

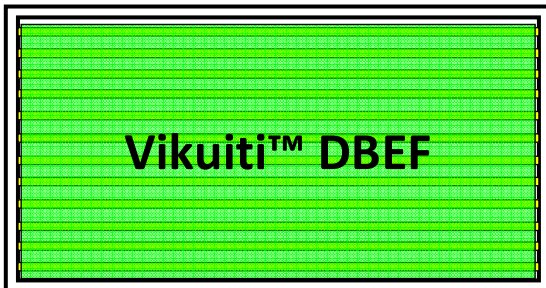
TV Energy Efficiency



P R E S E N C E O F V I S I O N

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3M DBEF Optical Film improves LCD TV Energy Efficiency



On Average
DBEF in Backlight
Efficiency Increases **42%**

- Range 32% to 52%

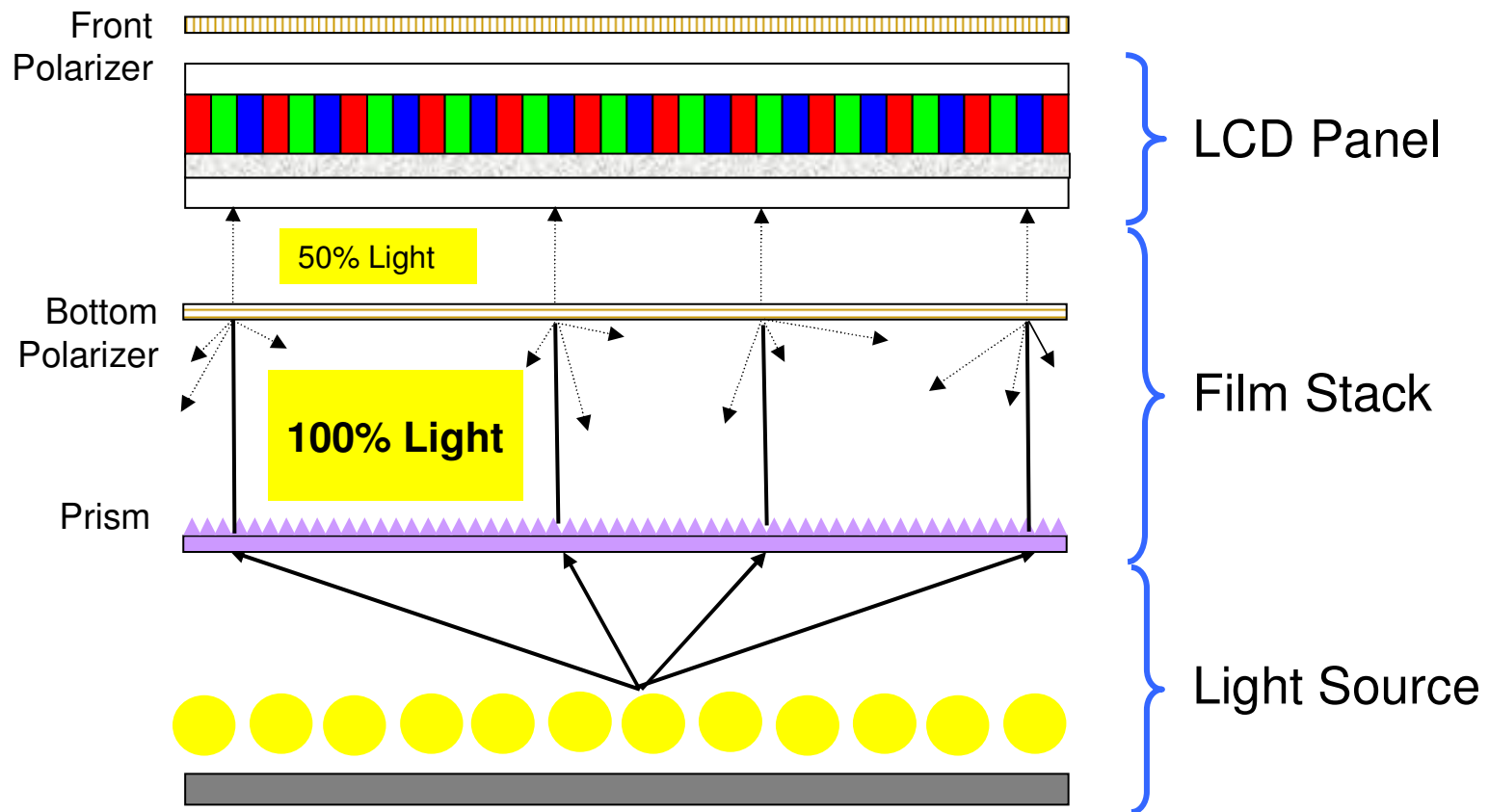
On Average
TV Power is Reduced **30%**
With DBEF

