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中華映管股份有限公司
CHUNGHWA PICTURE TUBES.,LTD.

TWINWILL

TFT-DISPLAYS – TOUCH PANELS
STANDARD & AUTOMOTIVE

TFT-DISPLAYS – STANDARD

Chunghwa Picture Tubes Ltd (CPT) was founded in 1971 in Taiwan and is specialized in TFT-modules as well as in the development of new TFT technologies. The product portfolio of the world biggest TFT-manufacturer CPT ranges from 4.3" up to 27.6". A big feature of CPT is the excellent quality of its products. 11,000 employees in 6 production locations are responsible for the continuous development of new technologies like the HFFS-technology (improved wide viewing angle). This offers a high value of the CPT products.

The benefits of CPT:

- Own TFT-Glass, Color-Filter and Backlight Manufacturing
- Extended operating temperature -30°C ... +85°C
- Extended viewing angle by the HFFS-technology
- Automotive TFT-production line – ISO/TS16949 certificated
- Special sizes available

SIZE	PART NUMBER	DISPLAY RESOLUTION	BRIGHTNESS [cd/m²]	MIN. BACKLIGHT LIFETIME [h]	INTERFACE	OPERATING TEMPERATURE [°C]	REMARKS
STANDARD TFT-DISPLAYS 5.0" - 7.0"							
5.0"	050LA0A	800 x 480	500	10 k	RGB	-20 … +70	TN
5.7"	057VC01	640 x 480	220	30 k	RGB	-30 … +85	TN
7.0"	070LF0B	800 x 480	450	30 k	RGB	-20 … +70	TN
7.0"	070LFA5	800 x 480	450	30 k	RGB	-20 … +70	TN
7.0"	070LFA6	800 x 480	680	30 k	RGB	-20 … +70	TN
7.0"	070NJ05	1024 x 600	500	30 k	LVDS	-20 … +70	TN
7.0"	070NQ08	1024 x 600	600	30 k	LVDS	-20 … +70	HFFS
7.0"	070WP0B	800 x 1280	380	10 k	MIPI	0 … +50	HFFS
7.0"	070WP0F	800 x 1280	450	50 k	LVDS	-20 … +70	HFFS
7.0"	070LD0D	800 x 480	500	30 k	RGB	-30 … +85	TN
7.0"	070LFA1	800 x 480	450	30 k	RGB	-30 … +85	TN

Reserve technical changes!

TFT-DISPLAYS – STANDARD

STANDARD TFT-DISPLAYS 8.0" - 27.6"

SIZE	PART NUMBER	DISPLAY RESOLUTION	BRIGHTNESS [cd/m²]	MIN. BACKLIGHT LIFETIME [H]	INTERFACE	OPERATING TEMPERATURE [°C]	REMARKS
8.0"	080XA12	1024 x 768	300	10 k	LVDS	-10 … +50	TN
8.0"	080LJ01	800 x 480	450	30 k	RGB	-20 … +70	TN
8.0"	080NA12	1024 x 600	600	30 k	LVDS	-20 … +70	TN
8.0"	080WK05	1280 x 720	500	20 k	LVDS	-20 … +70	HFFS
8.0"	080WQ05	800 x 1280	350	15 k	MIPI	-20 … +60	HFFS
8.0"	080FP01	1200 x 1920	390	15 k	MIPI	-20 … +60	HFFS
8.0"	080LJA1	800 x 480	600	30 k	RGB	-30 … +85	TN
8.8"	088WA01	1280 x 480	500	30 k	LVDS	-20 … +70	HFFS
9.0"	090NA06	1024 x 600	500	30 k	LVDS	-20 … +70	TN
9.0"	090WK05	1280 x 720	500	30 k	LVDS	-20 … +70	HFFS
10.1"	101ND06	1024 x 600	500	30 k	LVDS	-20 … +70	TN
10.1"	101WH32	1280 x 800	450	15 k	LVDS	-20 … +70	TN
10.1"	101WM01	1280 x 720	550	30 k	LVDS	-20 … +70	HFFS
10.1"	101WRxx	800 x 1280	350	15 k	MIPI	-10 … +60	HFFS
10.1"	101FP07	1920 x 1200	450	15 k	eDP	-10 … +50	HFFS
10.1"	101FP0A	1920 x 1200	700	TBD	LVDS	-10 … +50	HFFS
10.2"	102ND01	1024 x 600	400	20 k	LVDS	-20 … +70	TN
10.3"	103WA01	1280 x 480	600	30 k	LVDS	-20 … +70	HFFS
10.4"	104XA02	1024 x 768	400	30 k	LVDS	-20 … +70	TN
10.4"	104EA03	960 x 1280	800	50 k	LVDS	-30 … +85	HFFS
11.4"	114NA13	1024 x 600	500	30 k	LVDS	-20 … +70	TN
12.1"	121XA01	1024 x 768	600	70 k	LVDS	-20 … +70	TN
12.1"	121MQ01	800 x 600	450	50 k	LVDS	-30 … +80	TN
12.3"	123PA01	1440 x 540	800	30 k	LVDS	-30 … +85	TN
12.3"	123FBA1	1920 x 720	700	30 k	LVDS	-30 … +85	HFFS
15.0"	150XP06	1024 x 768	250	30 k	LVDS	-20 … +70	TN
15.0"	150XQ01	1024 x 768	450	50 k	LVDS	-30 … +80	TN
15.0"	150XQxx	1024 x 768	450	50 k	LVDS	-30 … +80	TN
17.0"	170EC01	1280 x 1024	450	50 k	LVDS	-20 … +70	TN
17.0"	170ECxx	1280 x 1024	600	50 k	LVDS	-20 … +70	TN
19.0"	190EB01	1280 x 1024	450	50 k	LVDS	-30 … +80	TN
21.3"	213QAxx	2048 x 1536	700	50 k	LVDS	0 … +60	HFFS
27.6"	276FP01	1920 x 360	1.000	70 k	LVDS	-20 … +70	HFFS

