8	GND	Ground
9	RX2+	Differential Data Input , CH2 (Positive)
10	RX2-	Differential Data Input , CH2 (Negative)
11	GND	Ground
12	RX1+	Differential Data Input , CH1 (Positive)
13	RX1-	Differential Data Input, CH1 (Negative)
14	GND	Ground
15	RX0+	Differential Data Input, CH0 (Positive)
16	RX0-	Differential Data Input, CH0 (Negative)
17	reLR	Horizontal Reverse Scan Control, Low or NC ⇒ Normal Mode. High ⇒ Horizontal Reverse Scan
18	reUD	Vertical Reverse Scan Control, Low or NC ⇒ Normal Mode, High ⇒ Vertical Reverse Scan
19	VCC	Power supply
20	VCC	Power supply

Optical Characteristics

	Symbol	Min	Typ	Max	Unit
Contrast Ratio	CR	500	700		
Brightness	B_{white}		580		cd/m^2
LCD Transmission	T				%
Response Time	t_r	-	5	10	msec
	tf	-	11	16	msec
Viewing Angle					
X Axis, Right	x_+	70	80		deg.
X Axis, Left	x_-	70	80		deg.
Y Axis, Up	y_+	60	70		deg.
Y Axis, Down	y_-	60	70		deg.
Outdoor Readability*					
Ambient light		10000	20000	30000	cd/m^2
Brightness gain (min)	35°	780	980	1180	cd/m^2
Brightness gain (max)	35°				cd/m^2
Reflectance (%)	35°		1-2		%

Electrical Specifications

	Symbol	Value			Unit
		Min	Typ	Max	
Backlight					
LED Input Voltage	V_L	10.8	12	13.2	V
LED Current	I_L		0.4	0.5	A
LED On Voltage (25 C)	V_O				Vrms
LED On Voltage (0 C)	V_O				Vrms
Operating Frequency	Fg				KHz
LED Life Time	t_{LP}	30,000			hours
Power Consumption	P_W		4.8	6	W

	Symbol	Value			Unit
		Min	Typ	Max	
Module					
Power Supply Voltage	Vcc	3	3.3	3.6	V
Power Supply Current	Icc		410	490	m A
Ripple Voltage	Vpp				mV_{p-p}
Power Consumption	P_W		2		W

Note: 1. Specifications are subject to change without notice.
2. Original LCD Model Spec.:CMO G121X1-L04

*Equivalent brightness under sunlight.

RayShine Photonics

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