

SSL Manufacturing Concepts

For LED & OLED Luminaires

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DOE SSL R&D Workshop

San Francisco, CA January 28th 2015

- Who We Are
- LED There vs Here
- OLED There vs Here
- Summary

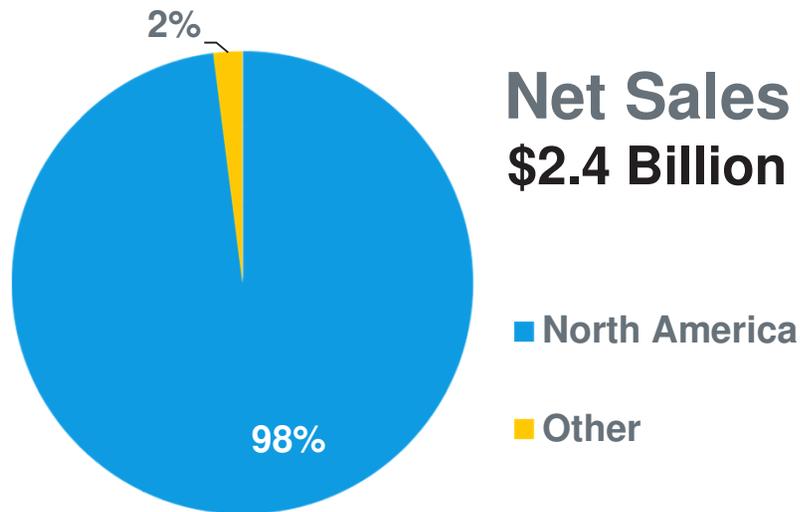
Who We Are

Acuity who?

Who We Are

North American Market

2014 Sales & Mix



- + 16 Manufacturing Facilities
- + 7,000 Associates

Competitive Dynamics

- + #1 Market Share in North America
- + Most Extensive Solutions Portfolio
 - Leading provider of luminaires, controls, components, solutions and services
 - 1.7 million+ SKUs
- + Sales Channel Leadership
 - 14 Channels Served
 - #1 Sales Force in Key Markets

Who We Are

Solutions Portfolio

Indoor

- + General Purpose
- + Architectural
- + Downlighting
- + Track Lighting
- + Emergency
- + Relight
- + Rough Service
- + Surface
- + Flexible Wiring
- + Controls

Outdoor

- + Area & Parking
- + Roadway & Street
- + Floodlighting
- + Security
- + Sports
- + High-Mast
- + Building Mounted
- + Poles & Post
- + In-grade
- + Underwater
- + Accent & Border
- + Controls

