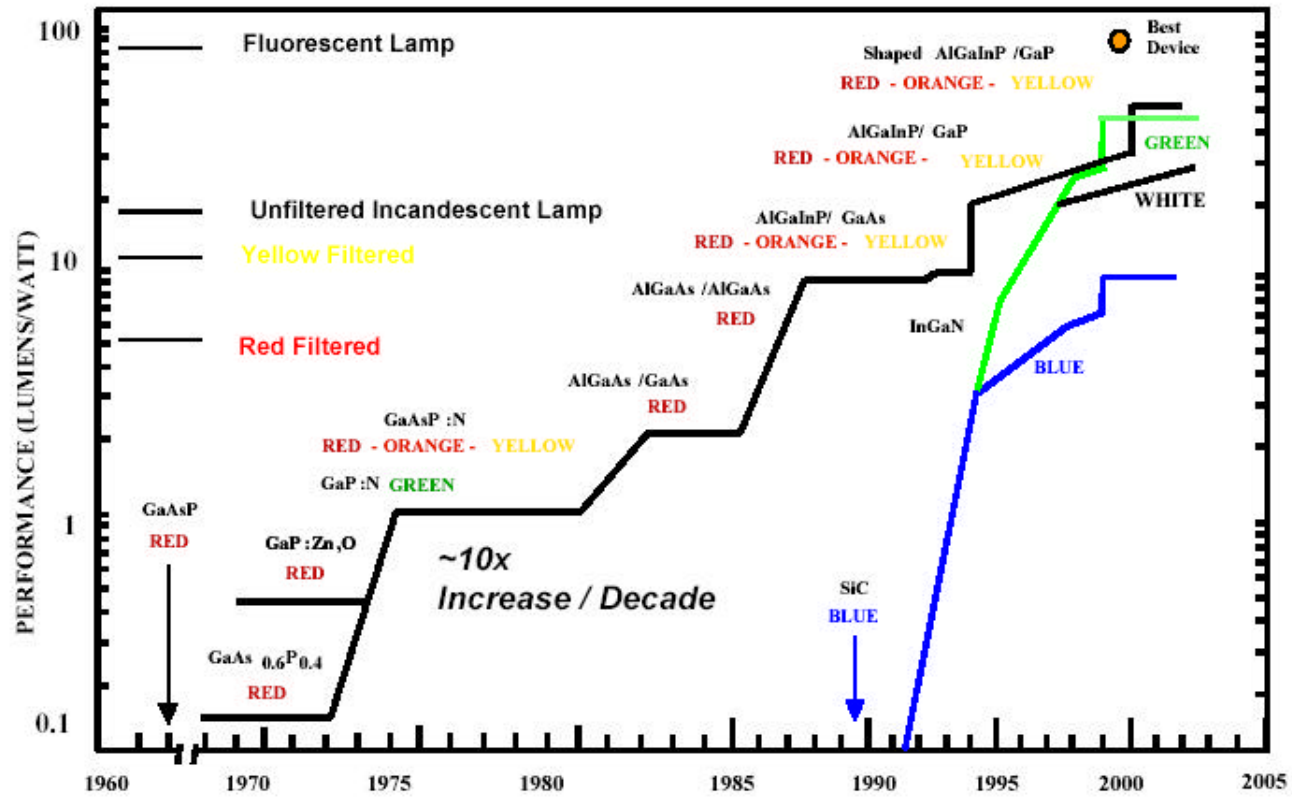
PHILIPS

Solid State Lighting (LED's)

