

1. General Description

M240HW01 is a Color Active Matrix Liquid Crystal Display composed of a TFT-LCD panel, a driver circuit, and backlight system. The screen format is intended to support the WUXGA (1920(H) x 1080(V)) screen and 16.7M colors (RGB 6-bits + FRC data).

1.1 Display Characteristics

The following items are characteristics summary on the table under 25 °C condition:

Items	Unit	Specifications
Screen Diagonal	[mm]	611.32 (24.0" Wide)
Active Area	[mm]	531.36 (H) x 298.89 (V)
Pixels H x V		1920 x 3(RGB) x 1080
Pixel Pitch	[um]	276.75 (per one triad) x276.75
Pixel Arrangement		R.G.B. Vertical Stripe
Display Mode		TN Mode, Normally White
White Luminance	[cd/m ²]	300(Typ)
Contrast Ratio		1000 : 1 (Typ)
Optical ResponseTime	[msec]	5 ms(Typ)
Nominal Input Voltage VCC	[Volt]	+5.0 (Typ)
Power Consumption	[Watt]	35 W (Typ)
Weight	[Grams]	3330 (Typ)
Physical Size (H x V x D)	[mm]	556.0 (W) x 323.0 (H) x 16.65 (D) typ
Surface Treatment		Anti-glare type, Harness 3H
Support Color		16.7M colors (RGB 6-bits + HiFRC data)
6500K White Point (CIE x,y)		(0.313,0.329) +/-0.03
Auto Adjustment		Auto Color, Size & Phase
Temperature Range Operating Storage (Non-Operating)	[°C] [°C]	0 to +50 -20 to +60
RoHS Compliance		RoHS Compliance
TCO '03 Compliance		TCO '03 Compliance

1.2 Optical Characteristics

The optical characteristics are measured under stable conditions at 25°C (Room Temperature):

Item	Unit	Conditions	Min.	Typ.	Max.
Viewing Angle	[degree]	Horizontal (R+L) CR = 10	150	170	-
		Vertical (U+D) CR = 10	140	160	-
Luminance Uniformity	[%]	9 Points	75	80	-
Optical Response Time	[msec]	Rising	-	3.8	6.1
		Falling	-	1.2	1.9
		Rising + Falling	-	5	8
		Grey to Grey (avg.)	-	2	-
Color / Chromaticity Coordinates (CIE 1931)		Red x	TBD	TBD	TBD
		Red y	TBD	TBD	TBD
		Green x	TBD	TBD	TBD
		Green y	TBD	TBD	TBD
		Blue x	TBD	TBD	TBD
		Blue y	TBD	TBD	TBD
		White x	TBD	TBD	TBD
		White y	TBD	TBD	TBD
White Luminance (At CCFL= 7.5mA)	[cd/m ²]		240	300	-
Contrast Ratio			600	1000	-
Cross Talk (At 75Hz)	[%]		-	-	1.5
Flicker	[dB]		-	-	-20

2.1 Backlight Unit

Parameter guideline for CCFL Inverter is under stable conditions at 25°C (Room Temperature):

Parameter	Min.	Typ.	Max.	Unit
CCFL Standard Current(ISCFL)	7.0	7.5	8.0	[mA] rms
CCFL Operation Current(IRCFL)	3.0	7.5	8.0	[mA] rms
CCFL Frequency(FCFL)	TBD			[KHz]
CCFL Ignition Voltage(ViCFL, Ta= 0°C)	TBD			[Volt] rms
CCFL Ignition Voltage(ViCF, Ta= 25°C)	TBD			[Volt] rms
CCFL Operation Voltage (VCFL)	TBD			[Volt] rms
CCFL Power Consumption(PCFL)	TBD			[Watt]
CCFL Life Time(LTCFL)	40,000	50,000	-	[Hour]
PWM Dimming Ratio	20		100	%

2.2 Pin Assignment

Pin#	Signal Name	Pin#	Signal Name
1	RxOIN0-	2	RxOIN0+
3	RxOIN1-	4	RxOIN1+
5	RxOIN2-	6	RxOIN2+
7	GND	8	RxOCLKIN-
9	RxOCLKIN+	10	RxOIN3-
11	RxOIN3+	12	RxEIN0-
13	RxEIN0+	14	GND
15	RxEIN1-	16	RxEIN1+
17	GND	18	RxEIN2-
19	RxEIN2+	20	RxECLKIN-
21	RxECLKIN+	22	RxEIN3-
23	RxEIN3+	24	GND
25	NC	26	NC
27	V _{DD}	28	V _{DD}
29	V _{DD}	30	V _{DD}