10.1 inch LCD Module Specification

Model No.：SLM-MR101M-E

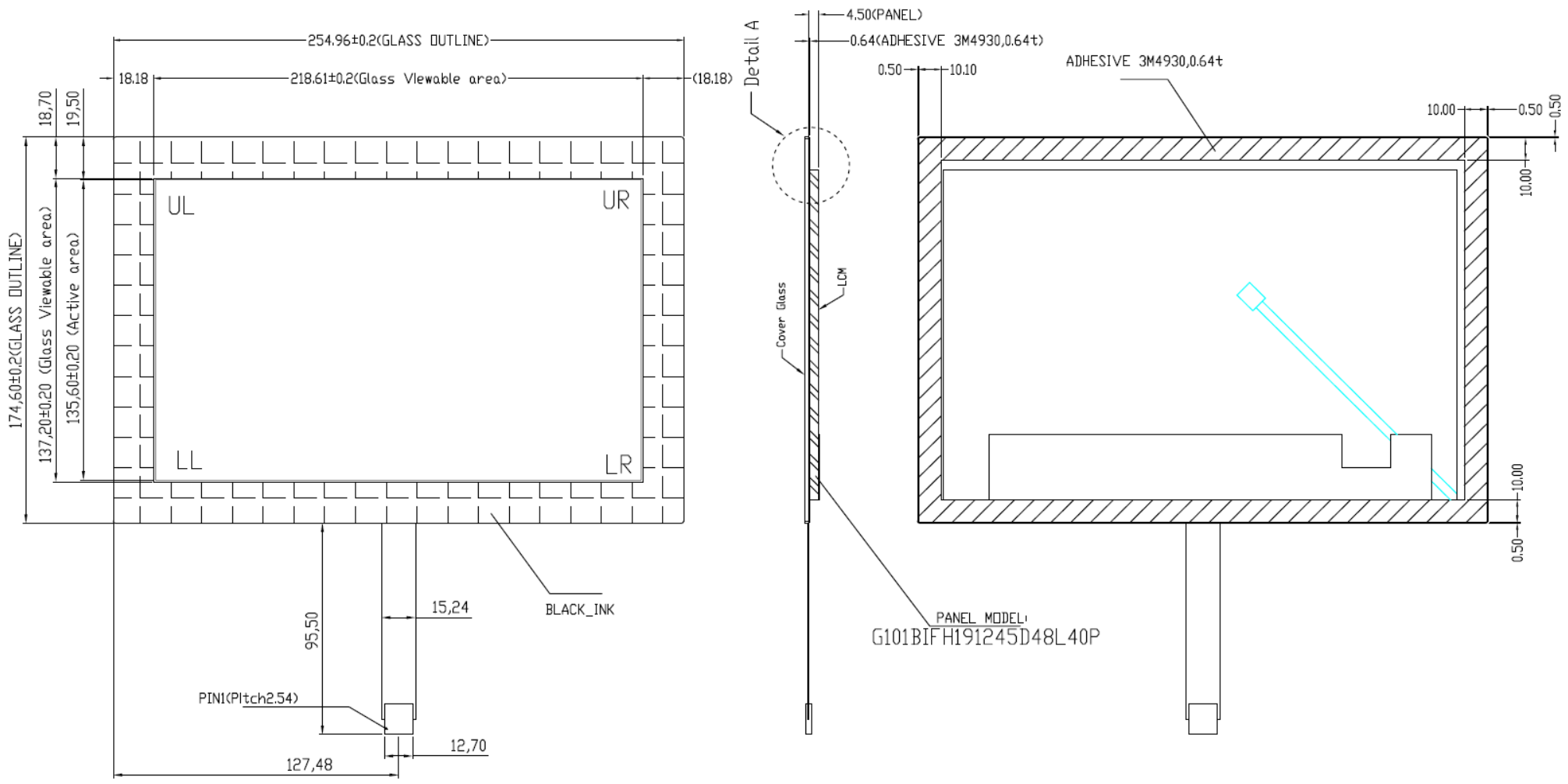
Date： 2021/3/29

Revision： 0.6

ACT Power GM Approve	ACT Power PM Approve

SLM-MR101M-E

Appearance



LVDS Pin Assignment

Pin No.	Symbol	Description	I/O
1	VLED-	LED Cathode	P
2	VLED-	LED Cathode	P
3	VLED+	LED Anode	P
4	VLED+	LED Anode	P
5	NC	NC	-
6	GND	GROUND	P
7	ELV3P	EVEN LVDS Positive data signal (+)	I
8	ELV3N	EVEN LVDS Negative data signal (-)	I
9	GND	GROUND	P
10	ELV2P	EVEN LVDS Positive data signal (+)	I
11	ELV2N	EVEN LVDS Negative data signal (-)	I
12	GND	GROUND	P
13	ELVCLKP	EVEN LVDS Positive CLK signal (+)	I
14	ELVCLKN	EVEN LVDS Negative CLK signal (-)	I
15	GND	GROUND	P
16	ELV1P	EVEN LVDS Positive data signal (+)	I
17	ELV1N	EVEN LVDS Negative data signal (-)	I
18	GND	GROUND	P
19	ELV0P	EVEN LVDS Positive data signal (+)	I
20	ELV0N	EVEN LVDS Negative data signal (-)	I

