



ionCORE™ | Plasma Light



ceravision - Brilliant Plasma Technology

ionCORE™ Explained

ionCORE™ is the name we give to the unique technology that drives Ceravision's brilliant plasma lighting solutions. It sits at the heart of everything we do and powers all of the various applications, both current and planned, across the Ceravision product and service range.

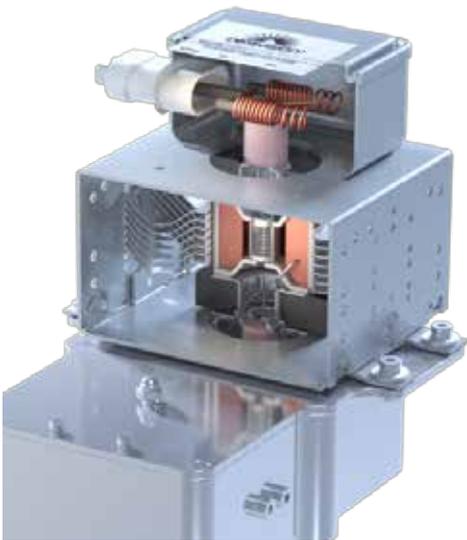
Plasma is often referred to as the fourth state of matter. A plasma is formed when a gas is heated to a sufficiently high temperature such that a significant fraction of its constituent atoms and molecules dissociate, forming pairs of electrons and ions. The resulting charged gas is electrically conducting, and when a current is passed through it the electrons interact with the neutral atoms, molecules and ions in the plasma to produce radiation, some of which is in the form of visible light.

ionCORE™ combines a stable and well controlled source of radio frequency energy within a compact discharge chamber to provide a highly intense light emitting plasma. This small light source can be accurately and reproducibly positioned in a precisely designed optical environment to deliver as much light as possible to a target area.

By providing a compact and versatile form factor and with the ability to change the combination of materials in the discharge chamber, ionCORE™ is the product to meet the specific requirements of many specialist applications.



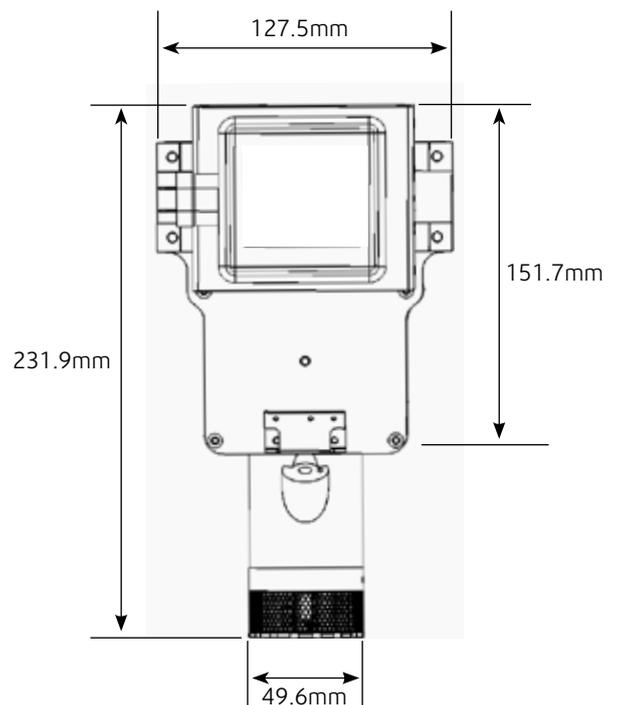
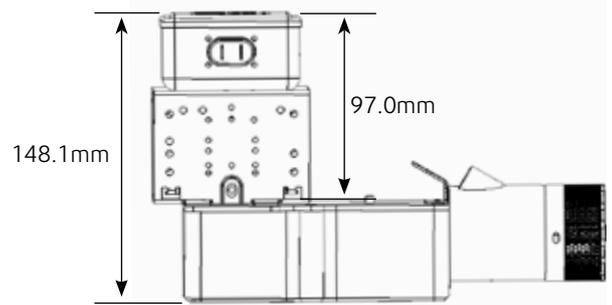


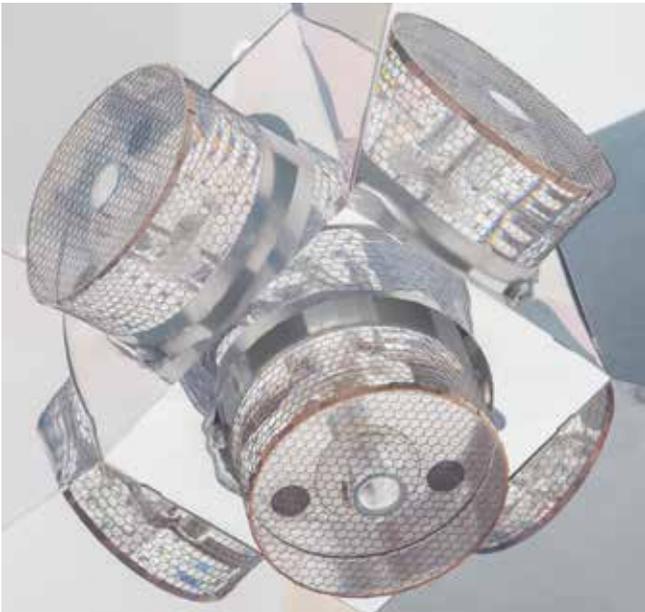


Specification and Features

Power Consumption	400 Watts
Mains Supply Voltage	110 - 277 Volts AC 50 - 60 Hz
IP Rating	N/A
Weight	1.9 kg
Source Type	Ceravision High Efficiency Plasma (HEP)
Lamp Type	Ceravision Light Emitting Resonator (LER)
Maximum Ambient Operating Temperature	+50 °C
Electronic Control Gear	Supplied separately
Wireless Control System	Supplied separately (optional)
Dimming Range	100% to 50 % (in 1% increments)
Magnetron & Waveguide Life	50,000 hours
Magnetron Operating Frequency	2.45 GHz
Thermal Management	Fan or Heat sink options
CRI	Application dependant
Colour Temperature	Application dependant
Luminous Flux	Application dependant, >26,000 lumens
Rated Light Source Life	25,000 hours
Flicker Free	Yes
Mercury Content	Application dependant
Warm Up Time	< 1 minute (to 90% output)
Hot Restrike	4 minutes

Alternative light engine configurations are available on request.





ionCORE™ Thermal Management Options

ionCORE™ is designed to maintain its operating temperature in one of two ways, forced air by way of an electrical fan or natural convection by way of a heat sink. Both options ensure that key components within ionCORE™ operate within an optimum temperature range by transferring thermal energy to air in order to keep light output and lifetime expectations maximised.

Fan Cooled

A 12 Volt DC fan option is offered. Fans enable the ability to design luminaires for applications in a compact and lightweight form factor. Ideally suited to cleaner environments or where access for maintenance is uncomplicated.

Heatsink Cooled

A passive heat sink option is offered. The heat sink option enables the ability to design luminaires for applications where an Ingress Protection (IP) rating is required, or where a silent lighting system is preferred. Heat sink design and form factor is free but the maximum operating temperature of ionCORE™ must not be exceeded. Various CeraVision designed heat sinks are available.





Manufacturing Facilities

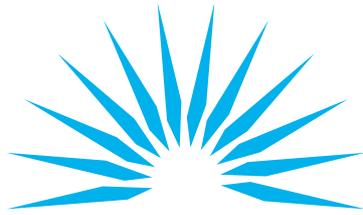
Multi Purpose Arena



Warehouse

Televised Sport







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