Reserve technical changes!

TFT-DISPLAYS – AUTOMOTIVE

SIZE	PART NUMBER	DISPLAY RESOLUTION	BRIGHTNESS [cd/m²]	MIN. BACKLIGHT LIFETIME [H]	INTERFACE	OPERATING TEMPERATURE [°C]	REMARKS
AUTOMOTIVE TFT-DISPLAYS 4.3" - 7.0"							
4.3"	043JD02	480 x 272	600	30 k	RGB	-20 … +70	TN
5.0"	050LA0A	800 x 480	500	30 k	RGB	-20 … +70	TN
6.1"	061LA0Q	800 x 480	500	30 k	RGB	-30 … +85	TN
6.1"	061LA0M	800 x 480	500	30 k	RGB	-20 … +70	TN
6.2"	062LA01	800 x 480	500	30 k	RGB	-20 … +70	TN
6.2"	062LA11	800 x 480	500	30 k	RGB	-20 … +70	TN
6.94"	069LR01	840 x 480	550	30 k	LVDS	-20 … +70	TN
6.95"	069LA0A	840 x 480	500	30 k	RGB	-30 … +85	TN
6.95"	069LA0T	840 x 480	500	30 k	RGB	-20 … +70	TN
6.95"	069LD01	840 x 480	500	30 k	RGB	-30 … +85	HFFS
6.95"	069NA01	1024 x 600	500	30 k	LVDS	-20 … +70	TN
7.0"	070LD0D	800 x 480	500	30 k	RGB	-30 … +85	TN
7.0"	070LF0B	800 x 480	450	30 k	RGB	-20 … +70	TN
7.0"	070LFA1	800 x 480	450	30 k	RGB	-30 … +85	TN
7.0"	070LM01	800 x 480	600	30 k	RGB	-30 … +85	HFFS
7.0"	070LQ01	800 x 480	760	30 k	LVDS	-30 … +85	HFFS
7.0"	070NJ05	1024 x 600	500	30 k	LVDS	-20 … +70	TN
7.0"	070NJ07	1024 x 600	600	30 k	LVDS	-20 … +70	TN
7.0"	070NQ08	1024 x 600	600	30 k	LVDS	-20 … +70	HFFS

Reserve technical changes!