Applications



Education



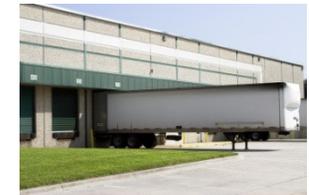
Office



Healthcare



Commercial



Warehouse



Industrial



Infrastructure



Roadway & Street



Architectural



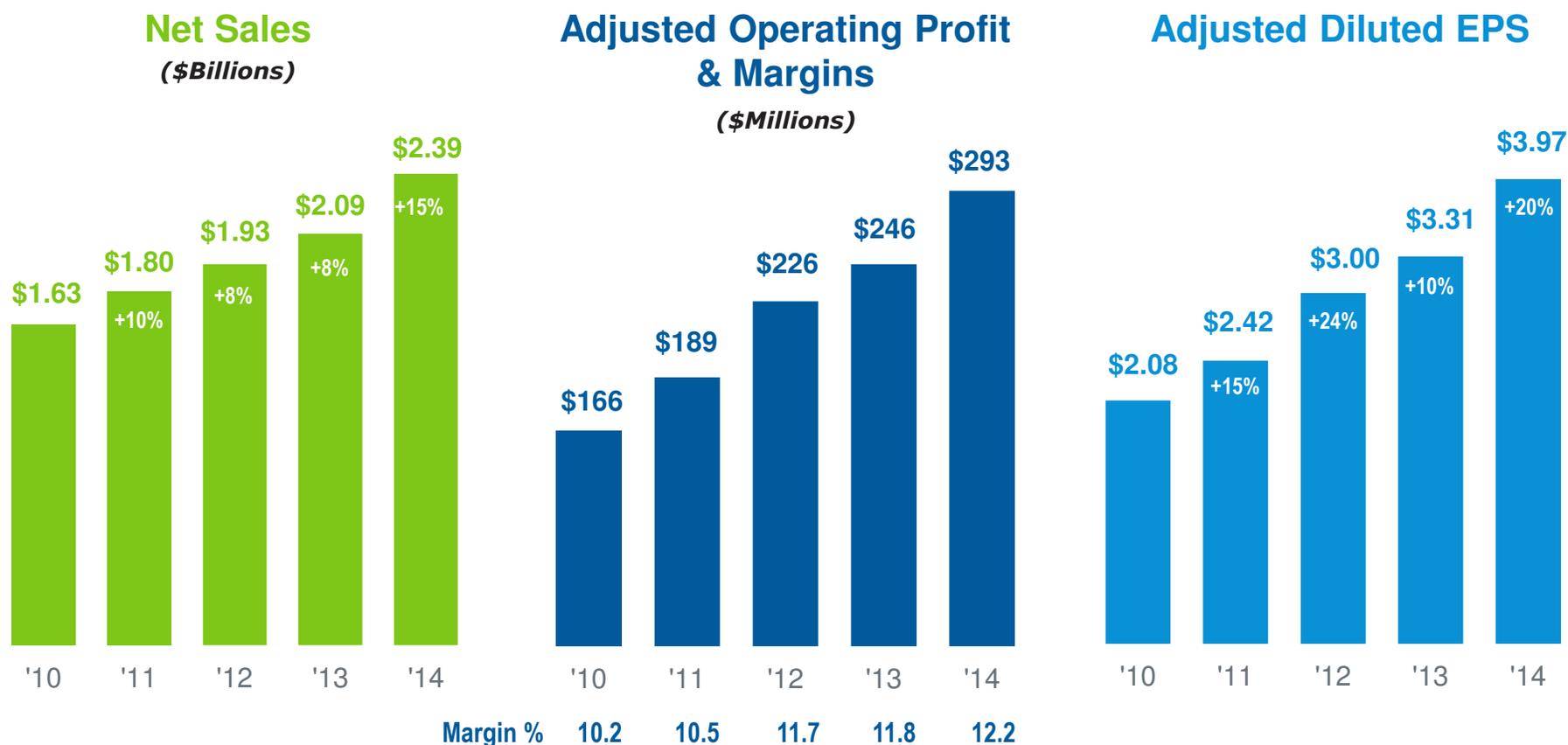
Residential

Who We Are



Who We Are

Financial Performance



Note: 2010 Diluted EPS also excludes \$0.16 for loss on early retirement of debt. 2012 operating profit excludes a special charge of \$13.3 million (\$0.21 per diluted share) for streamlining activities as well as \$1.2 million (\$0.02 per diluted share) for abandoned inventory and \$3.2 million (\$0.05 per diluted share) of streamlining inefficiencies. 2013 operating profit excludes a special charge of \$8.5 million (\$0.12 per diluted share) for streamlining activities, \$8.4 million (\$0.12 per diluted share) of streamlining inefficiencies, and \$8.1 million (\$0.12 per diluted share) for Trendset fraud. 2014 operating profit excludes recoveries related to Trendset fraud of \$5.9 million (\$0.08 per diluted share) and \$152K favorable adjustment to special charge for streamlining activities.

LED: There vs Here

North America vs Asia

LED: There

Sometimes it works

- Limited SKU count
- Material vs Labor Costs
- Shipping Costs
 - > Water vs Air
 - > Size

But there are risks

- Success
- Long lead-time
(Design + Manufacturing + Shipping)
- Market shift (Cost and/or Performance)



LED: Here

Sometimes it works

- Massive SKU count



LED: Here

Sometimes it works

- Massive SKU count

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: 2VTL4 48L ADP EZ1 LP835 N80

2VTL4				ADP											
Series	Air function	Lumens		Diffuser		Voltage		Driver ³		Color temperature		Controls ⁶		Options	
2VTL4 2X4 VTL	(blank) Static H Heat removal	30L 3000 ¹ 40L 4000 ¹ 48L 4800 ¹ 60L 6000 ¹ 72L 7200 ¹		ADP Acrylic linear prismatic		(blank) MVOLT 347 347 ²		EZ1 eldoLED dims to 1% (0-10 volt dimming) EZB eldoLED dims to black (0-10 volt dimming) EDB eldoLED DALI ⁴ EXB eldoLED DMX/RDM ⁴ SLD Step-level dimming ⁴ EXA1 Dims to 1%, XPoint wireless enabled ⁵ EXAB Dims to dark, XPoint wireless enabled ⁵		LP830 82CRI, 3000 K LP835 82CRI, 3500 K LP840 82CRI, 4000 K LP850 82CRI, 5000 K		(blank) No controls N80 nlight [®] with 80% lumen management N80EMG nlight [®] with 80% lumen management For use with generator supply EM power N100 nlight [®] without lumen management N100EMG nlight [®] without lumen management For use with generator supply EM power		EL7L 700 lumen battery pack EL14L 1400 lumen battery pack CP Chicago plenum	

$$2 \times 5 \times 1 \times 2 \times 7 \times 4 \times 4 \times 3$$

$$= 6720 \text{ Options}$$

LED: Here

Sometimes it works

- Massive SKU count
- Reducing Labor Costs



LED Here

LEAN Manufacturing is Key to reducing Labor Costs

- Visual Management
- Process Mapping
- 5S (Simplify, Straighten, Scrub, Stabilize, Sustain)
- Six Sigma
- Kaizen
- Identify and eliminate wastes