Peter van Strijp
Executive Vice President & CEO BU Solid State Lighting

November 23, 2004

Evolution of LED Technology



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July 2002
IMN 2002.ppt

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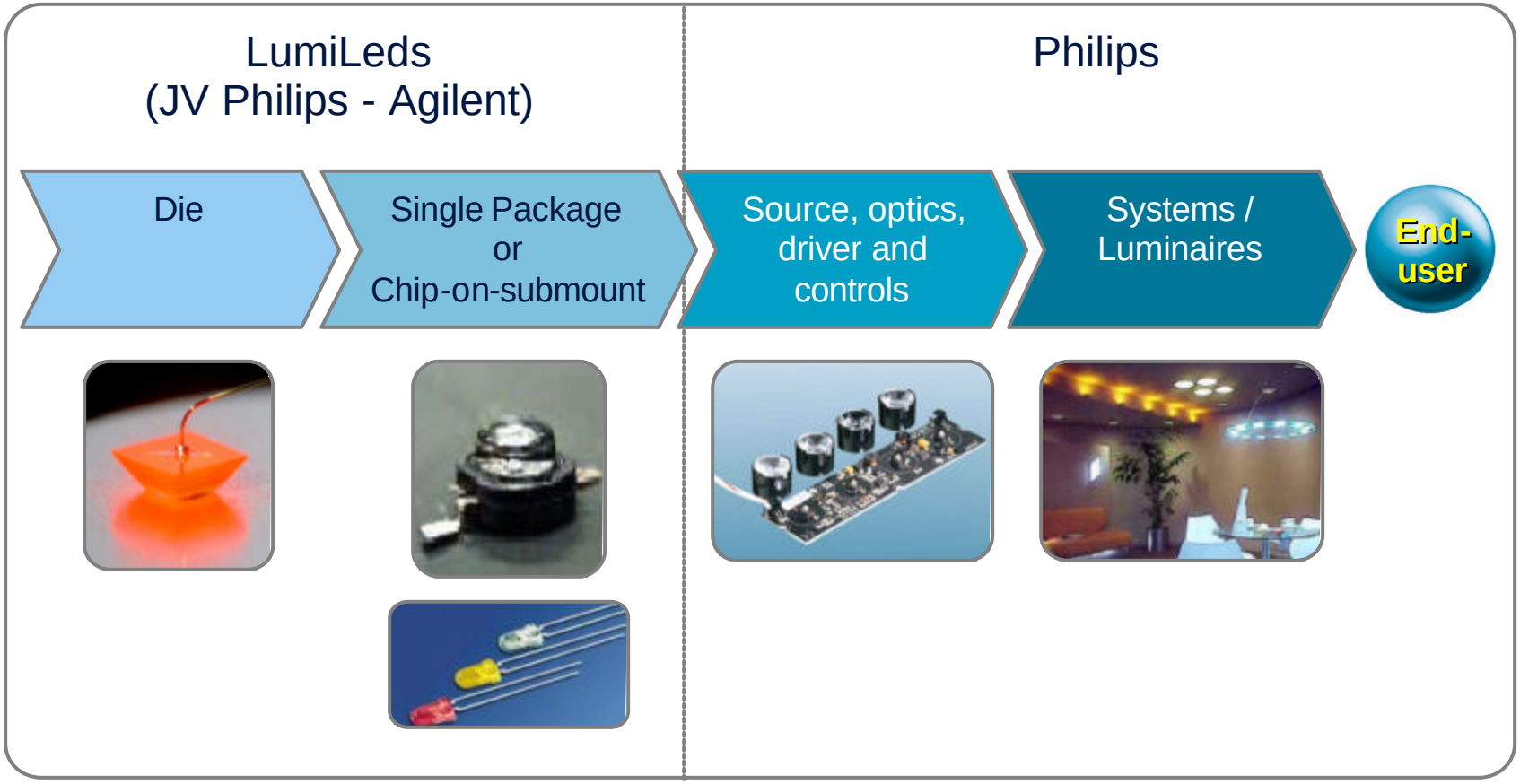
LUMILEDS