- Range 23% to 37%

DBEF improves efficiency of all LCD TVs – regardless of features
DBEF enables reduced energy while maintaining picture quality
DBEF enables reduced components as a result of the lower power consumption

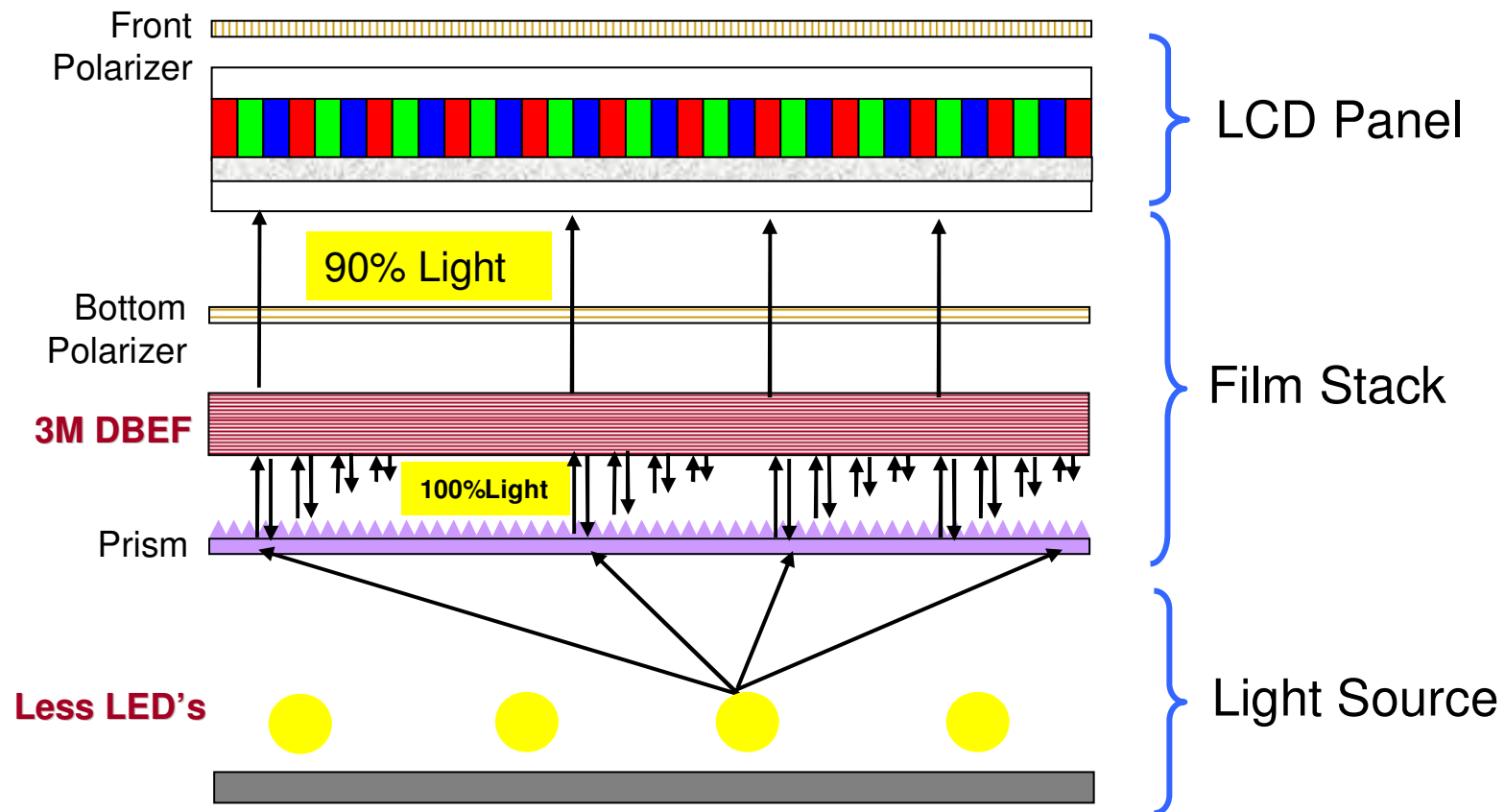
Light path through the LCD TV

Light needs to be polarized in one polarization state resulting in the loss of half of the total light