Pin No.	Symbol	Description	I/O
21	GND	GROUND	P
22	OLV3P	Odd LVDS Positive data signal (+)	I
23	OLV3N	Odd LVDS Negative data signal (-)	I
24	GND	GROUND	P
25	OLV2P	Odd LVDS Positive data signal (+)	I
26	OLV2N	Odd LVDS Negative data signal (-)	I
27	GND	GROUND	P
28	OLVCLKP	Odd LVDS Positive CLK signal (+)	I
29	OLVCLKN	Odd LVDS Negative CLK signal (-)	I
30	GND	GROUND	P
31	OLV1P	Odd LVDS Positive data signal (+)	I
32	OLV1N	Odd LVDS Negative data signal (-)	I
33	GND	GROUND	P
34	OLV0P	Odd LVDS Positive data signal (+)	I
35	OLV0N	Odd LVDS Negative data signal (-)	I
36	GND	GROUND	P
37	I2C _SDA	OTP_SDA	I
38	I2C _SCL	OTP_SCL	I
39	VDD_OTP	OTP Power supply VDD OTP=8.6V	P
40	EEPEN	Not Connection	I
41	VDDIN	Power supply VDDIN=3.3V (Typ.)	P
42	VDDIN		P
43	VDDIN		P
44	VDDIN		P
45	VDDIN		P