The in-organic Solid State Lighting value chain

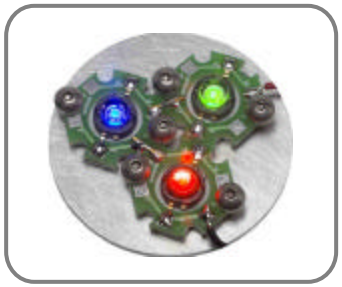
LumiLeds: focus on die and packaging

Philips: focus on modules and systems



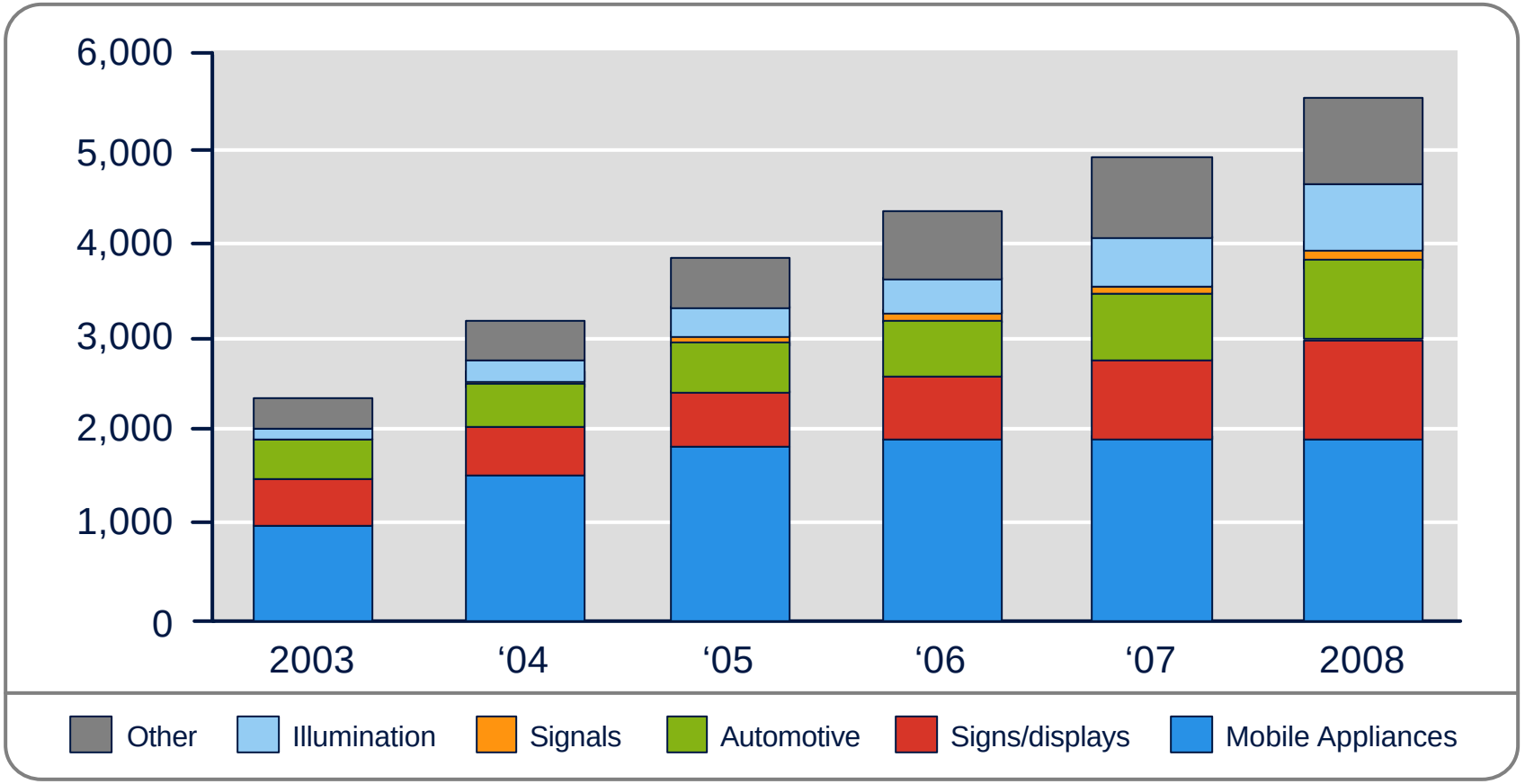
LumiLeds leadership in high power LEDs

- Joint venture with Agilent Technologies established in 1999
- Headquarter in San Jose, California
- Industry leadership in high power die and packaging (LUXEON platform)



