Ordering number : ENN6766

LCD Module

ALP236FCX

Low-Temperature Polysilicon 2.5-inch TFT LCD Module

Overview

This 2.5 inch low temperature poly- silicon TFT-LCD module consists of LCD panel and backlight.
This is suitable for digital still camera or for digital video camera.

Features

- Diagonal 6.3cm (2.5inch) display size.
- 881 × 228 = 200,868 dots.
- RGB delta color arrangement.
- Operating temperature (Panel) is -10 to +60°C. Ambient temperature during storage is -20 to +70°C.
- Slim design, light weight and narrow frame. (t=0.7mm glass)
- Up / down and right / left inverse function.
- Built-in shifter circuit..
- Conform to NTSC, PAL when using recommended IC : LV4135W, LV4137W (LV4139W : Under development).
- Wide viewing film, Anti-glare (AG) / Anti-reflection (AR) coat.
- Builds in fluorescent lamp backlight unit. (Not contains inverter unit)
- Panel power consumption is Typ.100mW at NTSC.

Specifications

Item	Specifications	Unit	Remarks
Dot count (H) × (V)	881 × 228	dot	
Effective display dimensions (H) × (V)	50.25 × 37.62	mm	
Display size (diagonal)	6.3(2.5inch)	cm	
Dot pitch (H) × (V)	0.057 × 0.165	mm	
Color arrangement	RGB Delta	-	
External Dimensions (W) × (H) × (D)	TYP 62.4 × 48.6 × 6.0	mm	Note1
Weight	TBD	g	

*Note1: Excluding flexible cable and protrusions.

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SANYO Electric Co.,Ltd. Semiconductor Company
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

Absolute Maximum Ratings at VSS=0V

Item	Symbol	Ratings	Unit
H driver power supply voltage	HVDD	-1.0 to +14	V
V driver power supply voltage	VVDD	-1.0 to +14	V
Common electrode voltage	VCOM	-1.0 to +14	V
Driving direction signal voltage	CSH, CSV	-1.0 to +14	V
H driver input voltage	STH, XSTH, CKH1, CKH2	-1.0 to +14	V
V driver / precharge data input voltage	STV, XSTV, CKV1, CKV2, ENB, XENB, PCG, XPCG	-1.0 to +14	V
Video / precharge data input voltage	VG, VR, VB, VPCD	-1.0 to +13	V
Operating temperature (panel)	Topr	-10 to +60	°C
Storage temperature	Tstg	-20 to +70	°C

Operating Conditions

Power supply voltage HVDD 12.0V ± 0.3V, VVDD 12.0V ± 0.3V, VSS 0V, HVSS 0V, VVSS 0V

Item		Symbol	MIN	TYP	MAX	Unit
H driver input voltage	Low	VHIL	-0.3	0.0	0.3	V
	High	VHIH	2.5	3.0	4.0	V
V driver input voltage	Low	VVIL	-0.3	0.0	0.3	V
	High	VVIH	2.5	3.0	4.0	V
CSV, CSH	Low	VSIL	-0.3	0.0	0.3	V
	High	VSIH	11.5	VDD	VDD	V
Video signal center voltage		VVC	5.0	5.2	5.4	V
Video signal input voltage range *1		VG, VR, VB	VVC-3.5	-	VVC+3.5	V
Common electrode voltage*2		VCOM	(VVC-0.2)-0.2	(VVC-0.2)	(VVC-0.2)+0.2	V
Precharge data signal *1		VPCD	VVC±1.5	VVC±2.0	VVC±2.5	V

*1 Video signal and precharge data signal shall be input symmetrically around VVC.

*2 Set common electrode voltage to the optimum voltage.