TFT-DISPLAYS – AUTOMOTIVE

SIZE	PART NUMBER	DISPLAY RESOLUTION	BRIGHTNESS [cd/m²]	MIN. BACKLIGHT LIFETIME [H]	INTERFACE	OPERATING TEMPERATURE [°C]	REMARKS
AUTOMOTIVE TFT-DISPLAYS 8.0" - 12.3"							
8.0"	080LG02	800 x 480	550	30 k	RGB	-30 … +85	TN
8.0"	080LJ01	800 x 480	450	30 k	RGB	-20 … +70	TN
8.0"	080LJA1	800 x 480	600	30 k	RGB	-30 … +85	TN
8.0"	080LQ01	800 x 480	1.000	30 k	RGB	-30 … +85	HFFS
8.0"	080NA12	1024 x 600	600	30 k	LVDS	-20 … +70	TN
8.0"	080NA32	1024 x 600	600	30 k	LVDS	-20 … +70	TN
8.0"	080NA23	1024 x 600	670	30 k	LVDS	-30 … +85	TN
8.0"	080WK03	1280 x 720	600	30 k	LVDS	-30 … +85	HFFS
8.0"	080WK05	1280 x 720	500	30 k	LVDS	-20 … +70	HFFS
8.0"	080WK07	1280 x 720	600	30 k	LVDS	-30 … +85	HFFS
8.0"	080WM01	1280 x 720	765	30 k	LVDS	-30 … +85	HFFS
8.0"	080WN01	1280 x 720	550	30 k	LVDS	-30 … +85	TN
8.0"	080WN02	1280 x 720	550	30 k	LVDS	-30 … +85	TN
8.8"	088WA01	1280 x 800	500	30 k	LVDS	-20 … +70	HFFS
9.0"	090LC41	800 x 480	450	30 k	RGB	-30 … +85	TN
9.0"	090LC51	800 x 480	450	30 k	RGB	-30 … +85	TN
9.0"	090LN01	800 x 480	500	30 k	RGB	-30 … +85	TN
9.0"	090NA06	1024 x 600	500	30 k	LVDS	-20 … +70	TN
9.0"	090NB16	1024 x 600	500	30 k	LVDS	-30 … +85	TN
9.0"	090WB01	1280 x 720	500	30 k	LVDS	-30 … +85	HFFS
9.0"	090WK05	1280 x 720	500	30 k	LVDS	-20 … +70	HFFS
10.1"	101ND06	1024 x 600	500	30 k	LVDS	-20 … +70	TN
10.1"	101WL01	1280 x 720	500	30 k	LVDS	-20 … +70	TN
10.1"	101WK01	1280 x 720	600	30 k	LVDS	-30 … +85	HFFS
10.1"	101WK05	1280 x 720	500	30 k	LVDS	-20 … +70	HFFS
10.1"	101WM01	1280 x 720	550	30 k	LVDS	-20 … +70	HFFS
10.2"	102NDA1	1024 x 600	600	30 k	LVDS	-30 … +85	TN
10.3"	103WA01	1280 x 800	600	30 k	LVDS	-20 … +70	HFFS
10.3"	103WA02	1280 x 800	700	30 k	LVDS	-30 … +85	HFFS
10.4"	104EA01	960 x 1280	765	30 k	LVDS	-30 … +85	HFFS
10.4"	104XA12	1024 x 768	400	30 k	LVDS	-20 … +70	TN
11.4"	114NA13	1024 x 600	500	30 k	LVDS	-20 … +70	TN
12.1"	121XA02	1024 x 768	600	30 k	LVDS	-30 … +85	TN
12.3"	123PA01	1440 x 540	800	30 k	LVDS	-30 … +85	TN
12.3"	123FBA1	1920 x 720	700	30 k	LVDS	-30 … +85	HFFS

TOUCH PANELS

Twinwill Optronics Inc. (TOI) was founded in 2001 with headquarter in Taipei, Taiwan. TOI is specialized in touch panel solutions. This mean TOI offers resistive and capacitive touch panels for industrial as well as sunlight readable applications. The touch panels of TOI are matching to the TFT-modules of CPT, which creates added value to customer applications.

RESISTIVE TOUCH PANEL 7.0" - 21.5"

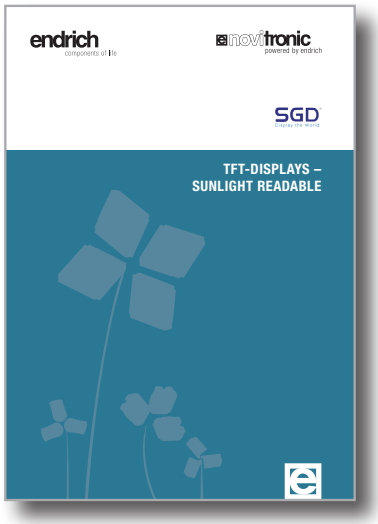
SIZE	TOUCH PANEL	MODULSIZE-DIMENSION STANDARD B X H X T [mm]	MODULSIZE-DIMENSION SUNLIGHT READABLE B X H X T [mm]	ACTIVE AREA B X H [MM]	VISIBLE AREA B X H [MM]
7.0"	5-wire	163.73 x 108.5 x 1.4	163.73 x 108.5 x 1.6	149.76 x 93.6	150.76 x 94.6
8.4"	5-wire	189.75 x 149.4 x 2.1	189.75 x 149.4 x 2.3	171.4 x 128.8	172.8 x 130.2
10.4"	5-wire	228.4 x 173.65 x 1.4	228.4 x 173.65 x 1.6	211.3 x 158.7	212.1 x 159.5
10.4"	Multi	230 x 176.4 x 1.4	230 x 176.4 x 1.6	212 x 159.2	213.08 x 160.44
12.1"	5-wire	271.27 x 205.74 x 2.1	271.27 x 205.74 x 2.3	247.27 x 185.8	248.27 x 186.8
13.3"	5-wire	309.3 x 213.4 x 1.4	309.3 x 213.4 x 1.6	288 x 180.8	290 x 182.8
15.0"	5-wire	332.9 x 248.9 x 2.1	332.9 x 248.9 x 2.3	305 x 229	308 x 232
17.0"	5-wire	361.65 x 290.18 x 2.1	361.65 x 290.18 x 2.3	339.12 x 271.54	341.12 x 273.54
18.5"	5-wire	430.37 x 254.6 x 2.1	430.37 x 254.6 x 2.3	409.8 x 230.4	413..4 x 234
18.5"	Multi	470 x 280 x 2.45		410.8 x 230.9	412 x 232.5
19.0"	5-wire	393.4 x 316.65 x 2.1	393.4 x 316.65 x 2.3	377.3 x 302.05	379.3 x 304.05
21.5"	5-wire	499.5 x 292.6 x 2.1	499.5 x 292.6 x 2.3	478 x 269.1	480 x 277.372