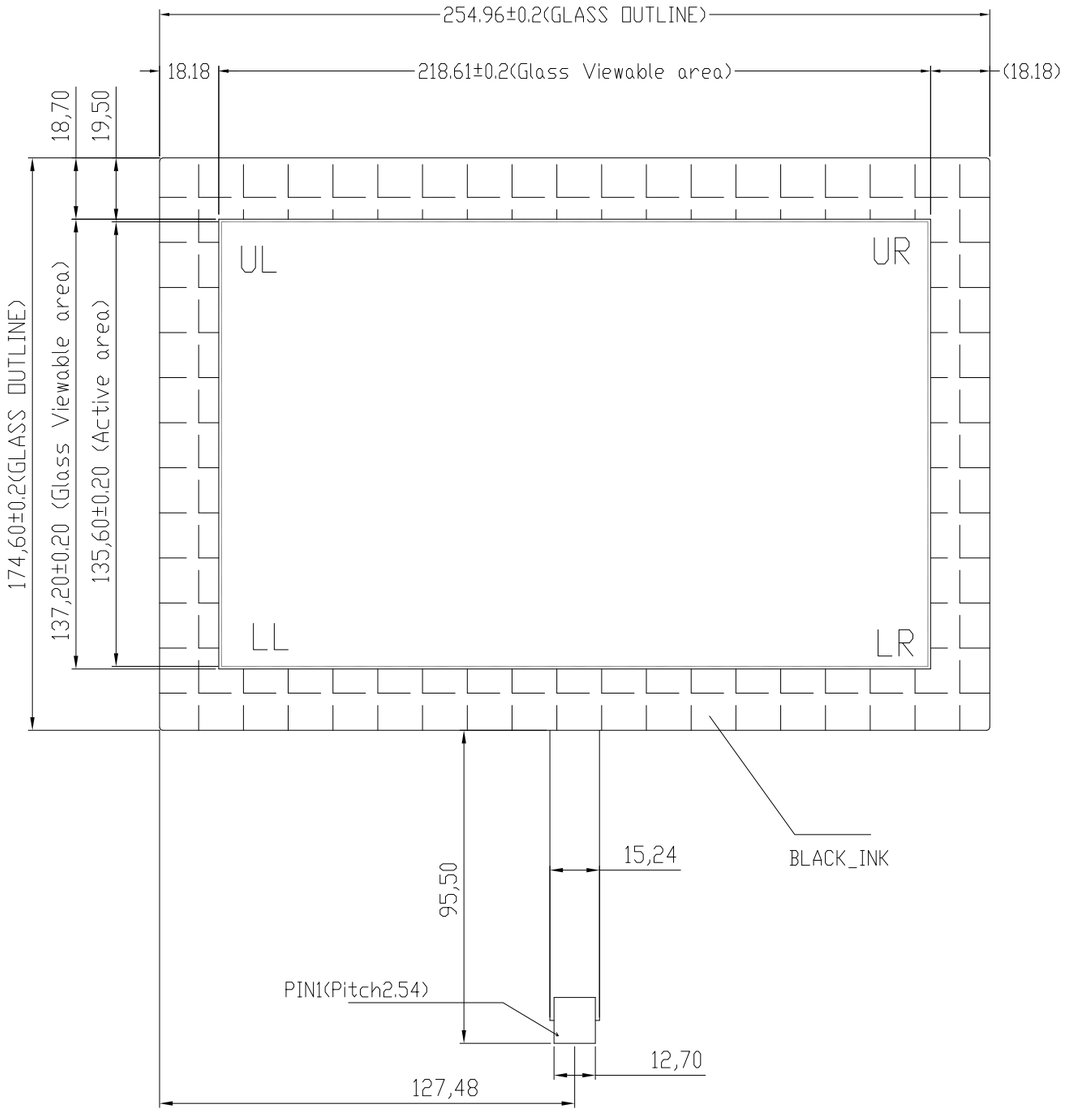
Specifications

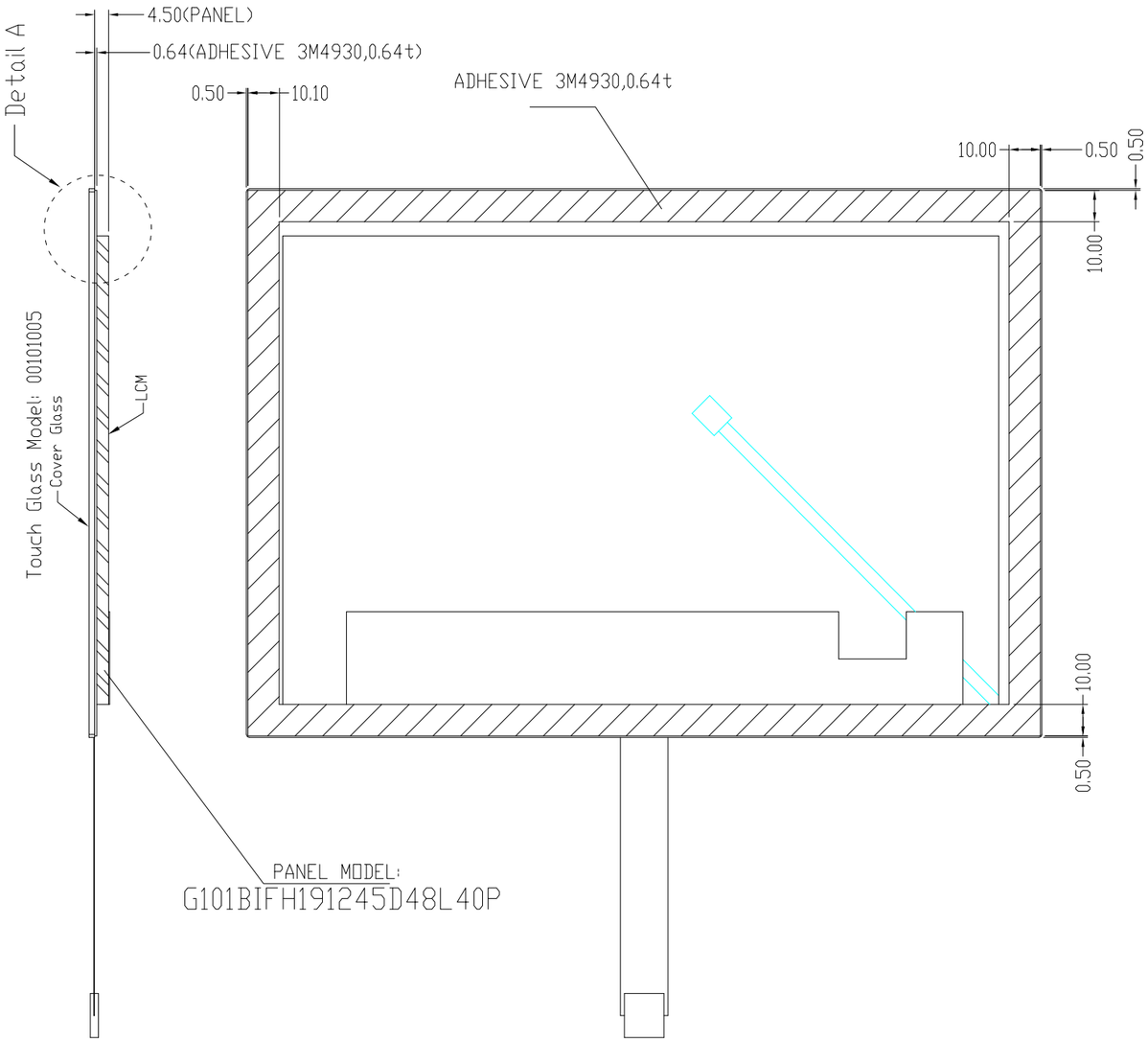
LCD Module	
LCD Size	10.1 TFT LCD
Backlight	LED
Resolution	1920 x 1200
View Angle	± 80° (H), ±80° (V)
Luminance	700 cd/m2 (after bonding)
Contrast Ratio	900:1
Aspect Ratio	16:10
Response Time	30 ms
No. of Color	16.7M (True 8 Bit)
Active area	216.8064(H) x 135.504(V) mm
Pixel Pitch	0.03764 (H) x 0.11292 (V)
LED Life Time	70,000Hrs
Touch Screen	
Touch Type	5-Wire Resistive Touch
Viewable Area	219.56 x 138.20 mm
Active Area	217.56 x 136.20 mm
Touch Interface	USB
Touch Glass	AG/AR Strengthen Glass
Optical Bonding	EMI mesh with optical bonding
Touch Drivers	Support Windows, Linux, Mac, etc.
Environmental	
Operating Temperature	-20°C to +70°C (*)
Storage Temperature	-30°C to +80°C (*)
Humidity	Operating: 90%, @ 60°C non-condensing
EMI/EMC	The LCD Kit is designed to meet ML-STD-461E/F (*)
Shock	The LCD Kit is designed to meet MIL-STD-810D (*)
Vibration	The LCD Kit is designed to meet MIL-STD-810E (*)
Altitude above sea level	0～9144 M (30000 feet) (*)
Accessories – Deliverables with LCD Module	
LVDS Cable	Molex 0150181173
Touch Control Board (Model: ADM-H0202)	5-wire USB Touch Panel Controller

*** : LCD kit has to be properly packed with bezel and back cover with required EMI-EMC and IP Gaskets to meet EMI/EMC and Environmental specifications**

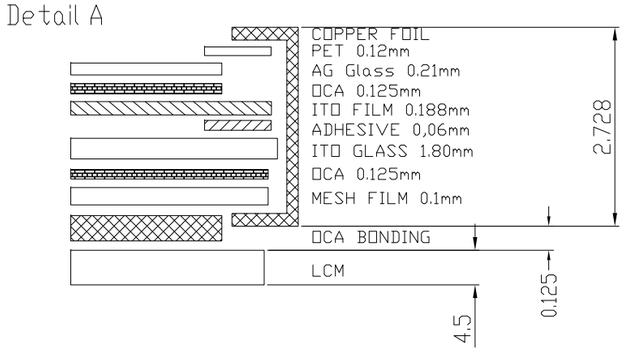
Order information

Model Name	Description	Qty
SLM-MR101M-E	10.1 inch LCD Module	1
	Deliver with	
	(a) Molex 0150181173 (LVDS Cable)	1
	(b) ADM-H0202: Touch Control Board	1





