

## Light Source

### Advantages of LED vs Halogen

LED (Light Emitting Diode) are the more common type of light sources used for Schott's high quality lighting applications, replacing the traditional Halogen based light sources.

Below are the key advantages of LED light sources over Halogen light sources:

#### 1. Energy Efficiency

- **LED:** LEDs are significantly more energy-efficient than halogen lights, which can lead to substantial cost savings on electricity bills.
- **Halogen:** Halogen lights are less efficient, converting a lot of energy into heat rather than light.

#### 2. Longer Lifespan

- **LED:** LEDs have a much longer lifespan than halogen bulbs, often lasting up to 50,000 hours, depending on usage and conditions.
- **Halogen:** Halogen bulbs typically last shorter than 2,000 hours, meaning they need to be replaced more frequently, resulting in higher production downtime and higher running cost.

#### 3. Lower Heat Emission

- **LED:** LEDs emit very little heat compared to halogen bulbs, making them safer to use and reducing the risk of burns or fires. This also helps in reducing the need for cooling.
- **Halogen:** Halogen bulbs get very hot, which can be a safety hazard and lead to higher air conditioning costs.

#### 4. Environmental Impact

- **LED:** LEDs are more environmentally friendly as they consume less energy and have a longer lifespan, resulting in fewer bulbs being disposed of over time.
- **Halogen:** Halogen bulbs are less environmentally friendly due to their higher energy consumption and shorter lifespan.

## 5. Better Color Options and Control

- **LED:** LEDs offer a wider range of color temperatures and can be easily adjusted for different lighting needs, from warm to cool light. They also allow for more advanced control, such as dimming and color changing, without affecting performance or lifespan.
- **Halogen:** Halogen bulbs generally provide a warm, yellowish light and have limited options for color temperature.

## 6. Durability and Robustness

- **LED:** LEDs are more durable and resistant to shock and vibration because they are solid-state lighting devices with no fragile filaments or glass components.
- **Halogen:** Halogen bulbs are more fragile, with glass components that can break easily and filaments that can be damaged by shock or vibration.

## 7. Instant On and Off

- **LED:** LEDs turn on instantly at full brightness without any warm-up time, making them ideal for applications where immediate lighting is needed.
- **Halogen:** Halogen lights also turn on quickly, but they may not reach full brightness as instantly as LEDs.

## Summary

While Halogen lights might be cheaper upfront and provide a warmer light that some users prefer, LEDs offer significant advantages in energy efficiency, lifespan, heat emission, and environmental impact, making them a better choice for most applications.

As a result, Schott is moving towards LED and has obsoleted many Halogen part numbers such as those from DCR III<sup>®</sup> and ACE<sup>®</sup> series produced in North America. Kindly refer our [Product Discontinuation Notification](#) link in our resource page for more details on the equivalent CV-LS and MC-LS models.