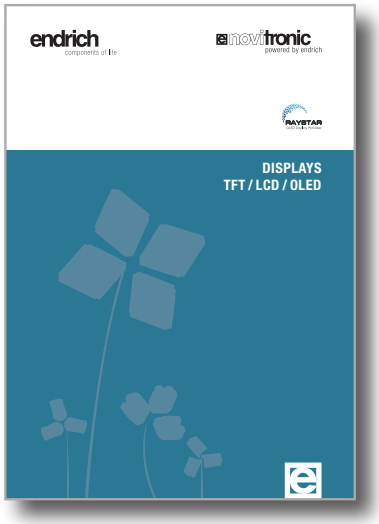
PROJECTIVE-CAPACITIVE TOUCH PANEL (PCAP) 7.0" - 21.5"

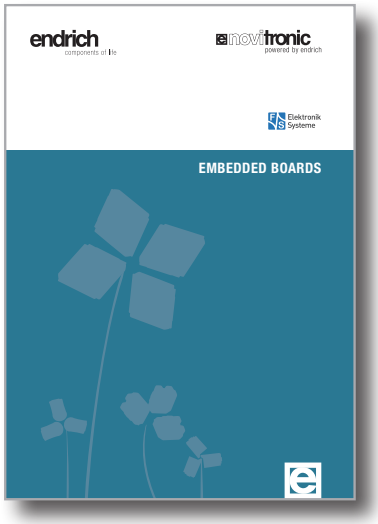
SIZE	RATIO	STRUCTURE	MODULSIZE-DIMENSION B X H X T [mm]	VISIBLE AREA B X H [mm]	ACTIVE AREA B X H [MM]	FPC	INTERFACE
7.0"	16:10	GFF	179.2 x 119.11 x 1.575	150.26 x 94.1	158.85 x 101.0682	FPC + PCBA	USB
7.0"	16:10	GG	178.14 x 121.88 x 1.975	154.6 x 91	158.47 x 93.53	FPCA	USB
10.1"	16:10	GG	230.46 x 152.7 x 1.975	217.56 x 136.2	222.09 x 140.55	FPCA	USB
10.4"	4:3	OGS	228.4 x 175.6 x 1.3	212.2 x 159.4	212.2 x 159.4	FPCA	USB
11.6"	16:9	GG	289.96 x 174.3 x 1.825	257.33 x 145.2	258.53 x 146.4	FPCA	USB
12.1"	4:3	GFF	284 x 220 x 1.575	247.5 x 186	257.02 x 195.54	FPC + PCBA	USB
15.0"	4:3	GG	358.6 x 273.06 x 2.675	306.8 x 230.714	307.8 x 231.714	FPC + PCBA	USB
15.6"	16:9	GG	384.5 x 233.7 x 1.975	346.43 x 195.64	347.43 x 196.64	FPC + PCBA	USB
17.0"	4:3	GFF	380 x 320 x 1.575	341.6 x 270.17	351.65 x 280.18	FPC + PCBA	USB
19.0"	4:3	GFF	420 x 355 x 1.575	378.02 x 302.76	387.02 x 311.8	FPC + PCBA	USB
21.5"	16:9	GG	517.6 x 311.11 x 1.975	477.64 x 269.11	480.64 x 272.11	FPC + PCBA	USB

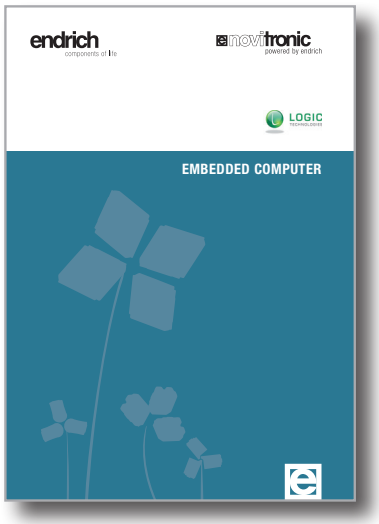
Reserve technical changes!