Detail A



Connector Pinout	
Pin NO.	Designation
1	UL
2	UR
3	SG
4	LL
5	LR

ACT POWER TAIWAN CO., Ltd. 行動力國際股份有限公司				MODEL NAME	SLM-MR101M-E	REV.	AX3
				DESCRIPTION/PART NAME	10.1″ Military LCD Module		
DRAWER	WILLIAM	DATE	2023/4/27	PART NO.	SLM-MR101M-E		
DESIGNER	JOE	DATE	2023/4/27	DRAWING NO.	SS_202111090	THIRD ANGLE PROJECTION	
APPROVED	DENNIS	DATE	2023/4/27	UNITS	mm	SHEET 1 Of 1	SIZE A3

0.50MM CENTER FLAT FLEX CABLE (FFC) (105°C, Au PLATED)

"L" DIM. ==>	51 ± 2 MM		76 ± 3 MM		102 ± 3 MM		127 ± 4 MM		152 ± 4 MM		178 ± 4 MM		203 ± 4 MM		229 ± 5 MM		254 ± 5 MM		305 ± 5 MM	
REF DIM ==>	(2 INCHES)		(3 INCHES)		(4 INCHES)		(5 INCHES)		(6 INCHES)		(7 INCHES)		(8 INCHES)		(9 INCHES)		(10 INCHES)		(12 INCHES)	
CABLE TYPE ==>	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
CIRCUITS																				
6	150180053	150180054	150180055	150180056	150180057	150180058	150180059	150180060	150180061	150180062	150180063	150180064	150180065	150180066	150180067	150180068	150180069	150180070	150180071	150180072
8	150180075	150180076	150180077	150180078	150180079	150180080	150180081	150180082	150180083	150180084	150180085	150180086	150180087	150180088	150180089	150180090	150180091	150180092	150180093	150180094
10	150180097	150180098	150180099	150180100	150180101	150180102	150180103	150180104	150180105	150180106	150180107	150180108	150180109	150180110	150180111	150180112	150180113	150180114	150180115	150180116
12	150180119	150180120	150180121	150180122	150180123	150180124	150180125	150180126	150180127	150180128	150180129	150180130	150180131	150180132	150180133	150180134	150180135	150180136	150180137	150180138
14	150180141	150180142	150180143	150180144	150180145	150180146	150180147	150180148	150180149	150180150	150180151	150180152	150180153	150180154	150180155	150180156	150180157	150180158	150180159	150180160
16	150180163	150180164	150180165	150180166	150180167	150180168	150180169	150180170	150180171	150180172	150180173	150180174	150180175	150180176	150180177	150180178	150180179	150180180	150180181	150180182
18	150180185	150180186	150180187	150180188	150180189	150180190	150180191	150180192	150180193	150180194	150180195	150180196	150180197	150180198	150180199	150180200	150180201	150180202	150180203	150180204
20	150180207	150180208	150180209	150180210	150180211	150180212	150180213	150180214	150180215	150180216	150180217	150180218	150180219	150180220	150180221	150180222	150180223	150180224	150180225	150180226
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24	150180251	150180252	150180253	150180254	150180255	150180256	150180257	150180258	150180259	150180260	150180261	150180262	150180263	150180264	150180265	150180266	150180267	150180268	150180269	150180270
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32	150180339	150180340	150180341	150180342	150180343	150180344	150180345	150180346	150180347	150180348	150180349	150180350	150180351	150180352	150180353	150180354	150180355	150180356	150180357	150180358
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36	150180383	150180384	150180385	150180386	150180387	150180388	150180389	150180390	150180391	150180392	150180393	150180394	150180395	150180396	150180397	150180398	150180399	150180400	150180401	150180402
38	150180405	150180406	150180407	150180408	150180409	150180410	150180411	150180412	150180413	150180414	150180415	150180416	150180417	150180418	150180419	150180420	150180421	150180422	150180423	150180424
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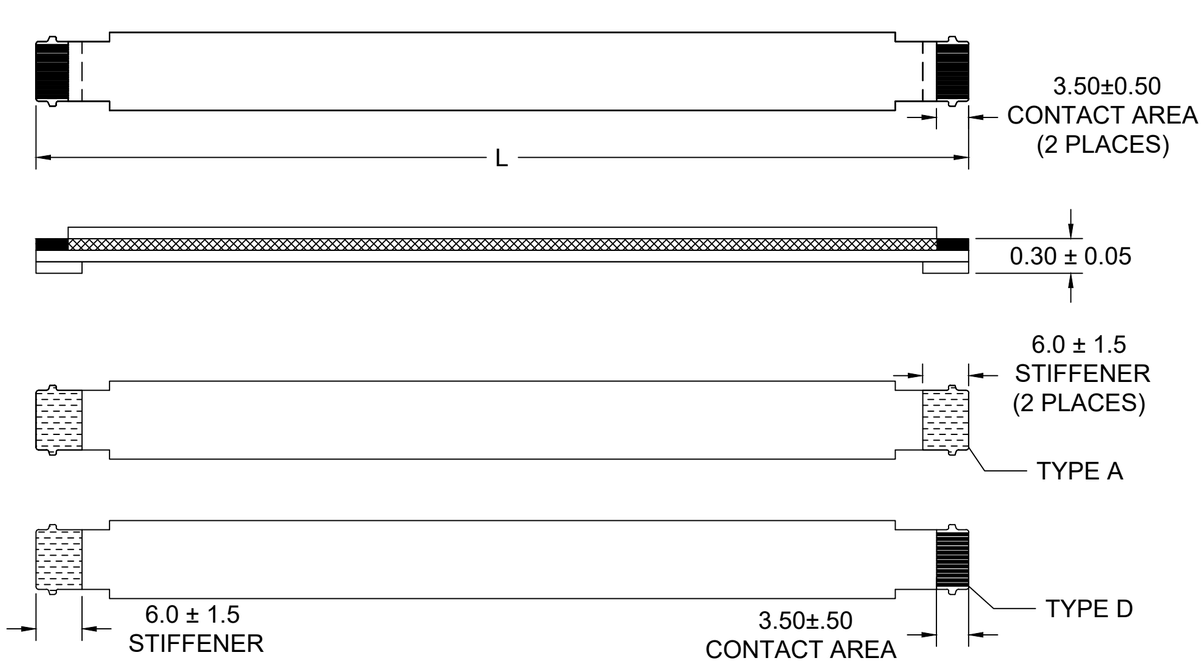
44	150180471	150180472	150180473	150180474	150180475	150180476	150180477	150180478	150180479	150180480	150180481	150180482	150180483	150180484	150180485	150180486	150180487	150180488	150180489	150180490
46	150180493	150180494	150180495	150180496	150180497	150180498	150180499	150180500	150180501	150180502	150180503	150180504	150180505	150180506	150180507	150180508	150180509	150180510	150180511	150180512
48	150180515	150180516	150180517	150180518	150180519	150180520	150180521	150180522	150180523	150180524	150180525	150180526	150180527	150180528	150180529	150180530	150180531	150180532	150180533	150180534
50	150180537	150180538	150180539	150180540	150180541	150180542	150180543	150180544	150180545	150180546	150180547	150180548	150180549	150180550	150180551	150180552	150180553	150180554	150180555	150180556
60	150180559	150180560	150180561	150180562	150180563	150180564	150180565	150180566	150180567	150180568	150180569	150180570	150180571	150180572	150180573	150180574	150180575	150180576	150180577	150180578
70	150180581	150180582	150180583	150180584	150180585	150180586	150180587	150180588	150180589	150180590	150180591	150180592	150180593	150180594	150180595	150180596	150180597	150180598	150180599	150180600