Market Forecast – packaged LEDs

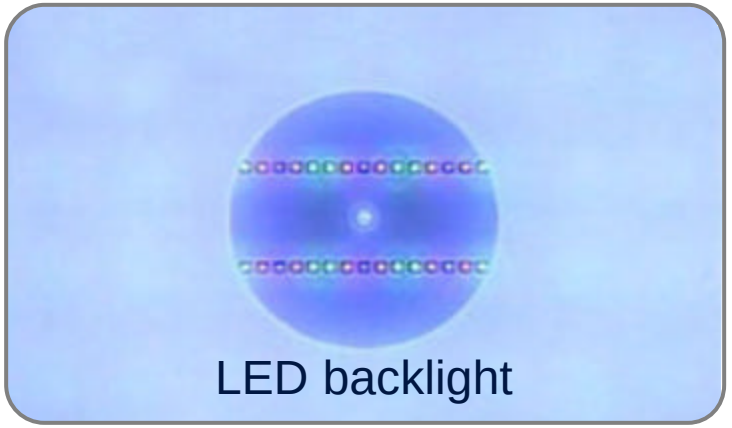
Revenues in $ million



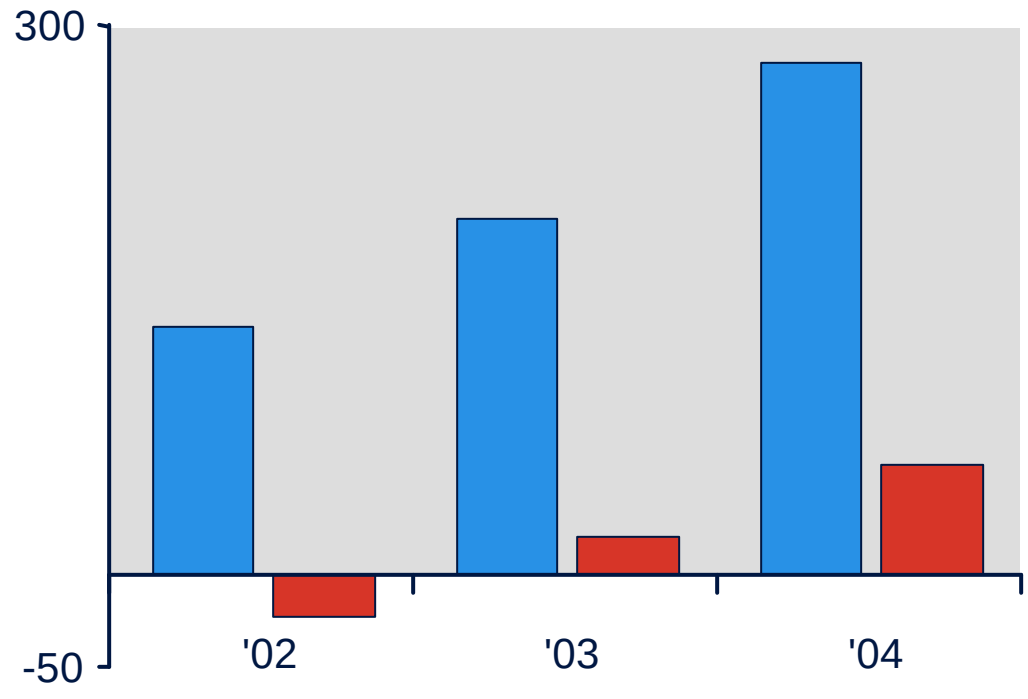
Source: Strategies Unlimited; PennWell

LumiLeds Luxeon in Sony LCD-TV

Sony high definition LCD TV
Model: KDX-46Q005



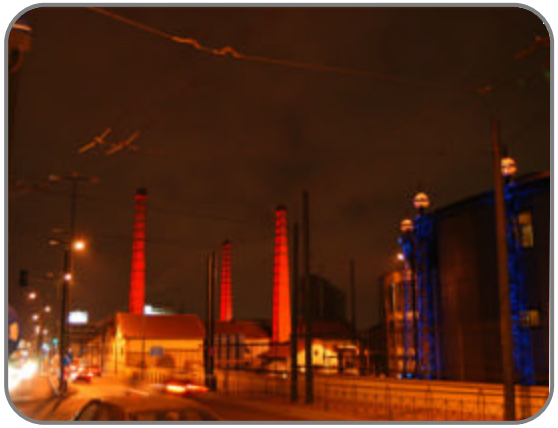
LumiLeds performance



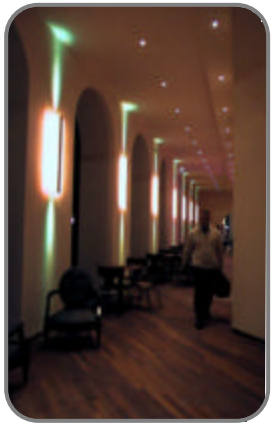
USD mln	2004
Sales	280
Average Annual Growth	43%
Net Income	62
As % of sales	22%

Fiscal year Nov/Oct

