CMH ECO PLUS
CERAMIC METAL HALIDE LAMP

MODEL: VIS-FL-CMHECO/45W/T38/E27/93/4K
PART NO: G9233/CMH-E45
DESCRIPTION: VISION FLEX 45W CERAMIC METAL HALIDE ECO PLUS LAMP 4K

CAP BASE: E27
GLASS: T38
GLASS FINISH: CLEAR
BURN POSITION: UNIVERSAL
GUARANTEE: VISION 4Y CYCLE

WATTAGE: 45W
VOLTAGE: 230V
LAMP VOLTAGE: 92V
LAMP CURRENT: 1A

LUMINOUS FLUX: 4550LM
LUMEN EFFICACY: 100LM/W
COLOUR TEMP: 4100K
CRI: 93

MERCURY CONTENT: 4MG
MAX OUTER BULB TEMPERATURE: 350°C
MAX BASE TEMPERATURE: 200°C

FURTHER INFORMATION: ENSURE LAMP IS INSTALLED WITH A SUITABLE IGNITOR

PHYSICAL PARAMETERS
Length: 156mm
Width: 38mm
Luminous Area: 14mm
Light Centre: 100mm
Unit Weight: 0.08KG
Carton Weight: 6KG
Carton Qty: 20

LIFESPAN CHARACTERISTICS
SURVIVAL RATE:
@2000H: 99%
@4000H: 98%
@6000H: 98%
@8000H: 97%
@12000H: 92%
@16000H: 72%

LUMEN MAINTENANCE:
@2000H: 95%
@4000H: 92%
@6000H: 90%
@8000H: 85%
@12000H: 83%
@16000H: 79%

KEY:
1: OUTER BULB, PROTECTIVE SLEEVE OF HARDENED EVACUATED GLASS, DIAMETERS T38 & T46 AVAILABLE (WATTAGE DEFINED).
2: EDISON SCREW LAMP HOLDER, AVAILABLE IN E27 & E40 CONFIGURATION.
3: SINTERED ALUMINA (PCA) TRANSLUCENT CERAMIC ARC TUBE, CONTAINS MERCURY ARGON & METAL HALIDE SALTS.
4: SOLID STATE GETTER, REACTIVE VACUUM MAINTENANCE DEPOSIT. MATERIAL: BARIUM.
5: ELECTRONICALLY CHARGED ARC TUBE SCAFFOLD, TWO PART CONSTRUCTION WITH TABBED WELDS FOR STABILITY & LONG LIFESPAN.
6: COATED TUNGSTEN ELECTRODES ACCESS INTO CERAMIC ARC TUBE.

Vision Engineering
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# CMH ECO PLUS
## CERAMIC METAL HALIDE LAMP

**Model:** VIS-FL-CMHECO/60W/T38/E27/93/4K  
**Part No:** G9232/CMH-E60  
**Description:** VISION FLEX 60W CERAMIC METAL HALIDE ECO PLUS LAMP 4K

<table>
<thead>
<tr>
<th>CAP BASE</th>
<th>GLASS</th>
<th>GLASS FINISH</th>
<th>BURN POSITION</th>
<th>GUARANTEE</th>
</tr>
</thead>
<tbody>
<tr>
<td>E27</td>
<td>T38</td>
<td>CLEAR</td>
<td>UNIVERSAL</td>
<td>VISION 4Y CYCLE</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WATTAGE</th>
<th>VOLTAGE</th>
<th>LAMP VOLTAGE</th>
<th>LAMP CURRENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>60W</td>
<td>230V</td>
<td>92V</td>
<td>1A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LUMINOUS FLUX</th>
<th>LUMEN EFFICACY</th>
<th>COLOUR TEMP</th>
<th>CRI</th>
</tr>
</thead>
<tbody>
<tr>
<td>6000LM</td>
<td>100LM/W</td>
<td>4100K</td>
<td>93</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MERCURY CONTENT</th>
<th>MAX OUTER BULB TEMPERATURE</th>
<th>MAX BASE TEMPERATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>5MG</td>
<td>350°C</td>
<td>200°C</td>
</tr>
</tbody>
</table>

**Further Information:** ENSURE LAMP IS INSTALLED WITH A SUITABLE IGNITOR

**Physical Parameters:**
- Length: 156mm
- Width: 38mm
- Luminous Area: 16mm
- Light Centre: 100mm
- Unit Weight: 0.08KG
- Carton Weight: 6KG
- CartonQty: 20

**Lifespan Characteristics**
- Survival Rate:
  - @2000H: 99%
  - @4000H: 99%
  - @6000H: 98%
  - @8000H: 97%
  - @12000H: 92%
  - @16000H: 72%

**Lumen Maintenance:**
- @2000H: 95%
- @4000H: 92%
- @6000H: 90%
- @8000H: 85%
- @12000H: 83%
- @16000H: 79%

**Key:**
1. OUTER BULB, PROTECTIVE SLEEVE OF HARDENED EVACUATED GLASS, DIAMETERS T38 & T46 AVAILABLE (WATTAGE DEFINED)  
2. EDISON SCREW LAMP HOLDER, AVAILABLE IN E27 & E40 CONFIGURATION  
3. SINTERED ALUMINA (PCA) TRANSLUCENT CERAMIC ARC TUBE, CONTAINS MERCURY ARGON & METAL HALIDE SALTS  
4. SOLID STATE Getter, REACTIVE VACUUM MAINTENANCE DEPOSIT, MATERIAL: BARIUM  
5. ELECTRONICALLY CHARGED ARC TUBE SCAFFOLD, TWO PART CONSTRUCTION WITH TABBED WELDS FOR STABILITY & LONG LIFESPAN  
6. COATED TUNGSTEN ELECTRODES ACCESS INTO CERAMIC ARC TUBE.