NOTES:

1. NO PRINTING ON JUMPER CABLE UNLESS OTHERWISE SPECIFIED. IF PRINTING IS REQUIRED, THEN IT WOULD BE CONSIDERED A SPECIAL JUMPER CABLE.
2. FOR ODD CIRCUIT COUNT, CROSS-SECTION AND END-TAIL DETAIL REFER TO SHEET # 2
3. CABLES MATES WITH MOLEX FFC/FPC CONNECTOR SERIES # 505110

FUNCTIONAL SYMBOLS
FA=0
FC=0
FP=0
DIVISIONAL SYMBOLS

DIMENSION UNITS	SCALE
MM	2:1

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	±----	±----
3 PLACES	±----	±----
2 PLACES	±----	±----
1 PLACE	±----	±----
0 PLACES	±----	±----
ANGULAR TOL ± 0.5 °		

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

CURRENT REV DESC: DRAWING CORRECTION

EC NO: 728054
DRWN: DIEGOG7 2022/11/10
CHK'D: JSMITH11 2022/11/14
APPR: JSMITH11 2022/11/14

INITIAL REVISION:
DRWN: MSHANNON 2019/03/13
APPR: DENGLISH 2019/09/25

molex

0.50MM CENTER FLAT FLEX CABLE (FFC)
(105°C, AU PLATED) SALES DRAWING

PRODUCT CUSTOMER DRAWING

DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION
SD-15018-001	PSD	001	C

THIRD ANGLE PROJECTION	DRAWING	SERIES	MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
	C-SIZE	15018	SEE CHART	GENERAL MARKET	1 OF 2

DOCUMENT STATUS	P1	RELEASE DATE	2022/11/14 14:34:38

FORMAT: IN-ACAD-tb-prod-C
REVISION: B
DATE: 2020/01/14

0.50MM CENTER FLAT FLEX CABLE (FFC) (105°C, Au PLATED)