Philips target applications in the professional market are decorative outdoor and shop lighting…



..creating new lighting possibilities …..



…bringing dynamic colour …..

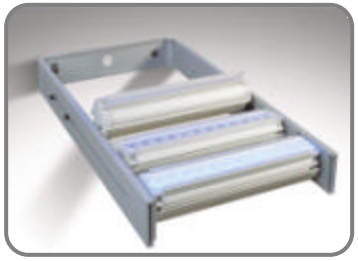
…….and light everywhere……

Dynamic Road marking

...based upon innovative product concepts ....

Surface

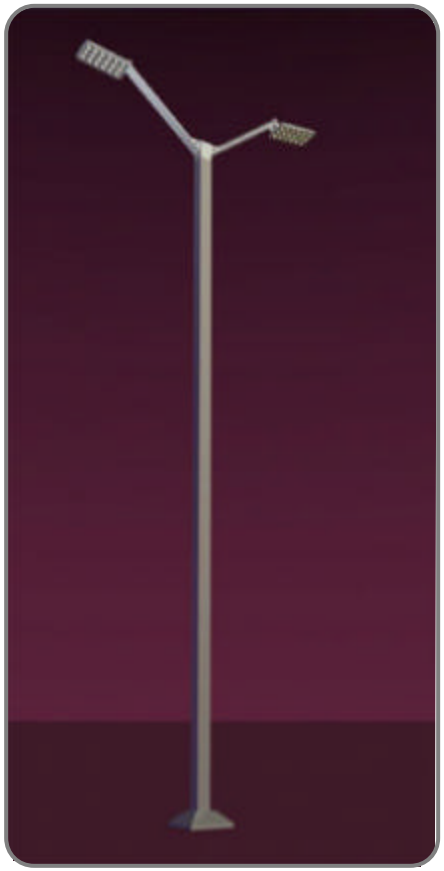
Recessed



Flood

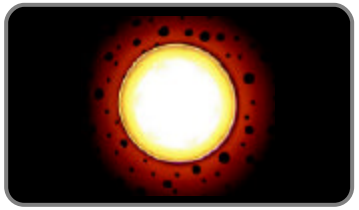
Philips Lighting
2004 - 2005 Product range

