

WELCOME

LED FUNDAMENTALS AND MORE!

**“GAIN AN ACTIVE UNDERSTANDING OF
HOW TO APPLY GENERAL LIGHTING TO
YOUR BUSINESS.”**

Presenter: Greg Murphy - MaxLite Product & Marketing Manager



Today's Presentation:

- BENEFITS OF LEDs.
- WHAT IS AN LED?
- HOW IT WORKS.
- TERMS YOU SHOULD KNOW.
- PERFORMANCE MEASUREMENT.
- LIGHTING FACTS LABEL.
- MAXLITE LED PRODUCTS.
- QUESTIONS & ANSWERS.



WHAT WE KNOW:

Benefits Of LED Luminaires & Lamps

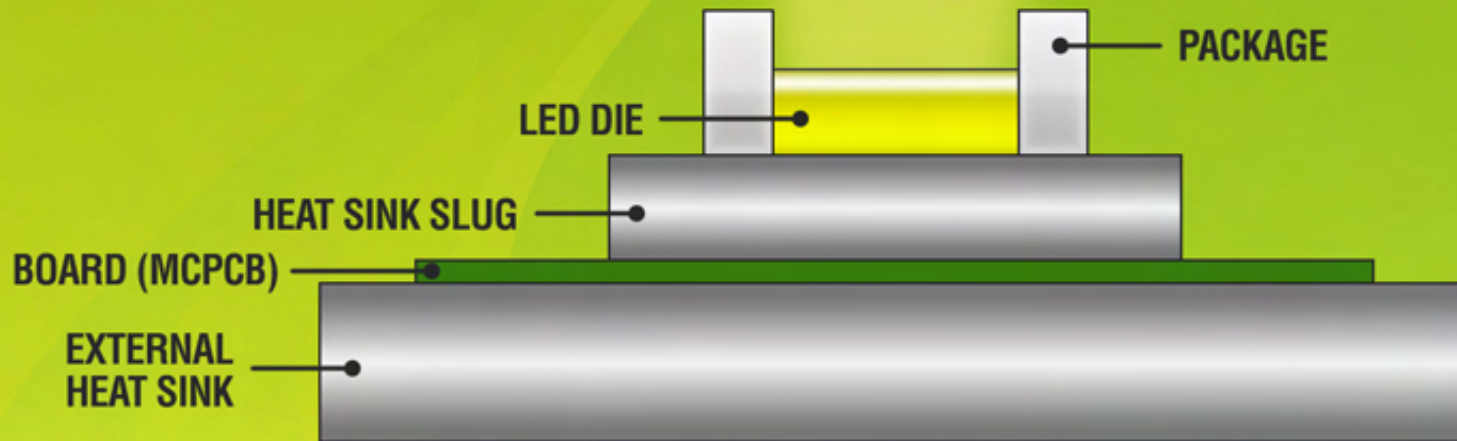
Potential Benefits:	Features:
Energy Savings	High Efficiency 30-65 LPW
Maintenance Savings	Long Life - Robust Vibration Resistant
Environmental Advantages	High Efficiency - Low Energy Consumption No Heavy Metals



WHAT IS A LED?