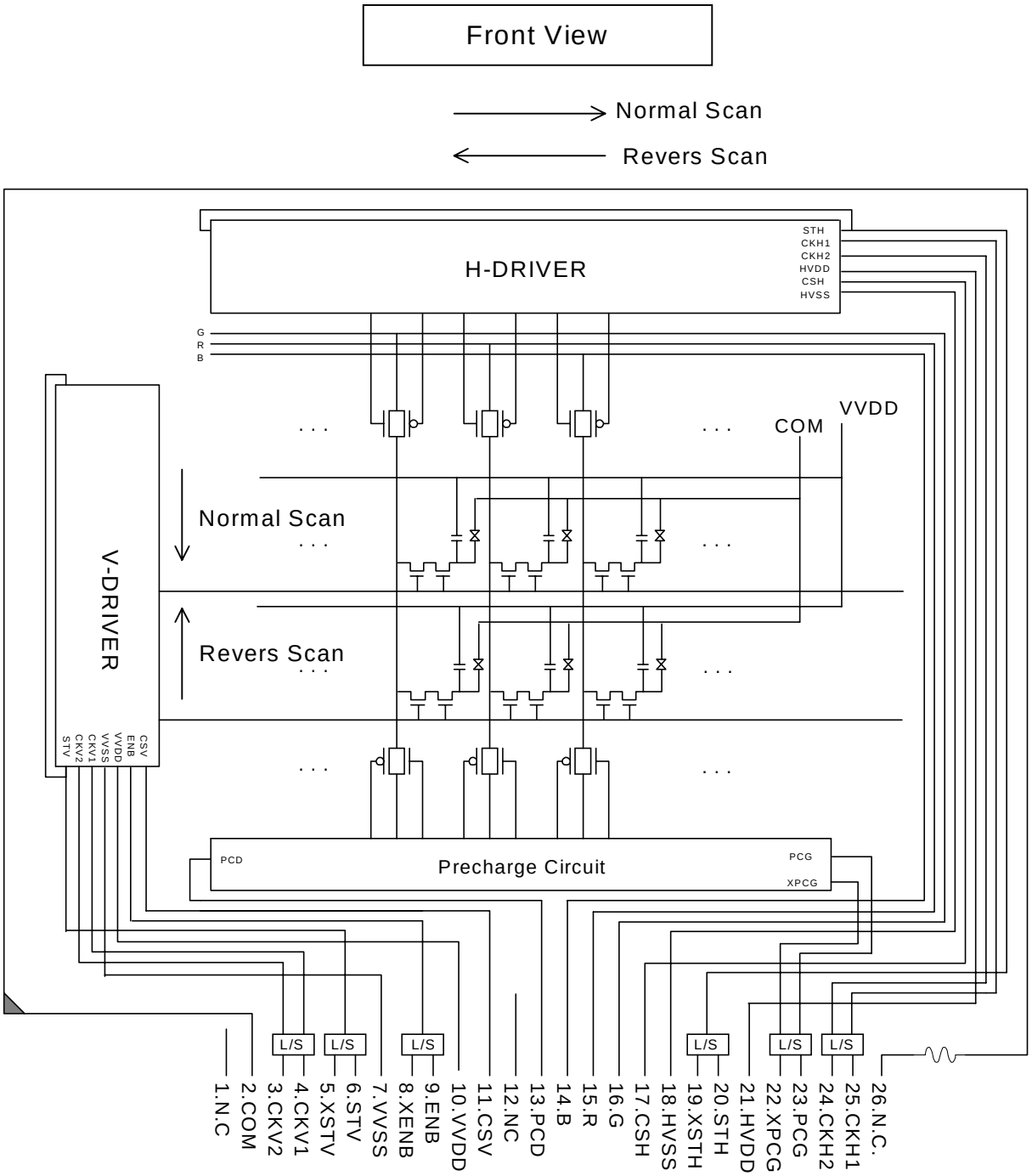
Optical Specifications

Item	Symbol	Condition	MIN	TYP	MAX	Unit
Contrast ratio	CR	25°C	-	100	-	-
Viewing angle range	θT θB θL θR	CR >= 10	-	35 60 55 55	-	deg

