

# GonLED

## Lights Hawaii

The Next  
**Giant**  
Leap!



# Today's Discussion: Rebuild Hawaii

- ✓ Who is GonLED Lights Hawaii
- ✓ Quality of LEDs
  - ✓ What to look for: GOOD & BAD
- ✓ Proper Disposal & Recycling
  - ✓ LEDs
  - ✓ Fluorescents/CFLs
  - ✓ Current State of lighting disposal
  - ✓ Responsibility?

Other: Energy Saving Tip of the day



# Who is GonLED Lights Hawaii

- ✓ LED lighting consulting company
- ✓ Intelligent Lighting Systems
- ✓ Representing multiple manufacturers (hundreds of different luminaries)
- ✓ Total project facilitation – light audit, LED selection & education, installation, rebate processing, financing, disposal, etc...

***"No other lighting technology (LED) offers as much potential to save energy and enhance the quality of our building environments, contributing to our nation's energy and climate change solutions." – U.S. DOE***



## Quality: Choosing an LED

- ✓ You are not just changing a light bulb
- ✓ What to look for
  - ✓ Electrical and Environmental Compliance



Listed or Pending??

- ✓ Third Party Testing : LM79 and LM80

## LED T8 Tubes at USA Parking (direct from Manufacturer)

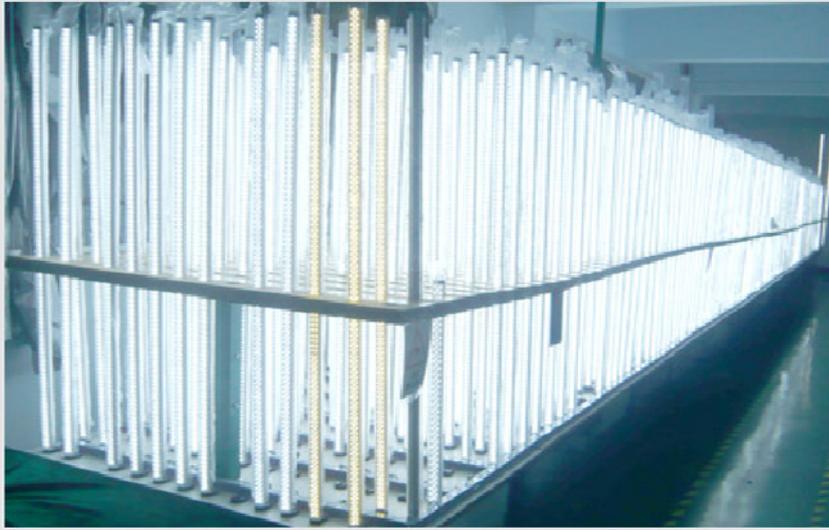
What language is that???

VERGIFTUNGSGEFAHR  
MOTOREN ABSTELLEN  
Ölwanne und Benzinwanne verbieten

↑ Empfang ↑ museum kurst palast  
↑ Ausgang ↑ robert-schumann-saal



# Quality Products and Quality Control



Quality Control

# Quality & Color Temperature of Lamps

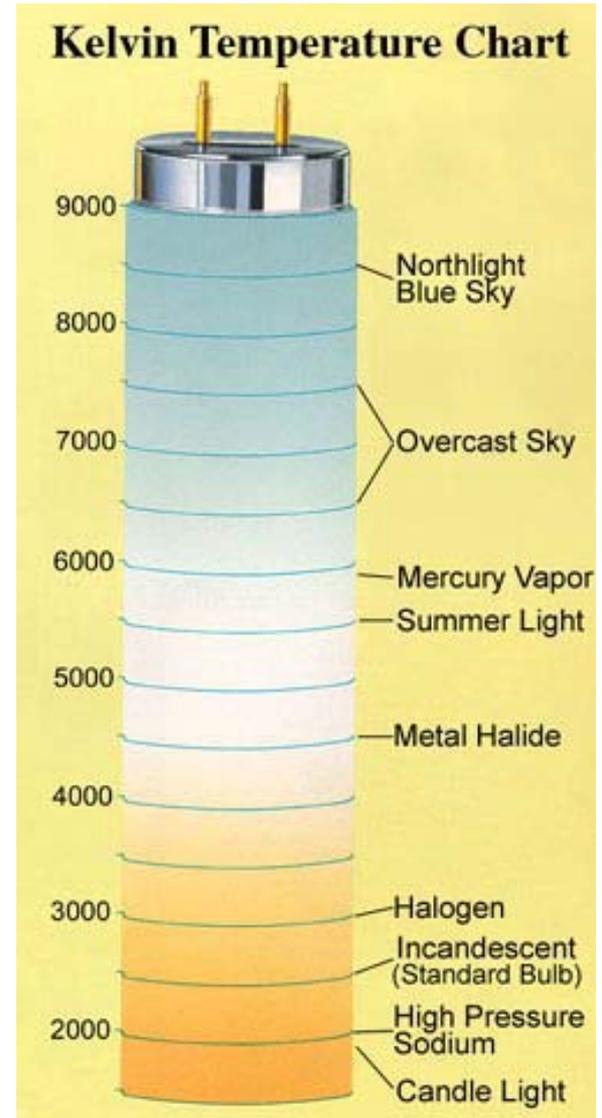
The color temperature represents the appearance of a lamp as rated in degrees Kelvin (K).