A LIGHT EMITTING DIODE

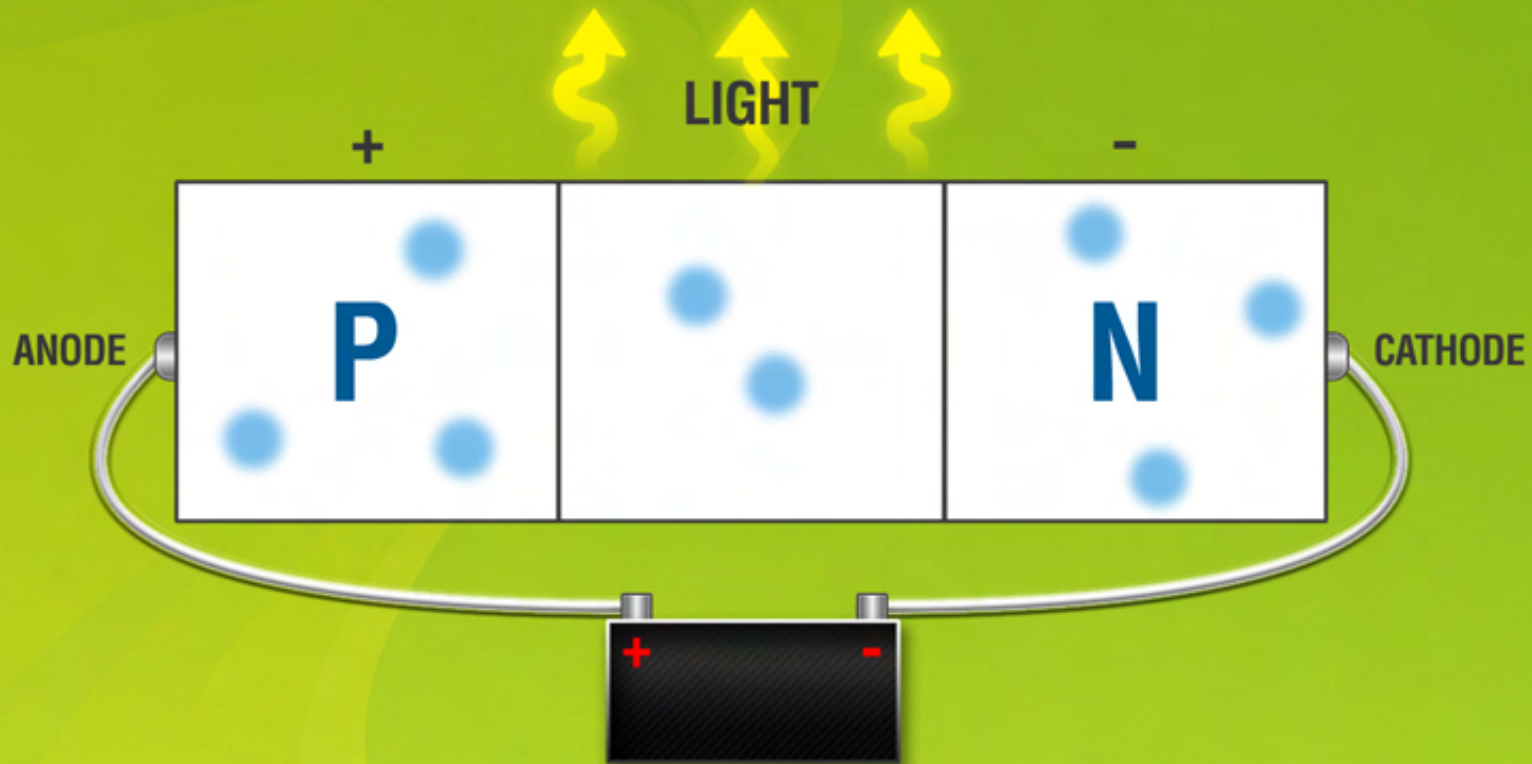
A SEMI CONDUCTOR



**MOUNTED AND INSERTED
INTO A LUMINAIRE**



HOW IT WORKS



Aluminum Gallium Arsenide = RED

Indium Gallium Nitride = BLUE

Aluminum Gallium Phosphide = GREEN

WHITE = RGB or Blue with Phosphor



TERMS YOU SHOULD KNOW

L70 - Accepted measure of life for LED Luminaires.

LM-80 - IESNA - Industry accepted procedures for measuring LEDs.