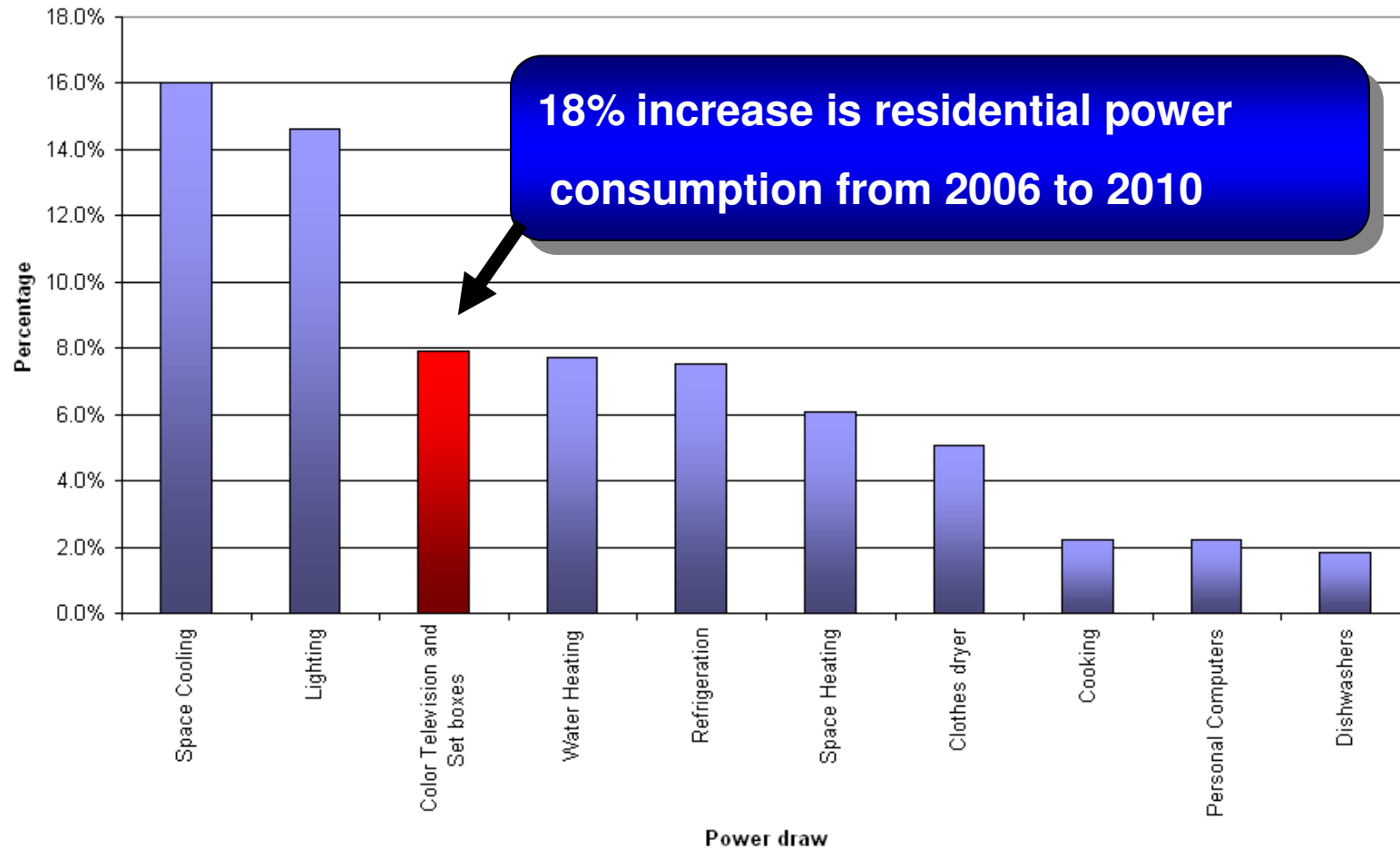
Light path through the LCD TV with 3M RF

3M DBEF scrambles the light component otherwise lost with the bottom polarizer and recycles it back with the correct state of polarization



2010: US Residential Electrical Power Consumption

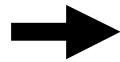
Ranking of Residential Power Consumption: 2010 estimates



Why TV power consumption is increasing...

