

Display power efficiency overview, August 2011

Average power consumption in operation (TVs)				
type	inch	watts	mw/inch ²	average
LCD-LED	55	75	58,0	
LCD-LED	46	56	61,9	
LCD-LED	40	48	70,2	
LCD-LED	40	50	73,1	
LCD-LED	46	68	75,2	
LCD-LED	37	46	78,6	
LCD-LED	46	77	85,2	
LCD-LED	55	113	87,4	
LCD-LED	40	60	87,8	
LCD-LED	37	52	88,9	
LCD-LED	32	39	89,1	
LCD-LED	46	81	89,6	
LCD-LED	47	85	90,1	
LCD-LED	32	40	91,4	
LCD-LED	40	64	93,6	
LCD-LED	37	56	95,7	
LCD-LED	42	81	107,5	
LCD-LED	37	63	107,7	
LCD-LED	37	70	119,7	
LCD-LED	32	53	121,1	
LCD-LED	42	97	128,7	
LCD-LED	32	57	130,3	
LCD-LED	32	58	132,6	
LCD-LED	32	59	134,8	95,8
LCD	42	99	131,3	
LCD	19	21	136,1	
LCD	22	33	159,6	
LCD	32	72	164,6	
LCD	26	59	204,3	159,2
Plasma	50	123	115,1	
Plasma	42	92	122,1	
Plasma	60	231	150,2	
Plasma	50	179	167,6	138,7

Old technology in comparison:			
CRT	22	50	241,8

Worst models removed				
type	inch	watts	mw/inch ²	average
LCD-LED	55	75	58,0	
LCD-LED	46	56	61,9	
LCD-LED	40	48	70,2	
LCD-LED	40	50	73,1	
LCD-LED	46	68	75,2	
LCD-LED	37	46	78,6	
LCD-LED	46	77	85,2	
LCD-LED	55	113	87,4	
LCD-LED	40	60	87,8	
LCD-LED	37	52	88,9	
LCD-LED	32	39	89,1	
LCD-LED	46	81	89,6	
LCD-LED	47	85	90,1	
LCD-LED	32	40	91,4	
LCD-LED	40	64	93,6	
LCD-LED	37	56	95,7	82,2
LCD	42	99	131,3	
LCD	19	21	136,1	
LCD	22	33	159,6	142,3
Plasma	50	123	115,1	
Plasma	42	92	122,1	118,6

Conclusion: Plasma has now more than kept up with conventional LCD/fluorescent light source Displays, but LCD with LED light (currently all white LED edge backlights) are significantly better. CRTs were just as good as early LCDs.

Because of their remarkable progress in terms of power efficiency and lower prices, plasma displays still have a considerable market share. A very detailed, in-depth treatment on the inner workings of plasma display panels can be downloaded from this [plasma.com page](#). ("Plasma display panels: physics, recent developments and key issues". J.P.Boef. J.Phys.D: Appl.Phys.36 (2003) R53–R79Ds).

Copyright © 2011 www.displaysbook.info

Source for flat panel data: Conrad Electronics catalog 2011/2012