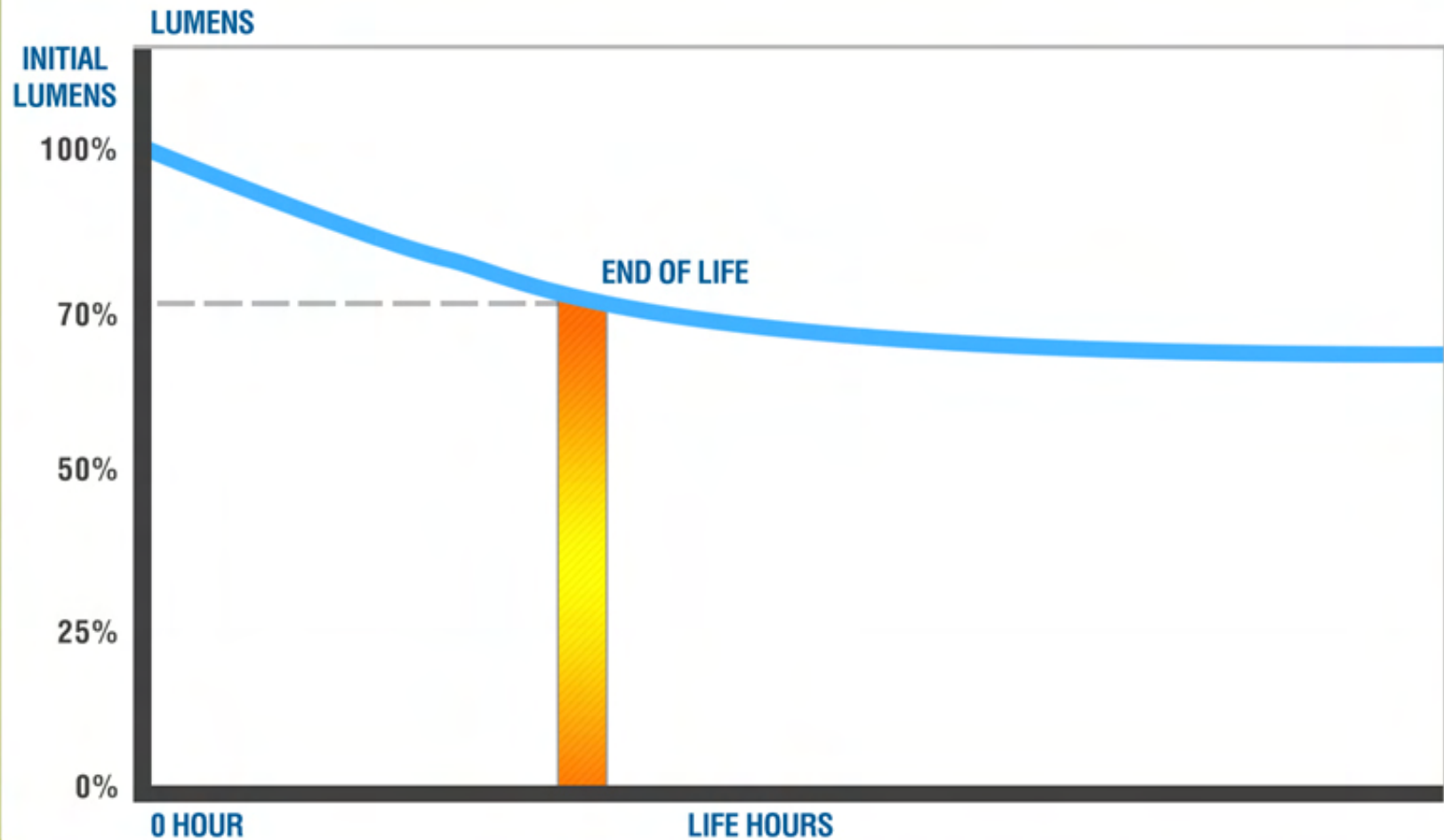
LM-79 - IESNA - Industry accepted method of photometric measurement of luminaires and LED products.

* LM = Light Measuring

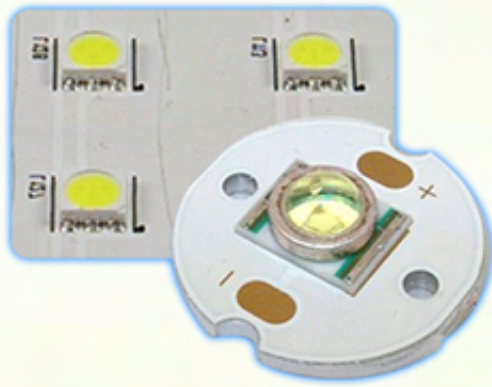


L70

L70 = 70% OF INITIAL LUMENS



THE DIFFERENCE BETWEEN LM-79 & LM-80



LM-80
The LED and
LED Module.