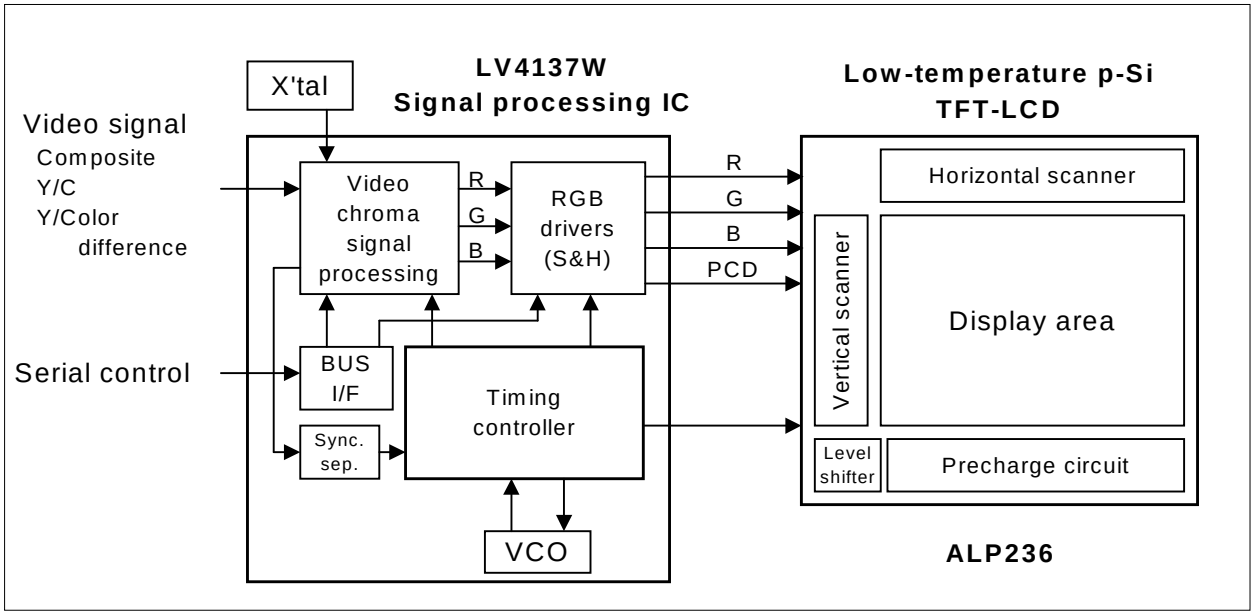
Pin Function

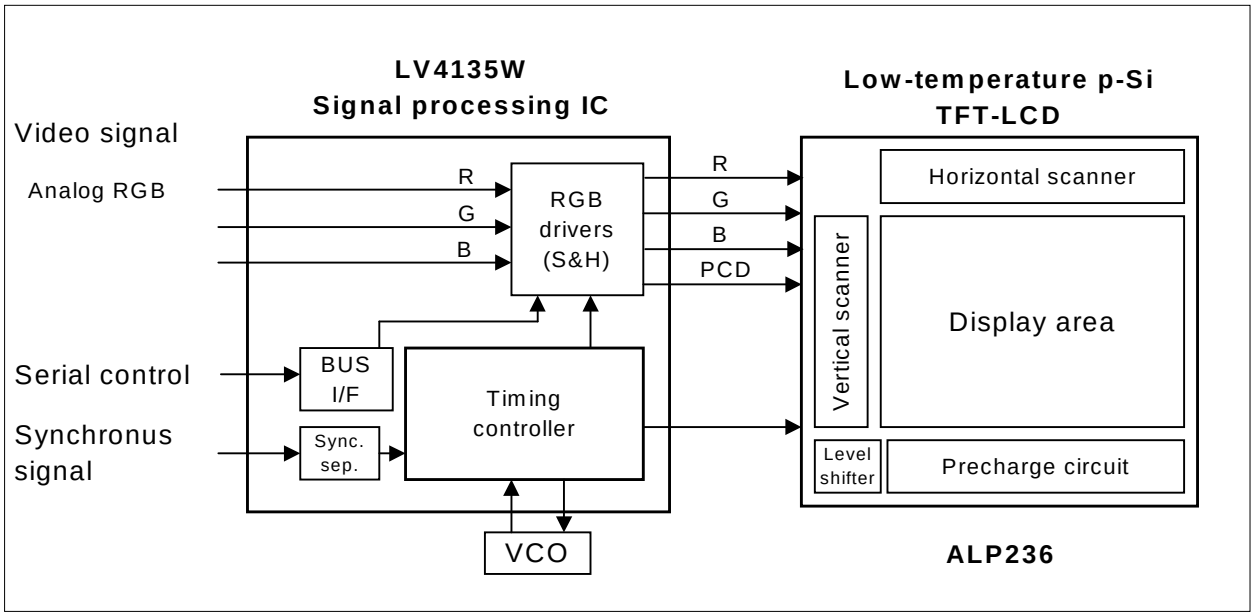
Pin No	Symbol	Function
1	NC	Leave this pin open
2	COM	Common electrode voltage
3	CKV2	V clock 2
4	CKV1	V clock 1
5	XSTV	Inverted signal of STV
6	STV	V start signal
7	VVSS	VSS for V drive
8	XENB	Inverted signal of ENB
9	ENB	Enable signal
10	VVDD	VDD for V drive
11	CSV	Up / down inverse control signal (H : Normal scan, L : Reverse scan)
12	NC	Leave this pin open
13	PCD	Precharge data signal
14	B	Video signal (B)
15	R	Video signal (R)
16	G	Video signal (G)
17	CSH	Right / left inverse control signal (H : Normal scan, L : Reverse scan)
18	HVSS	VSS for H drive
19	XSTH	Inverted signal of STH
20	STH	H start signal
21	HVDD	VDD for H drive
22	XPCG	Inverted signal of PCG
23	PCG	Precharge gate signal
24	CKH2	H clock 2
25	CKH1	H clock 1
26	NC	Leave this pin open