"L" DIM. →	51 ± 2 MM		76 ± 3 MM		102 ± 3 MM		127 ± 4 MM		152 ± 4 MM		178 ± 4 MM		203 ± 4 MM		229 ± 5 MM		254 ± 5 MM		305 ± 5 MM	
REF DIM →	(2 INCHES)		(3 INCHES)		(4 INCHES)		(5 INCHES)		(6 INCHES)		(7 INCHES)		(8 INCHES)		(9 INCHES)		(10 INCHES)		(12 INCHES)	
CABLE TYPE →	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
CIRCUITS "N" ↓																				
7	150180747	150180746	150180749	150180748	150180751	150180750	150180753	150180752	150180755	150180754	150180757	150180756	150180759	150180758	150180761	150180760	150180763	150180762	150180765	150180764
9	150180769	150180768	150180771	150180770	150180773	150180772	150180775	150180774	150180777	150180776	150180779	150180778	150180781	150180780	150180783	150180782	150180785	150180784	150180787	150180786
11	150180791	150180790	150180793	150180792	150180795	150180794	150180797	150180796	150180799	150180798	150180801	150180800	150180803	150180802	150180805	150180804	150180807	150180806	150180809	150180808
13	150180813	150180812	150180815	150180814	150180817	150180816	150180819	150180818	150180821	150180820	150180823	150180822	150180825	150180824	150180827	150180826	150180829	150180828	150180831	150180830
15	150180835	150180834	150180837	150180836	150180839	150180838	150180841	150180840	150180843	150180842	150180845	150180844	150180847	150180846	150180849	150180848	150180851	150180850	150180853	150180852
17	150180857	150180856	150180859	150180858	150180861	150180860	150180863	150180862	150180865	150180864	150180867	150180866	150180869	150180868	150180871	150180870	150180873	150180872	150180875	150180874
19	150180879	150180878	150180881	150180880	150180883	150180882	150180885	150180884	150180887	150180886	150180889	150180888	150180891	150180890	150180893	150180892	150180895	150180894	150180897	150180896
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23	150180923	150180922	150180925	150180924	150180927	150180926	150180929	150180928	150180931	150180930	150180933	150180932	150180935	150180934	150180937	150180936	150180939	150180938	150180941	150180940
25	150180945	150180944	150180947	150180946	150180949	150180948	150180951	150180950	150180953	150180952	150180955	150180954	150180957	150180956	150180959	150180958	150180961	150180960	150180963	150180962
27	150180967	150180966	150180969	150180968	150180971	150180970	150180973	150180972	150180975	150180974	150180977	150180976	150180979	150180978	150180981	150180980	150180983	150180982	150180985	150180984
29	150180989	150180988	150180991	150180990	150180993	150180992	150180995	150180994	150180997	150180996	150180999	150180998	150181001	150181000	150181003	150181002	150181005	150181004	150181007	150181006
31	150181011	150181010	150181013	150181012	150181015	150181014	150181017	150181016	150181019	150181018	150181021	150181020	150181023	150181022	150181025	150181024	150181027	150181026	150181029	150181028
33	150181033	150181032	150181035	150181034	150181037	150181036	150181039	150181038	150181041	150181040	150181043	150181042	150181045	150181044	150181047	150181046	150181049	150181048	150181051	150181050
35	150181055	150181054	150181057	150181056	150181059	150181058	150181061	150181060	150181063	150181062	150181065	150181064	150181067	150181066	150181069	150181068	150181071	150181070	150181073	150181072
37	150181077	150181076	150181079	150181078	150181081	150181080	150181083	150181082	150181085	150181084	150181087	150181086	150181089	150181088	150181091	150181090	150181093	150181092	150181095	150181094
39	150181099	150181098	150181101	150181100	150181103	150181102	150181105	150181104	150181107	150181106	150181109	150181108	150181111	150181110	150181113	150181112	150181115	150181114	150181117	150181116
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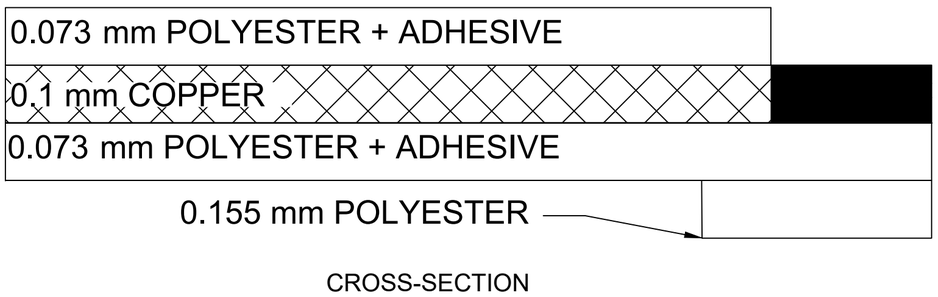
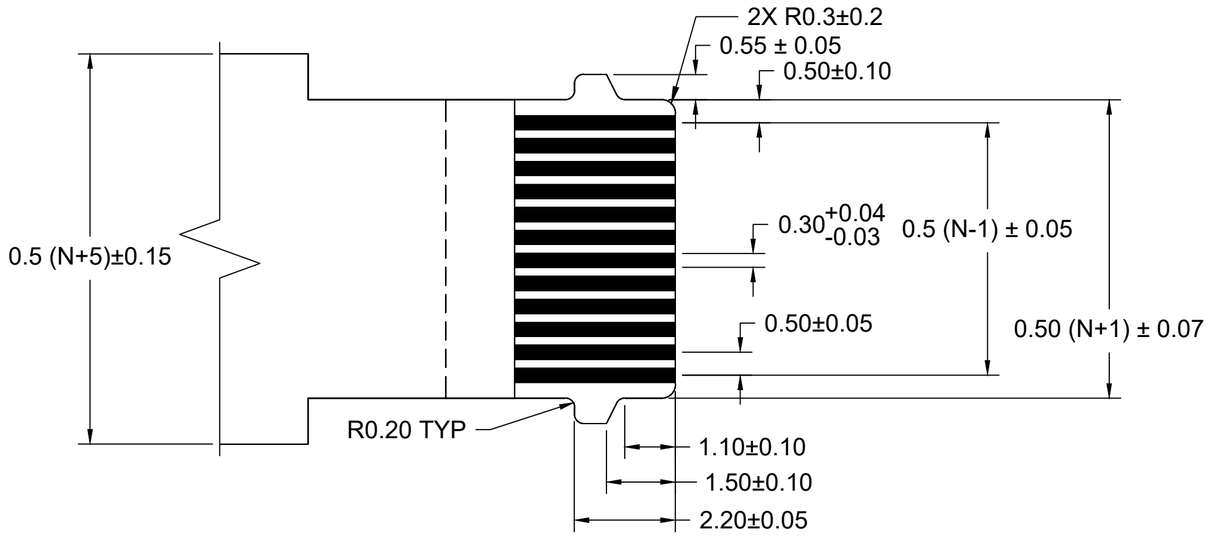
43	150181143	150181142	150181145	150181144	150181147	150181146	150181149	150181148	150181151	150181150	150181153	150181152	150181155	150181154	150181157	150181156	150181159	150181158	150181161	150181160
45	150181165	150181164	150181167	150181166	150181169	150181168	150181171	150181170	150181173	150181172	150181175	150181174	150181177	150181176	150181179	150181178	150181181	150181180	150181183	150181182
47	150181187	150181186	150181189	150181188	150181191	150181190	150181193	150181192	150181195	150181194	150181197	150181196	150181199	150181198	150181201	150181200	150181203	150181202	150181205	150181204
49	150181209	150181208	150181211	150181210	150181213	150181212	150181215	150181214	150181217	150181216	150181219	150181218	150181221	150181220	150181223	150181222	150181225	150181224	150181227	150181226