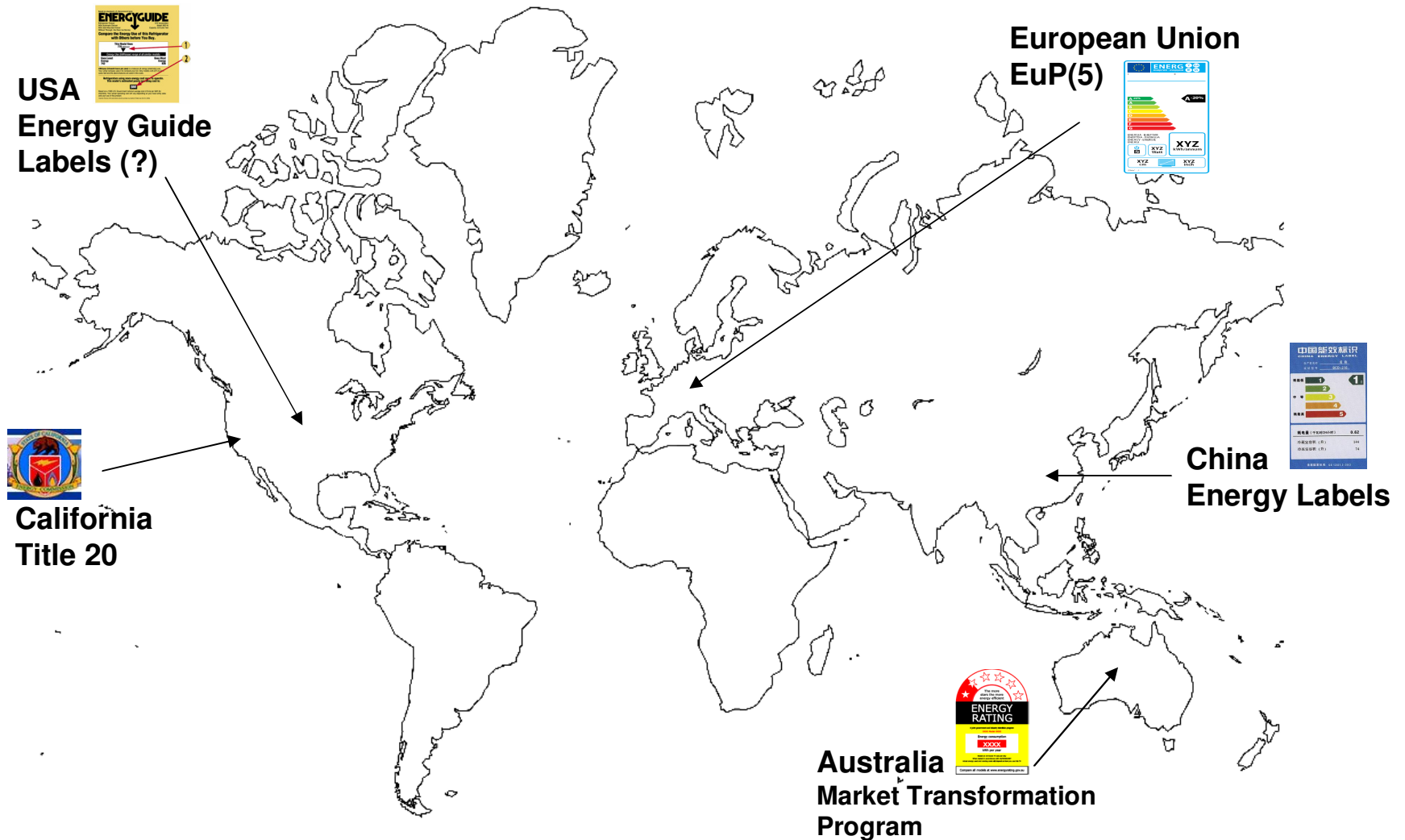


27" screen size




32", 37", 40", 42", 46"+ screen size

Television Regulatory Landscape – Mandatory programs. Timing: 2009-2011



Potential Energy Savings for LCD Televisions in the USA*

- In 2008, 23 million LCD televisions sold in the USA
 - If all those LCD TVs  used a reflective polarizing film, the potential energy savings would be:
 - Equal to powering 320 000 households

- Potential cumulative energy savings 2008-2012
 - Equal to powering 5 Million households base on total of 143 MM LCD TVs sold

*Sales projections (20"-60"+) from DisplaySearch.
weighted average: 53 watt savings per TV
8 hrs/day on
11 256 kWh = Annual power for one household.
Comparing identical TV sets- with DBEF vs 1 Diffuser Sheet

Brands, retailers, Consumers

- By reducing the number of LEDs', 3M DBEF technology helps brands to meet their energy targets.
- 3M continues to develop new products which enhances brightness and integrate other benefits and functions (on glass, on plate solutions).
- 3M is a technology partner to some major retailers. We do innovative work showing other commercial benefits of DEBF.
- 3M is willing to work with retailers through joined presence at trade shows, conventions, sales promotions and in any other activities promoting energy efficiency.
- 3M is also trying to reach out to consumers – project under development.