

LCD CONTROLLERS

Part Number	SED1330	SED1335	SED1336	SED 1341	SED 1345	SED1351	SED1352	SED1353	SED1354
Discontinued?	No	No	No	No	No	No	No	No	No
Replacement	—	—	—	—	—	—	—	—	—
Internal CGROM	160 chars (5x7)	160 chars (5x7)	160 chars (5x7)	No	No	No	No	No	No
CPU Interface (Bits)	68xx	8	8	8		8, 16	8, 16	8, 16	8, 16
	80xx	8	8	8		8, 16	8, 16	8, 16	8, 16
	MPU				4	4	8, 16	8, 16	8, 16
	ISA						8, 16	8, 16	8, 16
	Digital RGB			1(R or G or B)	4(R or G or B)				
Display Size	up to 640x256 dots at a duty of 1/256	up to 640x256 dots at a duty of 1/256	LCD: 640x200, TV: 256x200	adjusted by H/W 640X200 640X350 640X400 640X480 720x350 720x480	adjusted by S/W 640X200 640X350 640X400 640X480	max. duty of 1/1024 up to 1024x1024	max duty of 1/1024 max 640x400 for 16 grey shades	max 640x400 for 16 colors max 320x200 for 256 colors	max 640x480 for 256 colors
Frame Buffer Support	64KB SRAM	64KB SRAM	64KB SRAM	40KB SRAM	40KB SRAM	64KB SRAM	128KB SRAM	128KB SRAM	256Kx16 DRAM (FPM/EDO/S) 64Kx16 SRAM
Frame Buffer Data Bus Width (bits)	8	8	8	8	8	16	8/16	8/16	8/16
T oper (deg C)	-20 to 75	-20 to 75	-20 to 75	0 to 70	0 to 70	-20 to 75	0 to 70	-20 to 85	tdb
fosc max (MHz)	10	10	10	34	30	12.5	25	25	33
Supply voltage Rng (V)	4.5 to 5.5	2.7 to 5.5	3.0 to 5.5	4.75 to 5.25	4.75 to 5.25	4.5 to 5.5 F0A 2.7 to 3.6 FLA	4.5 to 5.5 F0B 2.7 to 3.3 D0B	4.5 to 5.5 F0B 2.7 to 3.3 D0B	4.5 to 5.5 F0B 2.7 to 3.3 D0B
Supply Current (mA) I <sub>DD</sub> typ	@ 3V	-	3.5	3.5	-				
	@ 5V	8	11	11	<40	<40	<40	45	45
Gray shade levels	2	x	x	x	x			x	x
	4							x	x
	8					x			x
Color Levels	16						x	x	x
	4							x	x
	16							x	x
Display Data Bus (bits)	4	x	x	x	x	x	x	x	x
	8				x	x	x	x	x
Programmable Features	3 layers, smooth scrolling, inverse video, text and graphic display	3 layers, smooth scrolling, inverse video, text and graphic display	LCD/TV support, 3 layers, smooth scrolling, inverse video, text and graphic display	Set by digital switches or MPU for panel size, panel timing, clock select	Set by ROM or MPU for panel size, panel timing, clock select	2 layers, data OR function, smooth scrolling, overlay, inverse video	configured via MPU for panel size/type, bus size, and memory interface	configured via MPU for panel size/type, bus size, and memory interface	configured via MPU for panel size/type, bus size, and memory interface

LCD CONTROLLERS (cont'd)

Part Number		SED1330	SED1335	SED1336	SED 1341	SED 1345	SED1351	SED1352	SED1353	SED1354
LCD Panel Type	M-STN	x	x	x	x	x	x	x	x	x
	C-STN								x	x
	MIM									x
	TFT									x
	Bi-refring							x	x	x
	EL		some Planar some Sharp					some Planar some Sharp	some Planar some Sharp	some Planar some Sharp
	NTSC			ntsc/pal						
Package	QFP	FBA (QFP5-60pin), FBB (QFP6-60pin)	F0A (QFP5-60pin), F0B (QFP6-60pin)	F0A (QFP6-60pin)	FOE (QFP5-80pin)	FOA (QFP5-80pin)	F0A (QFP5-100pin), FLB (QFP15-100pin)	F0B (QFP5-100pin) F1B (QFP15-100pin)	F0A (QFP5-100pin) (pin compatible w/ 1352F0B)	FOA
	DIE		D0A				D0A	D0B		
Data Book '96 Page		109	123	137	165	185	181	199	n/a	n/a
Evaluation Boards	SMOS	SDU1330B0B (very limited qty available)	SDU1335B0B (very limited qty available)		SDU1341B0E	SDU1345B0C	Not Available	SDU1352B0C (available for purchase)	SDU1353B0C (available for purchase)	SDU1354B0C #
	Third Party	LM-1336 Carlsen Assoc. 619-944-4248	LM-1336 Carlsen Assoc. 619-944-4248	LM-1336 Carlsen Assoc. 619-944-4248				Apollo Displays 804-674-5647		
MP Date		Now	Now	Now	Now	Now	Now	Now	Now	Jan 98

Notes: 1. Some packages of certain parts labeled with # are still under development.