In the area of displays & embedded boards we also offer these products:









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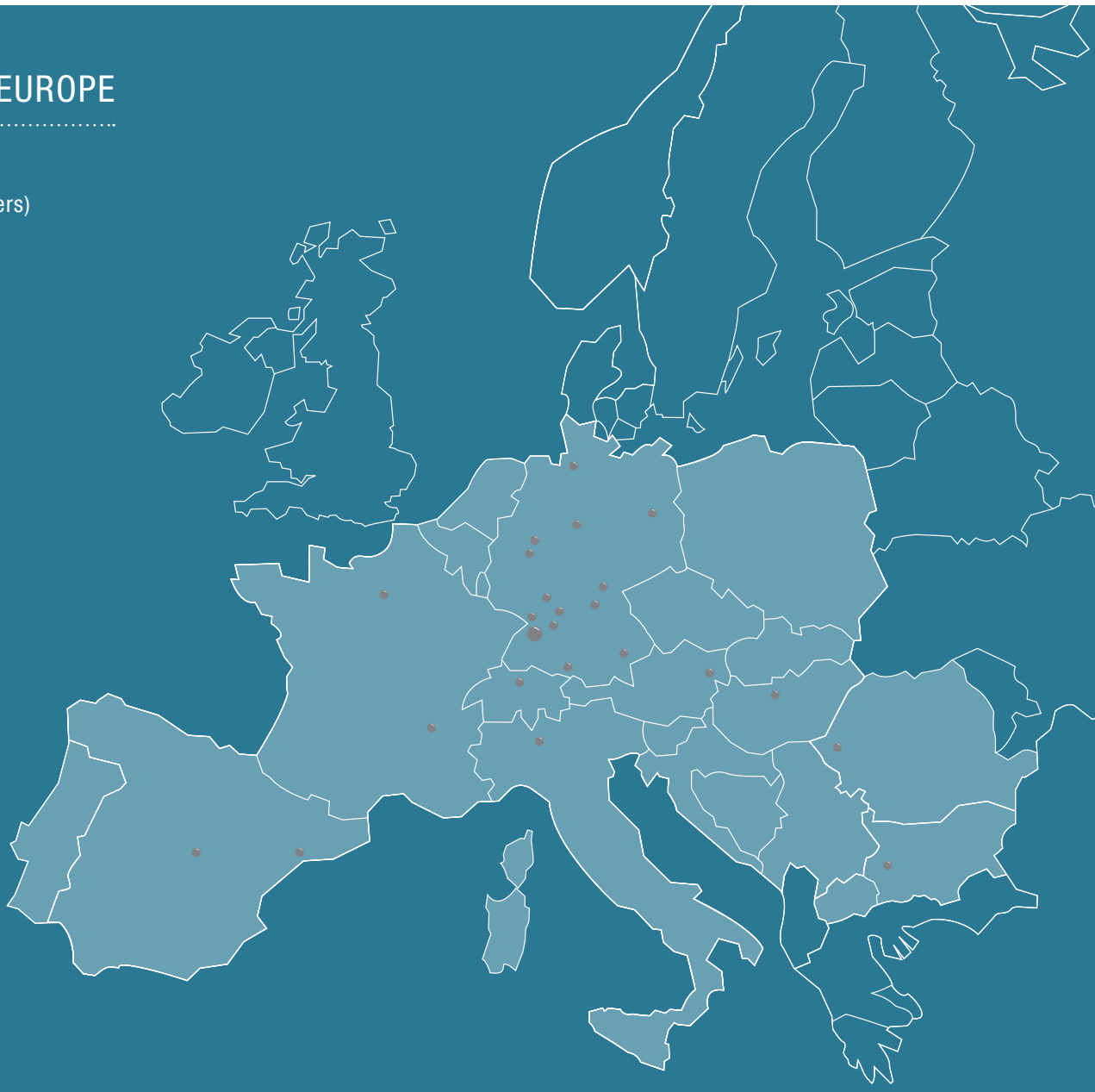

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