POWERTIP

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- TFT & OLED Products
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- IC Phase Out Issue
- Technical Discussion

Note: Please write down all of your questions and they will be answered during Q&A portion

TFT Push Products

TFT Raw Material

- Powertip receives the TFT Mother Glass from CMO.
- Mother Glass goes through LCD cutting process.
- All Back-end process then follows for the TFT LCD.
- B/L, Frame and PCB assembly completes the TFT LCM.

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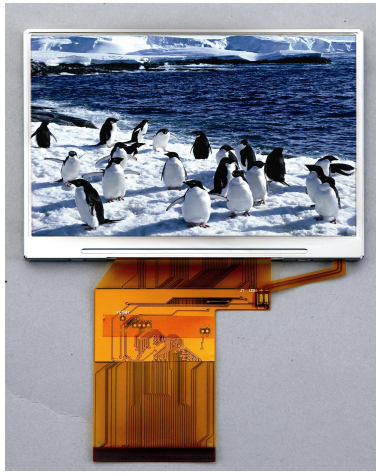
TFT Push Products

Size	Part #	Status	Remarks
3.5“ Digital	PH320240T-006-I-Q PH320240T-006-IP1Q	Mass Production Mass Production	Single Chip IC Single Chip IC w/ T/P
4.3” Digital	PH480272T-001-IA0Q PH480272T-001-I-Q	Mass Production Mass Production	 With Touch Panel
5.7“ Digital QVGA	PH320240T-009-I-Q Mechanical compatible PG320240-M	Mass Production	Positive Vcom T/P Available
5.7“ Digital QVGA	PH320240T-009-IC1Q Mechanical compatible to Kyocera	Mass Production	Positive Vcom T/P Available
7.0” WVGA	Part Number will be available soon	Sample Available	T/P Available

Note: 3.5” Single Chip IC is the trend for the future, for new projects please do promote the Single Chip IC solution to your customers.

3.5” TFT LCM



.5” Dual Chip

vs.

3.5” Single Chip

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TFT 3.5” Version

- Advantage of using 3.5” Single Chip IC Solution
  - Vcom, Vgh, Vgl, POL circuit built in for Single Chip IC.
  - Single Power Input
  - Customer can save $$$$ on Power Circuit
- Software Initialization
  - Initialization code should be provided – see application notes.
- Outline
  - The same mechanical outline and pin assignment.

4.3” TFT LCM

4.3” Digital TFT

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TFT 4.3” Version

- High brightness with 300 cd/m2.
- Touch Panel available.
- Automotive specification available with Top -30~85 Deg C.
- Suitable for GPS application.

5.7” TFT LCM

5.7” Positive Vcom

vs.

5.7” Negative Vcom

TFT 5.7” Version

- PH320240T-005-IC1Q is a Kyocera Mechanical compatible TFT. The Vcom circuit design is Negative mode.
- PH320240T-009-IC1Q is a Kyocera Mechanical compatible TFT. The Vcom circuit design is Positive mode.
- For customers who are using Kyocera already Powertip will recommend to use PH320240T-009-IC1Q.
- For new design customer can consider to use PH320240T-005-IC1Q.

Note: The above goes the same for PH320240T-005-I-Q (PG320240-M version)

TFT 5.7” Version

Display Outcome

PH320240T-005 Series

Negative Vcom

PH320240T-009 Series

Positive Vcom

7.0” TFT LCM

7.0” Digital TFT

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TFT 7.0” Version

- ODF TFT from CMO.
- Automotive specification available, Top -30~85 Deg C
- White LED version only
- Touch Panel available.
- High brightness with 350 cd/m2
- Mechanical and Pin out the same with CPT’s 7.0” TFT
- Tcon and LED B/L driving circuit built in

OLED Push Products

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OLED Products

Size	Part #	Status	Remarks
2.0“ AM OLED	PPT9999-A003-04-Q	Mass Production	CMEL OLED
2.2“ AM OLED	PPT9999-A003-05-Q	Mass Production	CMEL OLED
2.4“ AM OLED	PPT9999-A003-06-Q	Mass Production	CMEL OLED
2.8“ AM OLED	PPT9999-A003-07-Q	Mass Production	CMEL OLED

Note: Powertip will only promote AM OLED

QVGA Negative FSTN

QVGA

- Powertip has developed a brand new FSTN Negative LCD which comes with a darker black background.
- The new QVGA FSTN Negative LCD can be compared with Nanya product.
- Higher Contrast Ratio.

IC Phase Out Issue

Mono Controller & Driver IC
Phase out

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Samsung

- Samsung has decided to phase out much of its Monochrome controller and driver ICs. Last buy 9/30/08
- Most commonly used Samsung IC in Powertip are

Part #	PTC LCM	Part #	PTC Code
S6A0069	PC LCM	S6B0724	Custom Design
S6B0107	PG12864-K	S6B0713	Custom Design
S6B0108	PG12864-K	S6B0086	Graphics Driver

- Alternative IC solution that are available

Samsung	Alternative	Samsung	Alternative
S6A0069 (SO)	ST7066U (WA)	S6B0724	ST7565
S6B0107 (NN)	NT7107 (CN)	S6B0713	ST7565
S6B0108 (NN)	NT7108 (CN)	S6B0086	NT7086

- Please do place sample LCM if your end customer needs to do some testing.

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Sunplus

- Powertip doesn't use much of Sunplus monochrome Controller and Driver ICs.
- The only LCM that will be affected are Character LCMs which use LA, LK and LC as its controller IC.
- Stop production will be on Dec. 31, 2007
- Powertip suggests to use ST7066U as alternative IC.
- Please do place sample LCM if your end customer needs to do some testing.

Technical Discussion

Rex, a specialist of LCM products, will be available to answer your technical questions concerning TFT and OLED

The End

Thank you very much for your attention