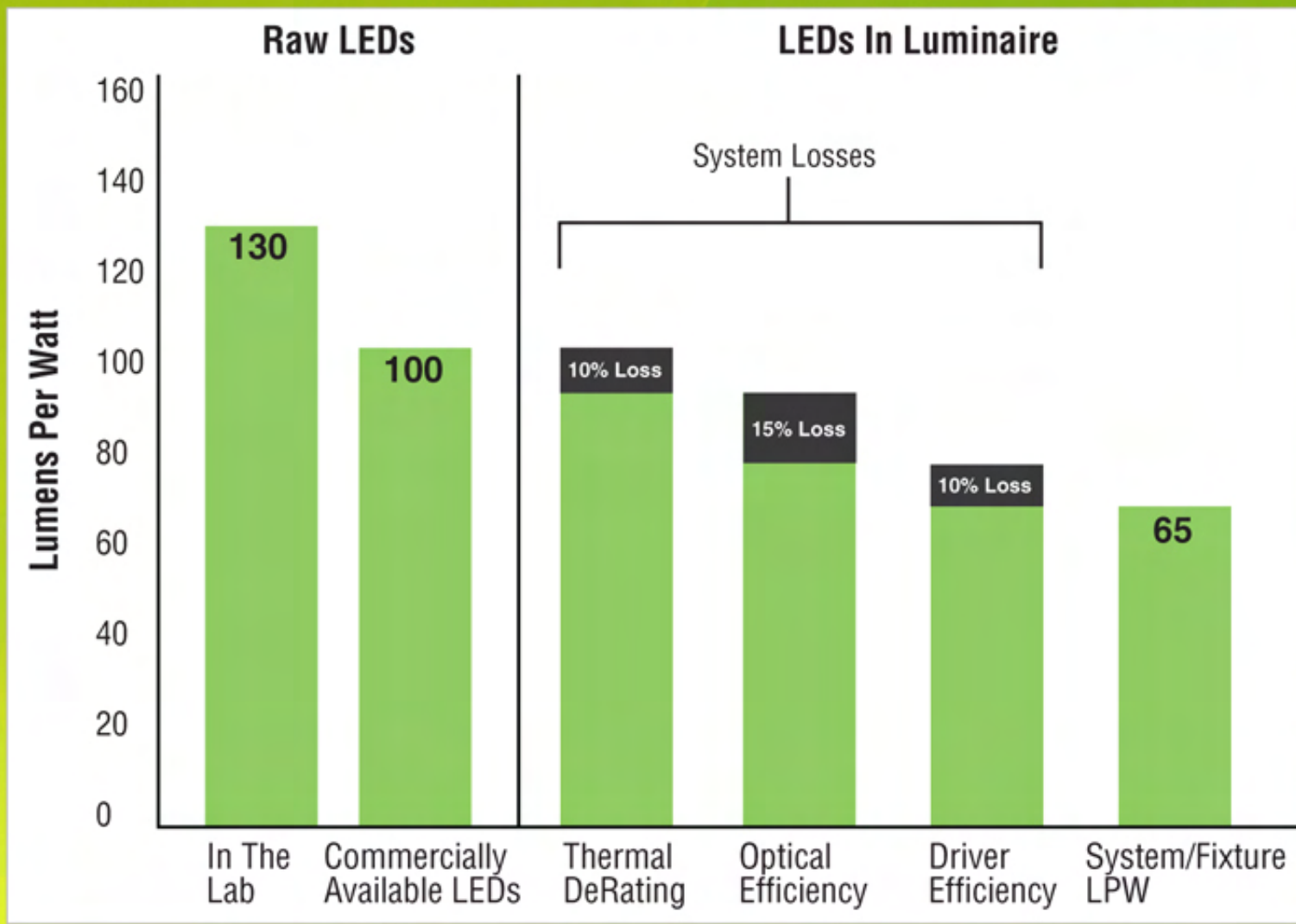


LM-79
The Luminaire
or the Product.

