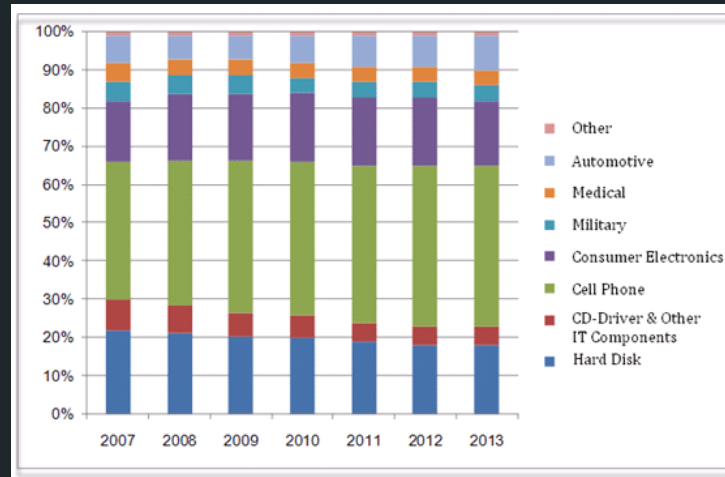


Global and China Flexible Printed Circuit (FPC) Industry Report, 2009



The FPC (Flexible Printed Circuit) industry burgeoned in 2002, saw rapid expansion from 2003 to 2004, and then in 2005 entered the price-war competition. Afterwards, the FPC industry went through its downturn during 2006 to 2007, and turned better in 2008. The global financial crisis did not hinder the recovery of FPC industry. On the one hand, the drop in the price of FPC stimulates the demand for FPC; and on the other hand, the increasing demand for lightness, smallness and thinness as well as high reliability brings further application of FPC. Meanwhile, the FPC manufacturers that survived from price competition once suffered great pressure, and they are veteran in cost control and dealing with difficulties, thus fearless of global economic downturn.

FPC Market Downstream Distribution, 2007-2013



The cell phone is the main driver for FPC market growth, in particular smart phone and high-end cell phones. What's more, FPC will be increasingly applied to such consumer electronics as laptop, PND, digital camera, DV, LCD TV, plasma TV, and media players with the pursuit of performance and ultra-thin size. A great number of Laptop and FPTV has been provided with LED as backlight, and FPC is as usual the main mode to connect LED with main circuit. In the near future, the shaft connecting laptop screen with motherboard is likely to use FPC.

The FPC has still certain market in hard disk, although with a higher growth to be desired. It is impossible for NAND to quickly replace hard disk in short term, since the storage capacity grows ever in information era, and hard disk rather than NAND can meet the demand. Despite the price of NAND drops sharply, it still can't keep up with the growth rate of mainstream storage density. NAND has some potential in non-mainstream market such as Netbook; the hard disk has still dominated the mainstream market. In a word, hard disk will enjoy advantages in storage density, reliability, maturity and price-performance ratio in next five years. Currently, there are only six hard disk manufacturers, and the number will decrease. In contrast, there are many FPC manufactures, but with weak price bargaining ability. Moreover, the FPC required by hard disk is single in style. All those above decide not a robust growth of FPC in hard disk market.

In optical disc drive industry, the growth of FPC rests with blue ray. In Addition, FPC has steady performance in printer market.

In automobile, the usage of ECU is attended by FPC with high reliability and space advantage. Now, auto ECU gets increasingly applied.

Ranking of Japanese FPC Manufacturers

Manufacturer	Revenue, 2008 (JPY100 mln)	Revenue, 2008 (USD1 mln)	Revenue,2009 (JPY100 mln)	Revenue,2009 (USD1 mln)
Mektron	1698	1451	1400	1296
Sumitomo	549	469	530	491
Fujikura	703	601	700	648
Nitto Denko	410	350	350	324
SONY Chemical	205	175	180	167
Sumitomo Bakelite	210	179	205	190

The JPY exchange rate was 117: 1 in 2008, and 108:1 in 2009.

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