Block Diagram

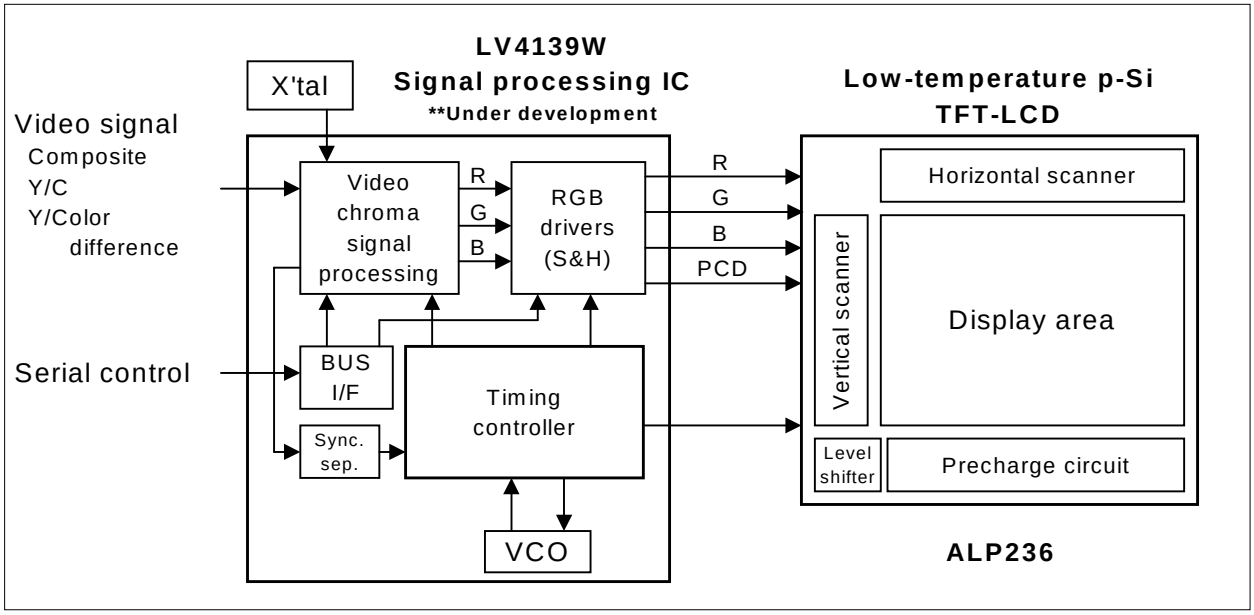


System Configuration

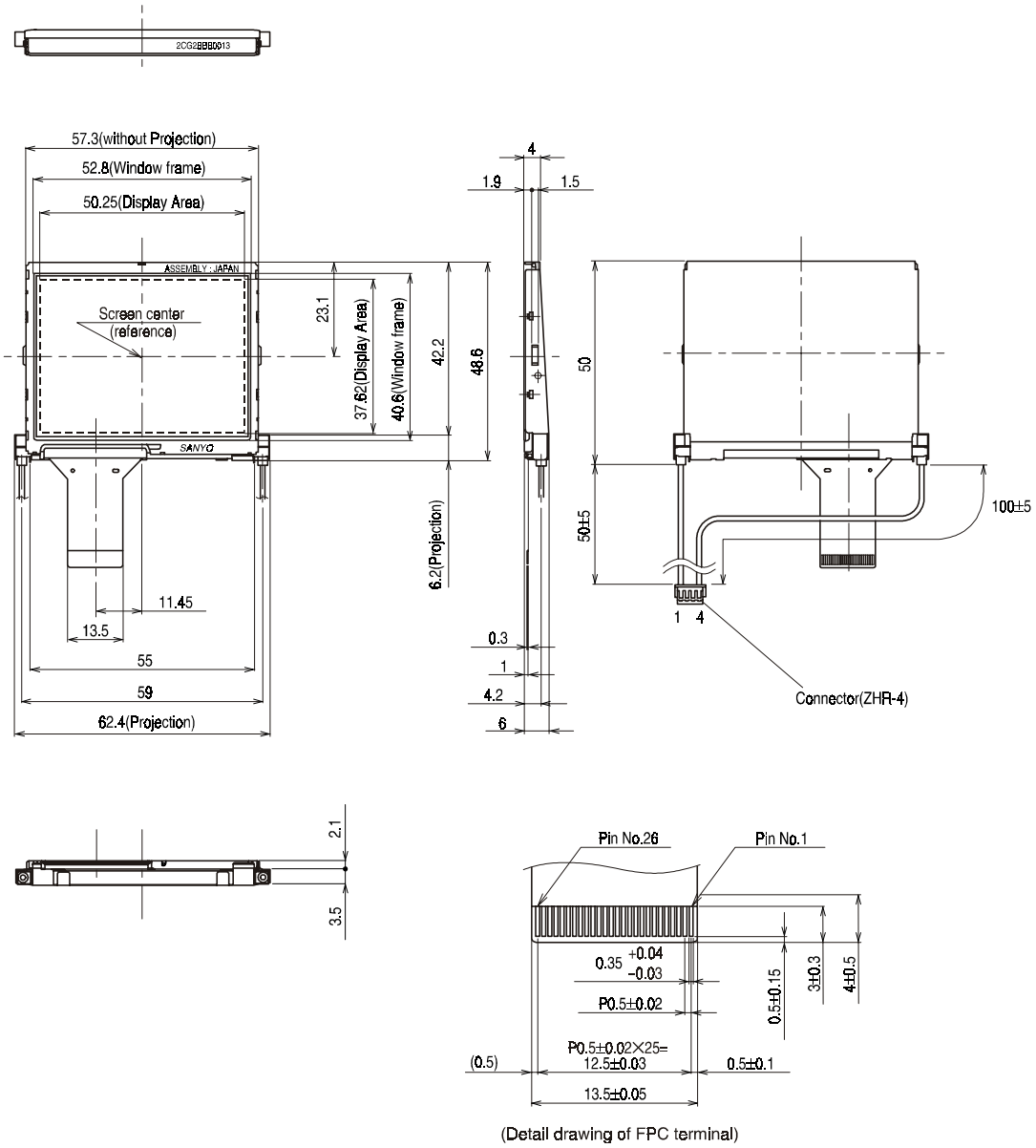




System Configuration



Package Dimension



(Detail drawing of FPC terminal)

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