LED Here



Competition Feeds
on our Waste

Our Goal

**The
relentless
pursuit and
elimination
of WASTE**

LED Here

BEFORE



**28 people
producing
280 units/hr. in
5000 sq. ft.**

**16 people
producing
300 units/hr.
in 2200 sq. ft.
with 2 cells**



AFTER

LED Here



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U-Cell Building 6" Downlight

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LED Here

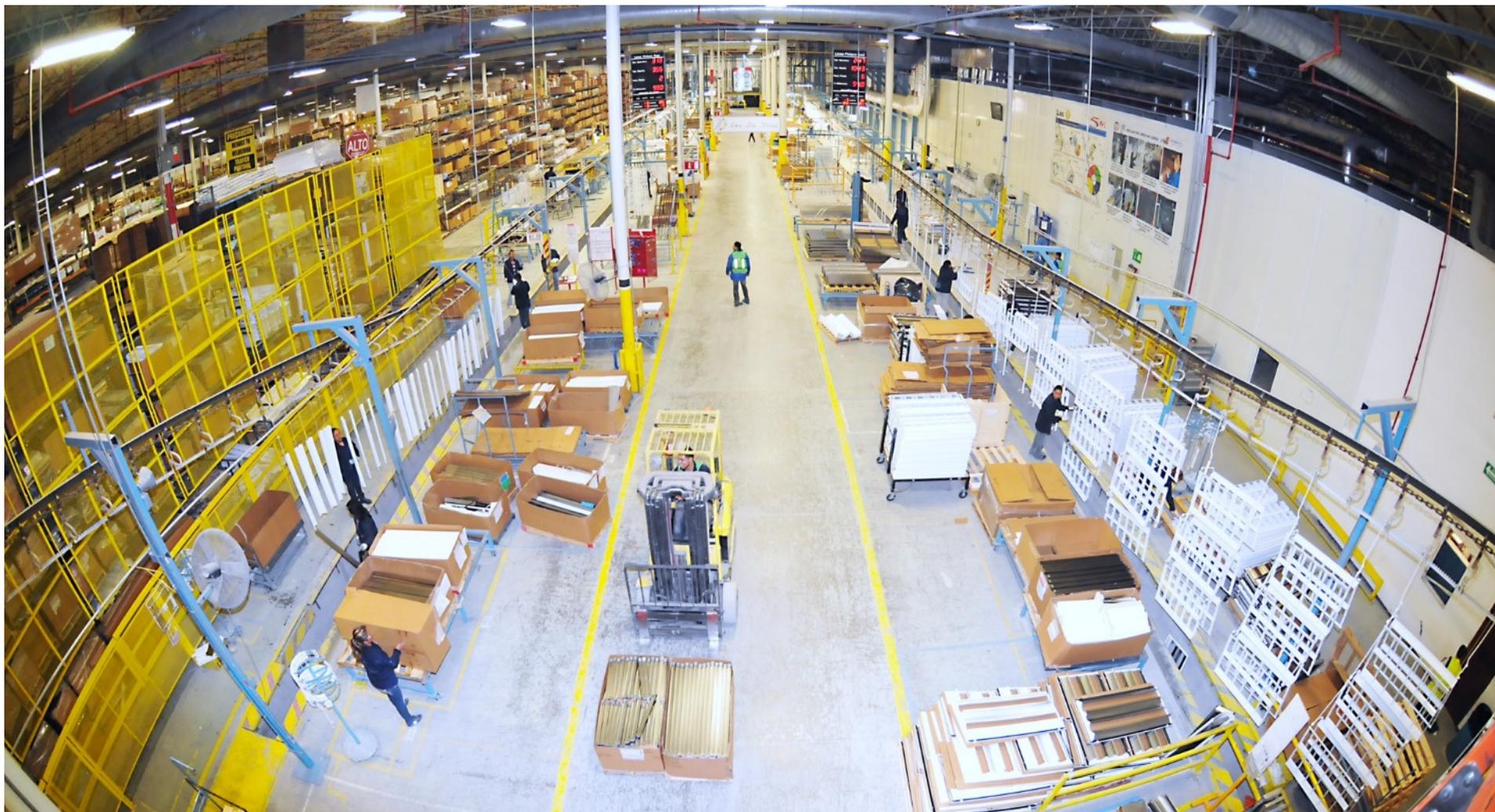


LED Here



Metal Fabrication

LED Here



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Paint Lines

AcuityBrands.

