

# Light Emitting Diode (LED) Lamps

## Sustainability Insights



### Product Description

Light Emitting Diode Lamps include any lamp that creates light by passing a voltage through an array of inorganic diodes that emit light at specific frequencies.

### Mission

The mission of The Sustainability Consortium (TSC) is to improve the sustainability of products when they are made, purchased, and used, with a focus on manufacturers and the retail buyers who decide what products to carry in stores. The information in this document is drawn from our detailed research on known and potential social and environmental impacts across product life cycles. TSC acknowledges that other issues exist, but we have included here those that are most relevant to the decision making of retail buying teams and manufacturers. The topics are listed alphabetically for ease of reading; the order does not represent prioritization or other criteria.

### Sustainability Insights



#### Consumers

##### Product Efficiency

Lighting uses significant amounts of electricity over its lifespan, after it is purchased. Manufacturers can help consumers reduce energy consumption by designing lamps that use energy-saving technologies and communicating how to select more energy-efficient lamps.



#### Managing the Supply Chain

##### Sustainable Mining

Mining operations can pollute the air and water, diminish natural resources, and jeopardize community and worker rights, health, and safety. Manufacturers should source their raw materials from suppliers that benchmark the environmental and social sustainability practices of their mining operations against recognized standards.



#### Use of Resources

##### Climate and Energy

Component processing and final product manufacturing of LED lamps consume significant amounts of electricity and energy, leading to greenhouse gas emissions. Manufacturers should procure from suppliers that help abate these impacts by measuring, tracking, and reporting energy use and greenhouse gas emissions, with a focus on reduction. They should also perform preventative maintenance on equipment, replace inefficient equipment, use renewable energy sources, and encourage efficient energy behaviors throughout their operations.

##### Pollution

Manufacturing electronic and other components for lamps can release gases that are harmful to humans and other life. Manufacturers should implement best available practices and

technology to abate the release of pollutants. They should also design products that are durable and use recycled and recyclable components, to avoid the need for new materials.



## Workers and Communities

### **Conflict Minerals**

Light emitting diode lamps may contain minerals, including gold and ores of tantalum, tin, and tungsten, that are mined in places where groups responsible for human rights abuses control and profit from mining operations. Manufacturers should ensure that materials in their products are sourced responsibly and are not from these areas, and should try to help improve stability and quality of life for miners and their communities.