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CMH ECO PLUS
CERAMIC METAL HALIDE LAMP

MODEL: VIS-FL-CMHECO/90W/T46/E40/94/4K
PART NO: G9231/CMH-E90
DESCRIPTION: VISION FLEX 90W CERAMIC METAL HALIDE ECO PLUS LAMP 4K

CAP BASE: E40
GLASS: T46
GLASS FINISH: CLEAR
BURN POSITION: UNIVERSAL
GUARANTEE: VISION 4Y CYCLE

WATTAGE: 90W
VOLTAGE: 230V
LAMP VOLTAGE: 92V
LAMP CURRENT: 1A

LUMINOUS FLUX: 8900LM
LUMEN EFFICACY: 99LM/W
COLOUR TEMP: 4100K
CRI: 94

MERCURY CONTENT: 5MG
MAX OUTER BULB TEMPERATURE: 450°C
MAX BASE TEMPERATURE: 250°C

FURTHER INFORMATION: ENSURE LAMP IS INSTALLED WITH A SUITABLE IGNITOR

KEY: 1: OUTER BULB, PROTECTIVE SLEEVE OF HARDENED EVACUATED GLASS, DIAMETERS T38 & T46 AVAILABLE (WATTAGE DEFINED), 2: EDISON SCREW LAMP HOLDER, AVAILABLE IN E27 & E40 CONFIGURATION, 3: SINTERED ALUMINA (PCA) TRANSLUCENT CERAMIC ARC TUBE, CONTAINS MERCURY ARGON & METAL HALIDE SALTS, 4: SOLID STATE GETTER, REACTIVE VACUUM MAINTENANCE DEPOSIT, MATERIAL: BARIUM, 5: ELECTRONICALLY CHARGED ARC TUBE SCAFFOLD, TWO PART CONSTRUCTION WITH TABBED WELDS FOR STABILITY & LONG LIFESPAN, 6: COATED TUNGSTEN ELECTRODES ACCESS INTO CERAMIC ARC TUBE.

PHYSICAL PARAMETERS
Length: 210mm
Width: 46mm
Luminous Area: 18mm
Light Centre: 130mm
Unit Weight: 0.05KG
Carton Weight: 6KG
Carton Qty20

LIFESPAN CHARACTERISTICS
SURVIVAL RATE:
@2000H: 95%
@4000H: 93%
@6000H: 92%
@8000H: 91%
@12000H: 95%
@16000H: 72%

LUMEN MAINTENANCE:
@2000H: 95%
@4000H: 92%
@6000H: 90%
@8000H: 85%
@12000H: 83%
@16000H: 79%

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CMH ECO PLUS
CERAMIC METAL HALIDE LAMP

MODEL: VIS-FL-CMHECO/140W/T46/E40/94/4K
PART NO: G9230/CMH-E140
DESCRIPTION: VISION FLEX 140W CERAMIC METAL HALIDE ECO PLUS LAMP 4K

CAP BASE: E40
GLASS: T46
GLASS FINISH: CLEAR
BURN POSITION: UNIVERSAL
GUARANTEE: VISION 4Y CYCLE

WATTAGE: 140W
VOLTAGE: 230V
LAMP VOLTAGE: 94V
LAMP CURRENT: 1.5A

LUMINOUS FLUX: 14900LM
LUMEN EFFICACY: 107LM/W
COLOUR TEMP: 4100K
CRI: 94

MERCURY CONTENT: 6MG
MAX OUTER BULB TEMPERATURE: 450°C
MAX BASE TEMPERATURE: 250°C

FURTHER INFORMATION: ENSURE LAMP IS INSTALLED WITH A SUITABLE IGNITOR

PHYSICAL PARAMETERS
Length: 210mm
Width: 46mm
Luminous Area: 20mm
Light Centre: 130mm
Unit Weight: 0.09KG
Carton Weight: 6KG
Carton Qty: 20

LIFESPAN CHARACTERISTICS
SURVIVAL RATE:
@2000H: 95%
@4000H: 93%
@6000H: 92%
@8000H: 91%
@12000H: 95%
@16000H: 72%

LUMEN MAINTENANCE:
@2000H: 95%
@4000H: 92%
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KEY: 1: OUTER BULB, PROTECTIVE SLEEVE OF HARDENED EVACUATED GLASS, DIAMETERS T38 & T46 AVAILABLE (WATTAGE DEFINED). 2: EDISON SCREW LAMP HOLDER, AVAILABLE IN E27 & E40 CONFIGURATION. 3: SINTERED ALUMINA (PCA) TRANSLUCENT CERAMIC ARC TUBE, CONTAINS MERCURY ARGON & METAL HALIDE SALTS. 4: SOLID STATE GETTER, REACTIVE VACUUM MAINTENANCE DEPOSIT, MATERIAL: BARIUM. 5: ELECTRONICALLY CHARGED ARC TUBE SCAFFOLD, TWO PART CONSTRUCTION WITH TABBED WELDS FOR STABILITY & LONG LIFESPAN. 6: COATED TUNGSTEN ELECTRODES ACCESS INTO CERAMIC ARC TUBE.

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