

# AMOLED LTPS

(Flat Panel Display, FPD) TFT - LCD(Thin Film Transistor Liquid Crystal Display)

2003 150  
(a - Si) TFT - LCD 1

2  
가 LCD  
가 , OLED  
(Organic Light Emitting Diode; OLED)가

LCD , ,  
backlight가  
가  
2010 9  
1 5 OLED  
가  
PDA 2010 20% 695  
OLED , car  
navigation system(CNS) 30% 4,230  
가OLED  
LCD

가 OLED  
LCD OLED  
OLED  
, 15V 가 ,  
160  
2mm  
0.3mm  
, 가 ,  
가 ,  
TFT - LCD  
OLED LCD  
passive matrix type active matrix  
type( AMOLED ) ,  
passive matrix type  
matrix ,  
duty . active matrix type  
TFT  
가 가 .  
passive matrix  
가 가 ,  
active matrix  
passive matrix  
가  
100 가

OLED TFT array  
 , AMOLED 가 가  
 stability  
 poly - Si a - Si  
 AMOLED가  
 poly - Si TFT poly - Si  
 gate  
 poly - Si TFT  
 poly - Si TFT  
 (integration)  
 TFT  
 (  $\mu e$ ), (  $V_{th}$ )  
 . TFT 가OLED  
 , TFT  
 3 TFT  $\mu e$   $V_{th}$   
 AMOLED  
 , TFT  
 AMOLED 가  
 AM(active matrix)OLED PM(passive matrix)  
 OLED 가  
 가  
 OLED  
 , TV

TV  
 400~500 cd/m2  
 50,000  
 OLED 가  
 OLED ,  
 , OLED LCD  
 , 15V  
 , 10 $\mu s$  170  
 가  
 OLED  
 가 LCD  
 PDP 가  
 가 100  
 가OLED  
 OLED 2 ( )  
 , MP3 , Portable Multimedia  
 Player, )  
 가  
 . OLED 10  
 , 20 40  
 가