Urban lighting luminaire

Armonia

Registered models - Design Massimo Sacconi

ArmoniA
ARMONIA represents the modern evolution of classic public lighting fittings. The retro style makes this the perfect luminaire for integration in both modern urban environments, and old town centres.

The ARMONIA range is completed by an extremely wide range of optical assemblies, brackets and supports. Available in two versions and in different sizes. ARMONIA MINI for SHP and MHL lamps up to 150W and CPO lamps up to 140W*. ARMONIA 1 and ARMONIA 2 for SHP and MHL lamps up to 250W and CPO lamps up to 140W*. ARMONIA LED features the LED Comfort Light OpticTM system.

* All the maximum powers shown are for ST optics.
MECHANICAL CHARACTERISTICS


2. EPDM seal.

3. Closure screen with serigraphy in flat tempered glass (4mm thickness) featured by high transparency and optimum thermal and mechanical resistance (IK08).

4. Optical unit in pure anodized and polished aluminum (99.85%).

5. Removable technopolymer gear plate.

6. Integrated cable clamp.

7. Fixing system in turned aluminium.

8. Stainless steel closure screws.

9. Regulation of the lamp focus in 3 different positions.

IP66 protection degree.

ELECTRICAL CHARACTERISTICS

- Insulation class: I, II.
- Power supply: 230V - 50Hz.
- Ferromagnetic power supply unit, efficiency EEI = A3.
- Superimposed pulse ignitor with timer upon request.
- Power factor: > 0.9 (at full load).
- Connection for cables featured by a maximum cross section of 4mmq.
- Integrated on-load switch for luminaires in class II.
- Anti-burst capacitor.
- Ceramic lamp holder.

Available dimming options: please visit the relevant section for ARMONIA in the website.
## Available versions - HID

### ARMONIA 1 (SEMI CUT-OFF)  ARMONIA 2 (SEMI CUT-OFF)  ARMONIA MINI (CUT-OFF)

<table>
<thead>
<tr>
<th>WATTAGES</th>
<th>LAMP TYPE</th>
<th>LAMP HOLDER</th>
<th>OPTIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>70W</td>
<td>SHP-T</td>
<td>E27</td>
<td>ST-OC-ST55²</td>
</tr>
<tr>
<td>100W</td>
<td>SHP-T</td>
<td>E40</td>
<td>ST-OC-ST55²</td>
</tr>
<tr>
<td>150W</td>
<td>SHP-T</td>
<td>E40</td>
<td>ST-OC-ST55²</td>
</tr>
<tr>
<td>250W</td>
<td>SHP-T</td>
<td>E40</td>
<td>ST</td>
</tr>
<tr>
<td>70W</td>
<td>MHL-E</td>
<td>E27</td>
<td>ST-OC-ST55²</td>
</tr>
<tr>
<td>100W</td>
<td>MHL-E</td>
<td>E27</td>
<td>ST-OC-ST55²</td>
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<tr>
<td>150W</td>
<td>MHL-E</td>
<td>E27</td>
<td>ST-OC-ST55²</td>
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<td>60W</td>
<td>CPO-TW¹</td>
<td>PGZ12</td>
<td>ST-OC-ST55²</td>
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<tr>
<td>90W</td>
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<td>PGZ12</td>
<td>ST-OC-ST55²</td>
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<tr>
<td>140W</td>
<td>CPO-TW¹</td>
<td>PGZ12</td>
<td>ST-OC-ST55²</td>
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<tr>
<td>70W</td>
<td>CDM-T</td>
<td>G12</td>
<td>ST-OC-ST55²</td>
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<td>100W</td>
<td>CDM-T</td>
<td>G12</td>
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<td>G12</td>
<td>ST</td>
</tr>
<tr>
<td>150W</td>
<td>SHP-TS</td>
<td>RX-7S</td>
<td>OP</td>
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<tr>
<td>250W</td>
<td>SHP-TS</td>
<td>FC2</td>
<td>OP</td>
</tr>
<tr>
<td>150W</td>
<td>MHL-TS</td>
<td>RX-7S</td>
<td>OP</td>
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<tr>
<td>250W</td>
<td>MHL-TS</td>
<td>FC2</td>
<td>OP</td>
</tr>
</tbody>
</table>