Equinox



Ledline^2

LEDFlood



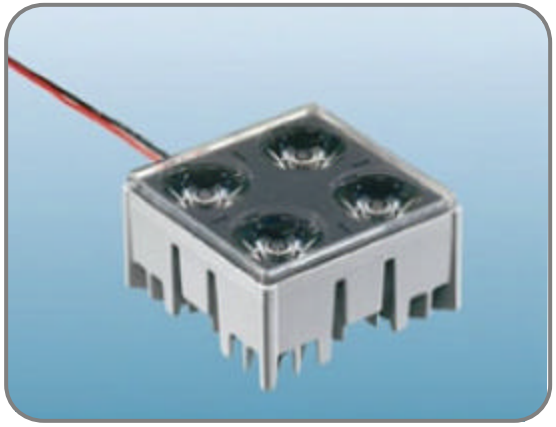
Origami

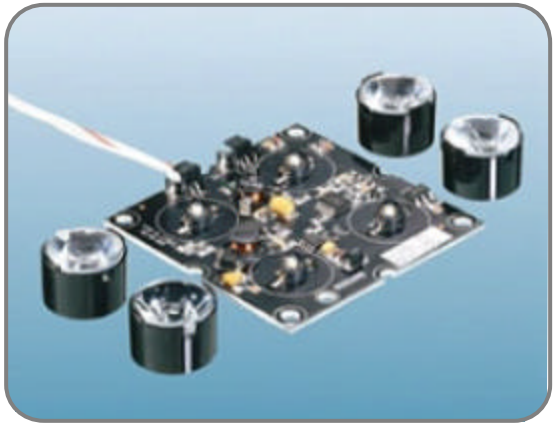
Minicolour

LEDAmazon

iParm

Philips Solid State Lighting modules ….
……enabling OEM luminaires concepts



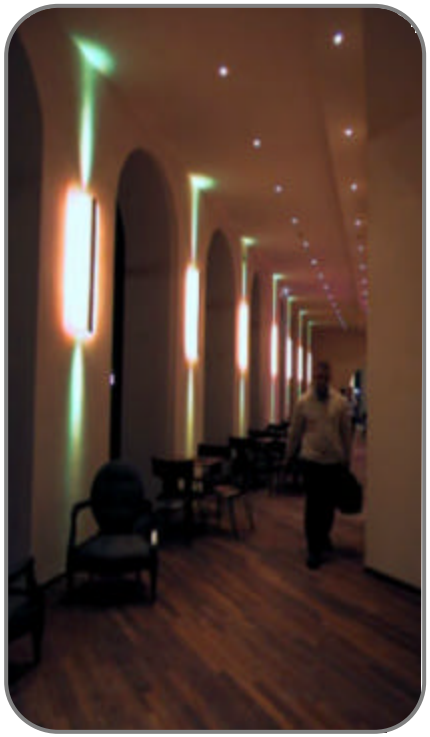


Exploiting Solid State features and benefits…..

Light experiences & effects
- Dynamic colors

Embedded
- Robust & long life

Total Cost of Ownership reduction
- Low energy & maintenance



…….resulting in

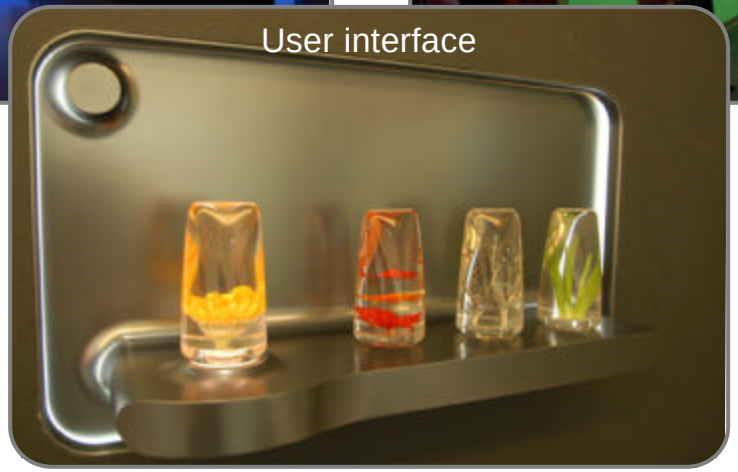
“increased number of light points”

