

# World's first organic LED TV

In the biggest innovation to reach the TV market in many years, Sony is to begin selling the world's first organic light emitting diode (OLED) sets. Unlike other flat-screen technologies, OLEDs require no back-lighting, so they can be made wafer thin and demand much less power

## Sony XEL-1 OLED TV

Price: ¥200,000 (around \$1,700)

### Picture size:

287mm diagonal

### Resolution:

960 x 540 pixels

### Power

#### consumption

Only 45W  
(or 0.84W on standby)

**Contrast ratio:** 1,000,000:1 – giving even gradations and clarity even in shadow, from zero luminosity (true black) to 30-bit colour

Terrestrial digital tuner



Low response times for clear fast-moving images, e.g. sports

3mm thick – slightly more than 1 Euro



1W speakers

HDMI, USB, ethernet and headphone connections

## ACTIVE MATRIX OLED

**Cathode:** 0.7mm transparent electrode, e.g Indium Tin Oxide

### Pixels:

Organic polymer

### Anode

**Thin film transistor matrix:** Activates individual pixels

**Organic polymer layers:** "Doped" with fluorescent molecules to enhance colour output

### Supporting substrate:

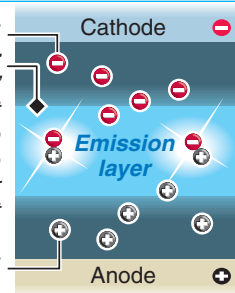
Glass or plastic – can even be flexible

Electrons

Cathode

Holes

Anode



Electrical current drives electrons and holes into **emission layer**, releasing energy as light when they combine – **electroluminescence**

Source: Sony

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