¹ Only available with electronic power supply unit.
² Asymmetrical street optic for ARMONIA MINI.
AVAILABLE OPTICS

**ST**: Asymmetrical optic for street lighting;

**OC**: Asymmetrical optic for pedestrian and cycle paths lighting;

**OP - SX**: Right asymmetrical optic for pedestrian crossing lighting. (Only ARMONIA 2).

**OP - DX**: Left asymmetrical optic for pedestrian crossing lighting. (Only ARMONIA 2).

In the street version (ST) it is possible to adjust the lamp focus placing the reflector in different positions. This allows to vary the photometric asymmetry in order to optimize the light beam according to the road width.

Please, download ARMONIA HID photometric data at www.aeciluminazione.com
**MECHANICAL CHARACTERISTICS**

- EPDM seal.
- High transparency closure screen in flat tempered glass (4mm thickness) on each LED module.
- Optical unit in high efficiency metallised polycarbonate.
- Removable metal gear plate.
- Integrated cable clamp.
- Fixing system in turned aluminium.
- Stainless steel closure screws.
- IP66 protection degree.

**ELECTRICAL CHARACTERISTICS**

- Insulation class: I, II.
- Power supply: 220-240V - 50/60Hz.
- LED current: 525/700mA.
- Power factor: > 0.9 (at full load).
- Connection: connector for cables featured by a maximum cross section of 2.5mm².
- Integrated overvoltage protection: Impulse withstand voltage: ≥7kV common / differential mode for CLASS I. Impulse withstand voltage: ≥4kV common / differential mode for CLASS II. Integrated SPD, Type II, In = 5kA, Imax = 10kA, Uoc = 10kV.
- Optical unit lifetime 525mA: ≥70.000hr B20L80 (including critical failures) ≥100.000hr L80, TM-21; 700mA: >60.000hr B20L80 (including critical failures) >100.000hr L80, TM-21.
Available versions - LED

Available sizes:
18 LED
27 LED
36 LED

Available optics:
ST: Asymmetrical optic for street lighting.
OC: Asymmetrical optic for pedestrian and cycle path lighting.

Optical unit characteristics:
Modular optical system.
Led light source colour temperature: 4000K.
CRI: minimum 70.

Please, download ARMONIA LED photometric data at www.aecillumiazione.com
Protection against overvoltage

In order to improve both the performance and reliability of its products, AEC pays particular attention to the protection against overvoltage. Thanks to the research performed within its own test laboratories, AEC is now able to offer dedicated and customized solutions according to the system selected by the customer.

AEC offers two different types of wiring and related protective devices:

- **CLASS I**: protection ≥ 7kV.*
- **CLASS II**: protection ≥ 4 kV.
- **CLASS II + SPD**: protection ≥ 4kV and surge arrester integrated into the unit.

AEC experience concerning LED technology permits to define the limits of reliability and to propose our customers better safety solutions according to the characteristics of the system. The minimum requirements imposed by the product standards in the field of “surge protection” may, in some cases, be insufficient: for this reason AEC provides a variety of additional protections.

For further information please visit www.aecilluminazione.com. Click LED section on the menu and discover more about reliability & safety.

* For standard luminaires
Bracket in hot-dip galvanized steel tubular Ø 60mm (vertical part) and Ø 42mm (horizontal part).
Top cable rod in anodized aluminum (MA1 - MA2).
Decoration in pressed steel (MA1 - MA2 - MA4).
Steel double junction for PA poles Ø 102mm.
Power cable protected by a rubber coupling element in the junction between the bracket and the pole.

Closing cap in plastic material.
Stainless steel screws.
Projection: 1005mm.
Compositions:
- Groups of 1-2-3 brackets.
- Wall mounted single bracket.
Municipal coat of arms applicable on MA2 bracket.
Pastoral bracket in galvanized and painted steel. Circular section Ø 42mm. Structural steel junction for post top application on PG poles Ø 60mm. Stainless steel screws. Projection: 700mm.

Compositions:
- Post top mounted luminaire.
- Groups of 1-2-3 brackets.
- Wall mounted single bracket.