CROSS-SECTION



END-TAIL DIMENSIONS
SCALE 10:1

NOTES:

1. NO PRINTING ON JUMPER CABLE UNLESS OTHERWISE SPECIFIED. IF PRINTING IS REQUIRED, THEN IT WOULD BE CONSIDERED A SPECIAL JUMPER CABLE.
2. CABLES MATE WITH MOLEX FFC/FPC CONNECTOR SERIES # 505110

DOCUMENT STATUS	P1	RELEASE DATE	2022/11/14 14:34:38		

FUNCTIONAL SYMBOLS
FA=0
FC=0
FP=0
DIVISIONAL SYMBOLS

DIMENSION UNITS	SCALE
MM	NA

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	±----	±----
3 PLACES	±----	±----
2 PLACES	±----	±----
1 PLACE	±----	±----
0 PLACES	±----	±----
ANGULAR TOL ± 0.5 °		

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

CURRENT REV DESC: DRAWING CORRECTION

EC NO: 728054
DRWN: DIEGOG7 2022/11/10
CHK'D: JSMITH11 2022/11/14
APPR: JSMITH11 2022/11/14

INITIAL REVISION:
DRWN: MSHANNON 2019/03/13
APPR: DENGLISH 2019/09/25

molex

0.50MM CENTER FLAT FLEX CABLE (FFC)
(105°C, AU PLATED) SALES DRAWING

PRODUCT CUSTOMER DRAWING

DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION
SD-15018-001	PSD	001	C

THIRD ANGLE PROJECTION	DRAWING	SERIES	MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
	C-SIZE	15018	SEE CHART	GENERAL MARKET	2 OF 2

FORMAT: IN-AGAD-tb-prod-C
REVISION: B
DATE: 2020/01/14

LCD Module Electronics Specs

< **LCD Module Electrical specifications** > [Ta =25±2 ℃]

Parameter		Symbol	Values			Unit	Notes
			Min.	Typ.	Max.		
Power Supply Voltage		VDD	3.0	3.3	3.6	V	
		VRP			300	mV	Ripple
Power Supply Current		IDD	-	300	360	mA	Note 1
Power Consumption		PLCD	-	1	1.2	W	
Rush current		IRUSH	-	-	3.0	A	Note 2
CMOS Interface	Input Voltage	VIH	2.7		3.3	V	
		VIL	0		0.5	V	
	Output Voltage	VOH	2.7		3.3	V	
		VOL	0		0.5	V	

Notes : 1. The supply voltage is measured and specified at the interface connector of LCM.
The current draw and power consumption specified is for VDD=3.3V, Frame rate f_V=60Hz and Clock frequency = 80MHz. Test Pattern of power supply current

LCD Module Input Terminal PIN Assignment

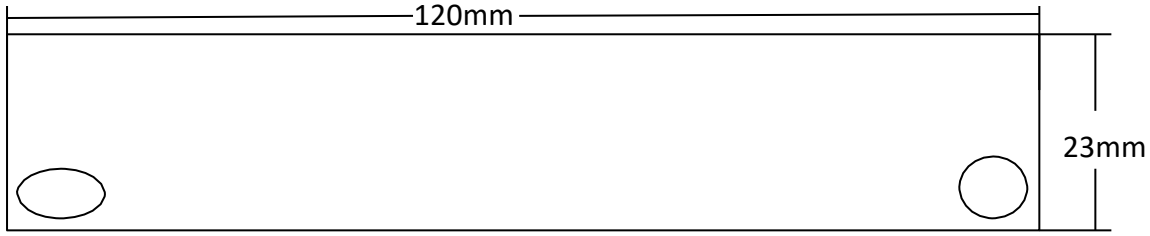
Connector: FH34SRJ-45S-0.5SH(50) (HRS) or equivalent

< Pin Assignment for LCD Module Connector >

Pin No.	Symbol	Description	I/O
1	VLED-	LED Cathode	P
2	VLED-	LED Cathode	P
3	VLED+	LED Anode	P
4	VLED+	LED Anode	P
5	NC	NC	-
6	GND	GROUND	P
7	ELV3P	EVEN LVDS Positive data signal (+)	I
8	ELV3N	EVEN LVDS Negative data signal (-)	I
9	GND	GROUND	P
10	ELV2P	EVEN LVDS Positive data signal (+)	I
11	ELV2N	EVEN LVDS Negative data signal (-)	I
12	GND	GROUND	P
13	ELVCLKP	EVEN LVDS Positive CLK signal (+)	I
14	ELVCLKN	EVEN LVDS Negative CLK signal (-)	I
15	GND	GROUND	P
16	ELV1P	EVEN LVDS Positive data signal (+)	I
17	ELV1N	EVEN LVDS Negative data signal (-)	I
18	GND	GROUND	P
19	ELV0P	EVEN LVDS Positive data signal (+)	I
20	ELV0N	EVEN LVDS Negative data signal (-)	I

4	IRLED 4	LED Current sense for string4
5	IRLED 5	LED Current sense for string5
6	IRLED 6	LED Current sense for string6
7	IRLED 7	LED Current sense for string7
8	IRLED 8	LED Current sense for string 8
9	NC	NC
10	VLED	LED power supply
11	VLED	LED power supply
12	VLED	LED power supply