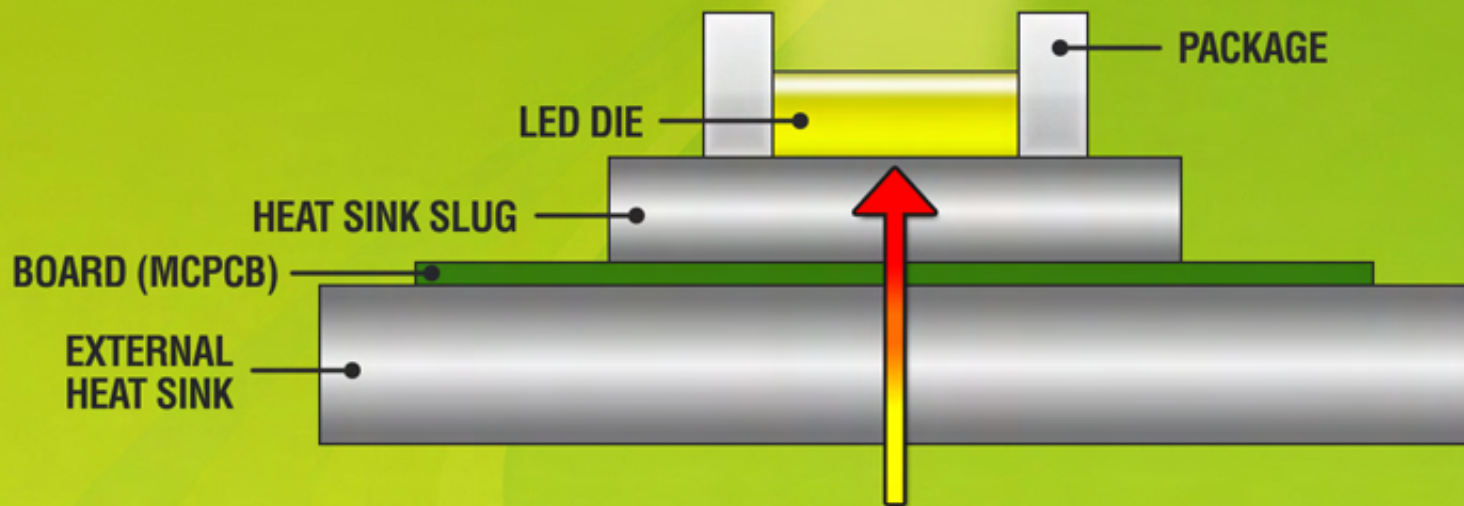
**THESE TWO STANDARDS ARE VERY IMPORTANT
WHEN ASSESSING LED PRODUCTS.**



ACTUAL PERFORMANCE Vs. PERFORMANCE CLAIMS



JUNCTION TEMPERATURE



**SUCCESSFUL PRODUCTS WILL USE
SUPERIOR HEAT SINK DESIGNS**



THERMAL CONTROL



**ALUMINUM FINNS TO PROVIDE
GREATER AREA.**



**BACK OF PANEL
IS ALUMINUM FOR
THERMAL CONTROL.**



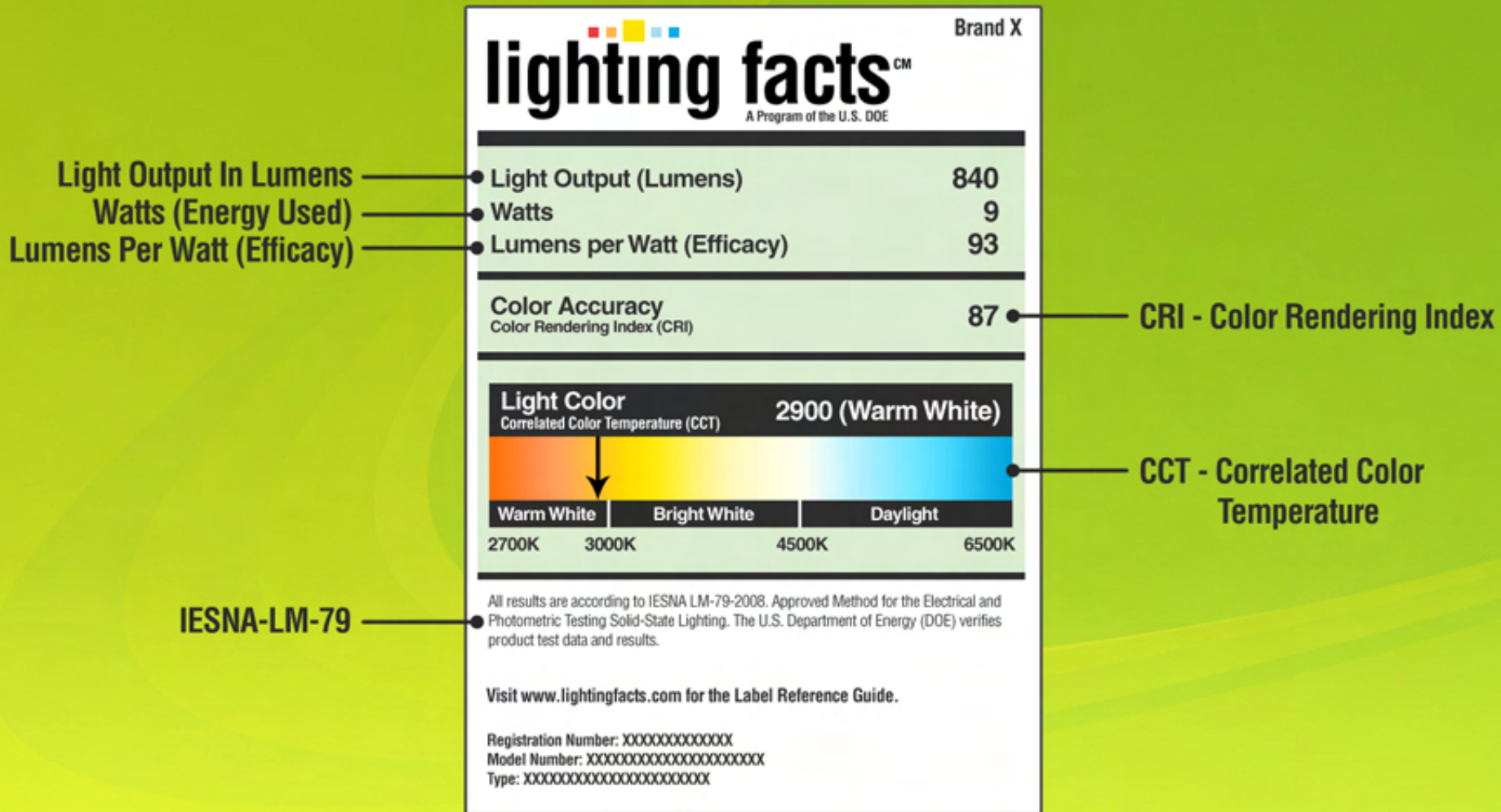
APPLICATION EFFICIENCY

Some applications take advantage of LED's directionality. Others do not.

The better the efficiency the lower the power consumption.



THE LIGHTING FACTS LABEL (FROM THE DOE)



QUESTIONS YOU SHOULD ASK

- Is your company a registered DOE quality advocate?
- Who's LED chips do you use?
- What is the chip makers rating and what is the rating on your product?
- Does your product use LEDs that have been LM80 tested?
- Does your product meet LM79 requirements?



QUESTIONS & ANSWERS:

Thank you everyone for your attention.

This webinar session will be left open for the next 20 minutes to allow time for questions. **Please type your questions directly into the chat area on the right side of your screen.** We will answer as many questions as we have time for right now, but **ALL** questions will be answered via e-mail within the next 24 hours.

Thanks again for attending, and we hope to speak to you again, soon!



For more information, visit us at: <http://www.MaxLite.com>