Decorative element available in three versions:
- Blue color.
- Transparent color with bright blue LED 1W.
- Transparent color with bright red LED 1W.

MG - MG/TP BRACKET

<table>
<thead>
<tr>
<th>MG-MG/TP</th>
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</thead>
<tbody>
<tr>
<td>MODEL</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>MG 600</td>
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<tr>
<td>MG 601</td>
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<tr>
<td>MG 602</td>
</tr>
<tr>
<td>MG 603</td>
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<tr>
<td>MG M01</td>
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</table>

■ GRAPHITE [CODE 01]
Circular section pastoral bracket (Ø 60mm) in structural steel UNI EN 485 Ø 60mm for PN-PA-EC poles Ø 102mm.
Structural steel double junction for pole Ø 102mm.
Closing cap in plastic material.
Stainless steel screws.
Projection: 710mm.
Compositions:
- Groups of 1-2-3 brackets.
- Wall mounted single bracket.

<table>
<thead>
<tr>
<th>MP</th>
<th>STANDARD COLOUR</th>
<th>COMPOSITIONS</th>
<th>POLES</th>
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<tbody>
<tr>
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<td></td>
<td>.</td>
<td>PA - PN - EC</td>
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<td>MP 22</td>
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<tr>
<td>MP 23</td>
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<td>PA - PN - EC</td>
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<tr>
<td>MP 24</td>
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</table>

■ GRAPHITE (CODE 01)
EC SERIES

DESCRIPTION
Circular cross section tapered steel pole with turned steel gasket, consisting of two sections, made of tubular elements welded in sequence. Cable inlet slot and terminal box slot with finished edges, also suitable for the application of a flush mounted cover door.

FINISH
Hot galvanized in accordance with UNI EN ISO 1461, and subsequent brushing to ensure perfect surface finish. Polyester powder coating.

COLOURS
Code 01, 02, 03, 04, RAL on request.

Available luminaire heights

<table>
<thead>
<tr>
<th>H</th>
<th>Ø D1</th>
<th>A1</th>
<th>A2</th>
<th>H1</th>
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<tbody>
<tr>
<td>5.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</table>
Description
Circular cross section steel pole with formed tapering, consisting of two sections, made of tubular joint elements welded in sequence. The pole is fitted with turned aluminium trim to cover the tapering. Cable inlet slot and terminal box slot with finished edges, also suitable for the application of a flush mounted cover door.

Finish
Hot galvanized in accordance with UNI EN ISO 1461, and subsequent brushing to ensure perfect surface finish. Polyester powder coating.

Colours
Code 01, 02, 03, 04, RAL on request.

Measures in metres
Available luminaire heights
**PN SERIES**

**DESCRIPTION**
Circular cross section steel pole with formed tapering, consisting of two sections, made of tubular joint elements welded in sequence. The pole is fitted with pressure die-cast aluminium trim to cover the tapering. Cable inlet slot and terminal box slot with finished edges, also suitable for the application of a flush mounted cover door.

**FINISH**
Hot galvanized in accordance with UNI EN ISO 1461, and subsequent brushing to ensure perfect surface finish. Polyester powder coating.

**COLOURS**
Code 01, 02, 03, 04, RAL on request.

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**Measures in metres**

<table>
<thead>
<tr>
<th>Height (m)</th>
<th>( H )</th>
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<tbody>
<tr>
<td>6,5</td>
<td></td>
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<tr>
<td>7,5</td>
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</tr>
<tr>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

**Section**

Available luminaire heights

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**Technical Data Sheet**

**Armónia - Poles**
PG SERIES

DESCRIPTION
Conical circular section from a hot roll tube in S275 JR steel, ERW welded. Cable inlet slot and terminal box slot with finished edges, also suitable for the application of a flush mounted cover door.

FINISH
Hot galvanized in accordance with UNI EN ISO 1461, and subsequent brushing to ensure perfect surface finish. Polyester powder coating.

COLOURS
Code 01, 02, 03, 04, RAL on request.
For more information about AEC Pole Division poles, please, consult the catalogue "The Best in Pole Design".
The information contained in this catalogue aren’t binding. In order to guarantee a continuous updating of its products, AEC reserves itself the right to modify the contents without notice.

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