Fluorescents use a Phosphor coating to set color temperature and CRI.

LEDs can produce 6 million colors

## Colors:

- 3000K (warm)
- 3500K (neutral)
- 4100K (cool)
- 5000K (daylight)
- 6500K (daylight)



# LEDs in Use



# CFL & Fluorescent Recycling and Proper Disposal

*\*\*From EPA & National and State Requirements*

- ✓ ALL Fluorescent lamps contain mercury and should be recycled.
- ✓ Spent lamps are classified as “Universal Waste.”
- ✓ Incineration or landfill disposal pollutes the environment.
- ✓ 7-9 million bulbs, each & every year are thrown away into Hawaii’s landfills
- ✓ Over 150,000 Grams of Mercury into our land, air and oceans  
*\*\*\*1 gram of Mercury can containment a 2 acre pond*
- ✓ Lighting Industry needs to educate Businesses and Residential  
*\*\*This is why we need ReBuild Hawaii*

What to do with old bulbs???



# Recycle and Proper Disposal of Fluorescent Tubes



Recycle !!!!

## Directly from EPA

*Each year, an estimated 600 million fluorescent lamps are disposed of in U.S. landfills amounting to 30,000 pounds of mercury waste.*

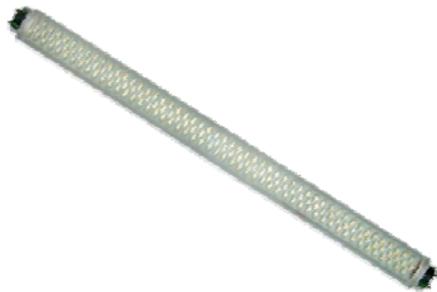
*Due to the new Federal Environmental Protection Agency's regulation on lamps, which went into effect on January 6th, 2000, most non-residential facilities are now required by law to properly dispose of their lamps. Landfills are increasingly intolerant of lamps from non-residential sources due to the amount of mercury found in each lamp. Lamps later found in landfills are subject to retroactive clean-up costs under CERCLA. Recycling of the lamp components is the recommended method of disposal by the Environmental Protection Agency and helps to minimize facility liability.*

*Packaging of the lamps coupled with the recycling of the lamps will greatly reduce the mercury dilemma and create a much safer environment*



## LED Design Advantages

- ✓ Solid state construction
- ✓ 100% environmentally friendly
- ✓ Significantly reduces CO2 and greenhouse gas emissions
- ✓ FREE of mercury and glass (no special disposal requirements)
- ✓ Significantly reduces headaches and eye strain
- ✓ LEDs produce no UV radiation
- ✓ Shock Resistance



T8



R30



R40

## Return on Investment Opportunity

- ✓ Typically 12-24 months
- ✓ Immediate electricity savings, less wattage, BTUs
- ✓ No new fixtures required, ballasts can be eliminated
- ✓ HVAC savings, less wattage and BTUs
- ✓ Maintenance and repair reduction
- ✓ No regulated disposal needs

# ★ Energy Tip of the Week: use a KWH meter!



- ✓ Only \$20 at most stores like Home Depot, Lowes, Ace, etc...
- ✓ Wattage, Cost per day, week, month & year is automatically calculated
- ✓ See how much Electricity is used when machines are OFF
- ✓ DO NOT GET ADDICTED! I USE IT ON EVERYTHING!
- ✓ However, along with LEDs and using this I decreased my home bill by 50%

ALOHA and MAHALO!!!!

Bradford Leach

bradford@gonled.com

808-221-1031

www.gonled.com



Twitter: LEDlightsHawaii

*\*\*\*General energy saving tips*