LED Here



LED: Here

Sometimes it works

- Massive SKU count
- Reducing Labor Costs
- Shipping Costs
 - > Size
 - > Weight
- Shorter Lead-times



LED: Here

Sometimes it works

- Massive SKU count
- Reducing Labor Costs
- Shipping Costs
 - > Size
 - > Weight
- Shorter Lead-times



But there are risks

- Currency/Oil/Raw Material Price Fluctuations
- Market shift (Customer Education/Preferences)

OLED: There vs Here

North America vs Asia

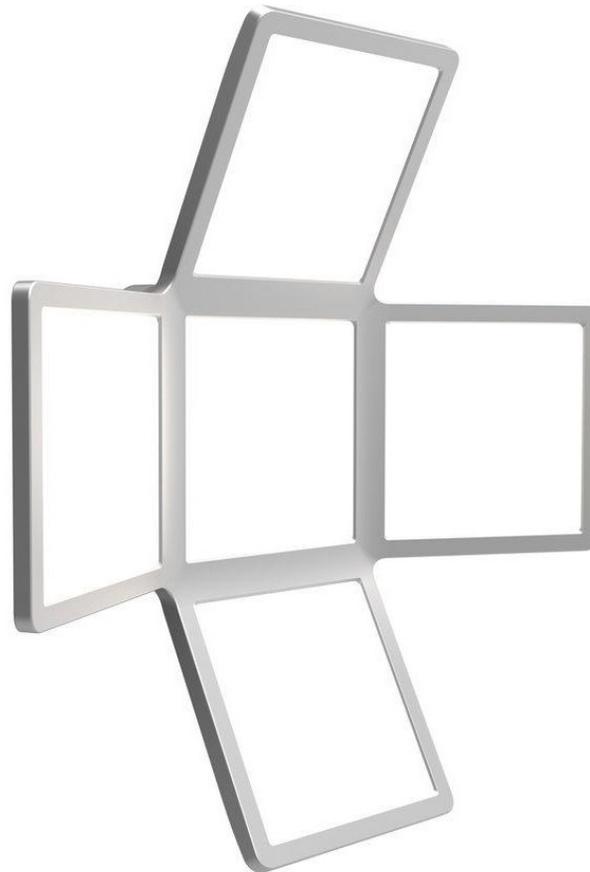
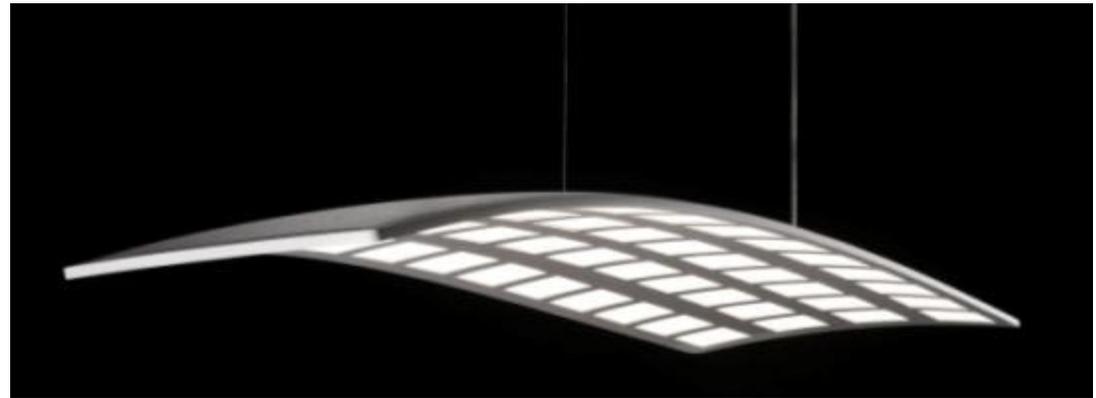
OLED: Here

Sometimes it works

- Specification Market
- Commoditization
- Lean Manufacturing

But there are risks

- Testing
- Market Acceptance
- LED



Summary

Summary

- For LED and OLED Luminaires we expect
 - > More North American Vertical Integration
 - > More Controls
 - > More Complexity
 - > More Investment
 - > More Innovation

- More Job Security.....For a while a least

Thank You