Atmosphere demo Philips Lighting application centre Eindhoven

Winter

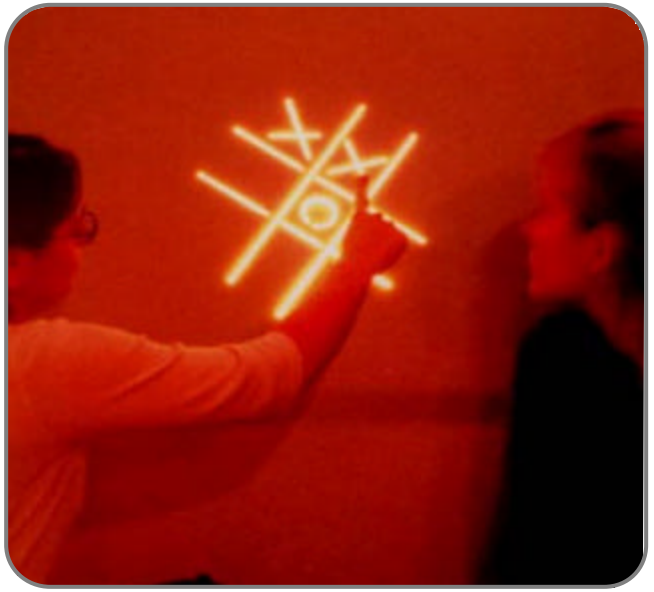
Spring

User interface



Controlling “increasing number of light points” requires “intelligent lighting modules”

- Control Light quality
- Color mixing
- Dynamic over time
- Store preferred settings in memory
- With an easy (intuitive) user interface



Philips Solid State Lighting …. leveraging Philips Electronics technical capabilities

- Philips Research for advanced technology development
- Philips Semiconductors for packaging of modules & systems
- Philips Design for intuitive user interfaces
- Philips Software Development for control-intelligence

…….as well as leveraging Philips Electronics market positions

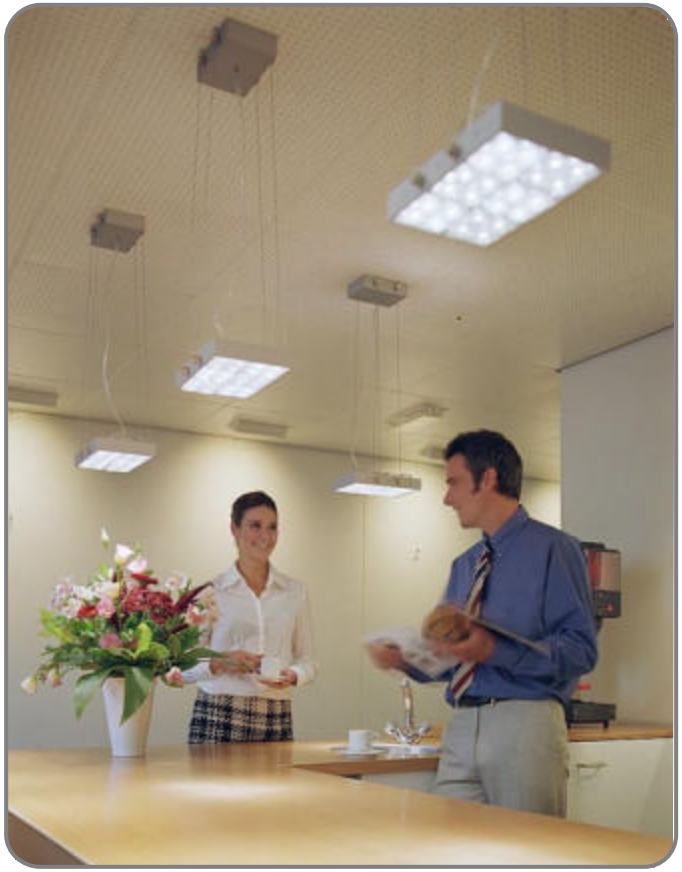
- Philips Consumer Electronics for viewing experiences
- Philips Medical for creating caring environments
- Philips Lighting for light application and product know how

Consumer Electronics: Viewing experience

Medical: Ambient Experience / RSNA , Chicago

Lighting: Growth in professional .....

……. and consumer applications



Leading to Profitable Growth

- Today's installed luminaire base will continue to drive conventional lamp replacement
- Luminaire sales will convert gradually to Solid State
- Solid State creates new lighting possibilities with more initial light points per application

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