2. Dimension:
23*120MM



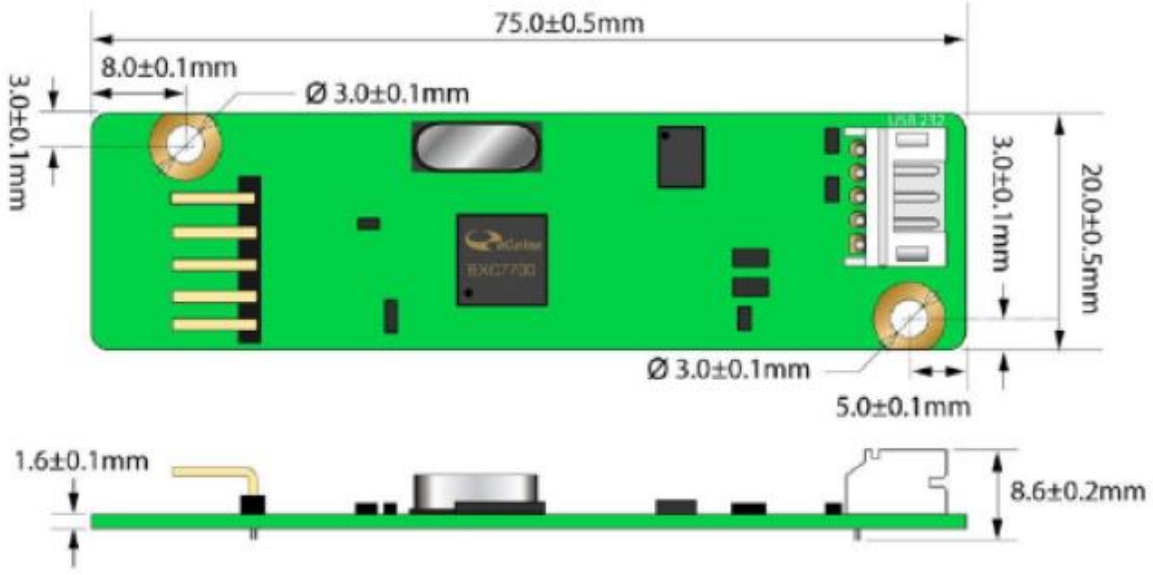
ACT POWER

Model Name: ADM-H0202

Touch Control Board Specs

OS	Version	Interfaces
Windows	Windows 7, Vista, XP, 2000, ME, 98 Windows CE (up to 7.0) Windows Embedded Windows XP Tablet PC edition	RS232/USB
Windows	Windows NT4, 95	RS232
Linux	Supports Kernel 2.4.x / 2.6.x / 3.x with XFree86 4.x / xorg (up to X server 1.11.x). Supports most of the Linux distribution 32/64 bit versions, Including:CentOS, Debian, Fedora, Gentoo, Mandrake(Mandriva), Moblin(Meego), Red Hat, Ubuntu, Slackware, SuSE(openSuSE) etc.	RS232/USB
	Android (up to 4.x)	RS232/USB
DOS	DOS 6.22	RS232
Mac	Mac OS9, Mac OS X (Power PC, Intel CPU)	USB
QNX	QNX RTOS v6.3	RS232/USB

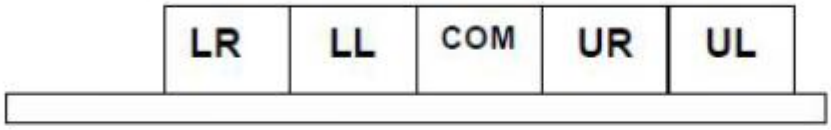
Controller:



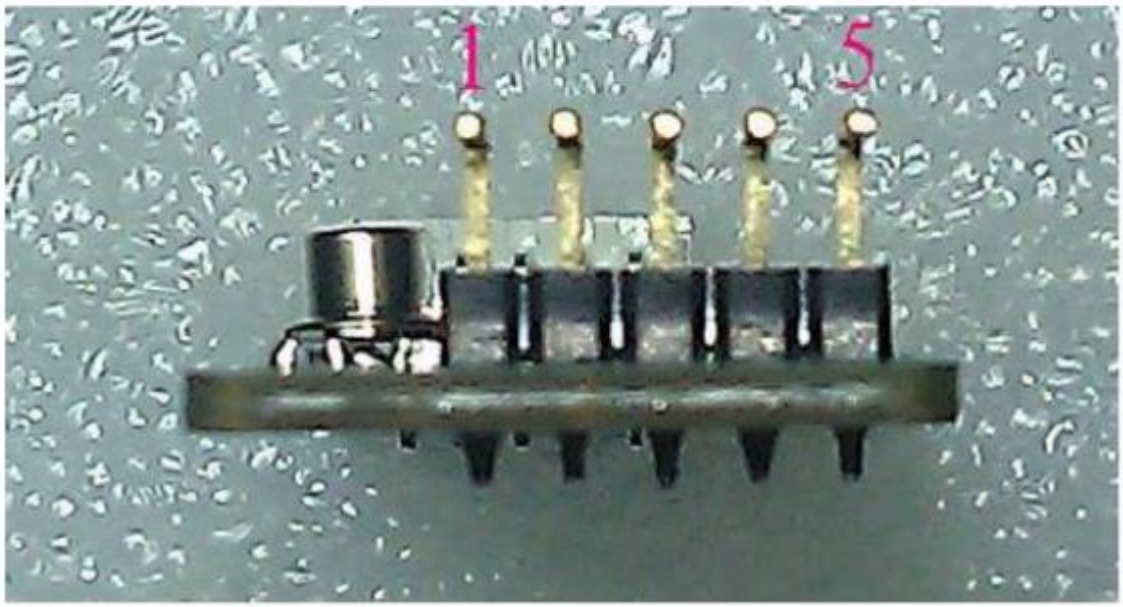
ACT POWER

For 5-Wire Resistive Touch Panel

ELO type Pin-Out



ELO PIN-OUT



Controller Wafer Pin Assignment: