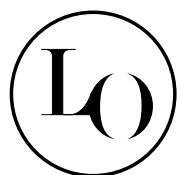


# MODÌ

design LORELUX®



LORELUX

## LORELUX - MODI DATASHEET



|                   |   |
|-------------------|---|
| Concept           | Essential design for a sustainable and resistant urban lighting with an easy maintenance.   |
| Description       | Modì is a LED urban luminaire suitable for illuminating parks, squares and city roads. Its lighting body is made from innovative polymeric materials that respect urban ecology and resist corrosion, extreme temperatures (from - 60°C to + 80°C) and UV discolouration thanks to the innovative Rotoskin® patented system, the self-cleaning covering providing a protective shield on all exposed surfaces of the luminaire. Modì includes both suspended and on catenary mounting and offers a wide range of finishes and photometries, as well as remote-control devices located inside the luminaire that do not alter its design while guaranteeing further savings and road safety. |
| Materials         | <p>Mono-material (Vxxx finishes):<br/>100% recyclable and PSV (Plastic Second Life) certified polyethylene (from 50 to 98% of post-consumer plastic content), anti-discolouration, UV stabilised and batch-dyed.</p> <p>Floral (Rxxx finishes):<br/>100% recyclable and PSV (Plastic Second Life) certified compound (with post-consumer plastic content equal to 75%), obtained from the combination of flakes and PE powders with anti-UV additives.</p>  |
| Product's preview |   |



## Pluses

- Lighting body's useful service life of over 50 years
  - Immunity to corrosion by atmospheric agents and pollutants
  - Resistance to impacts and vandalism
  - No flaking or discolouration over time
  - Interchangeable LED engine for upgrades and/or repairs
- Wide range of finishes from recycled polyethylene (PSV -Plastic Second Life- certified)
- Wide range of photometries in order to meet all lighting needs
  - Devices for Smart cities that can be integrated without any external antenna

## Product's certifications



## Material's certifications



## Application areas



## Mountings

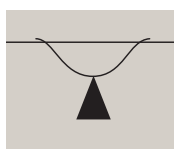
Mast arm  
Code **KM-MODI-S**



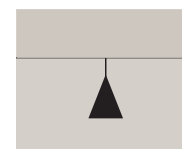
Wall suspended on arm  
Code **KM-MODI-S**



Suspended on catenary  
Code **KM-MODI-T**



Ceiling suspension  
Code **KM-MODI-S**





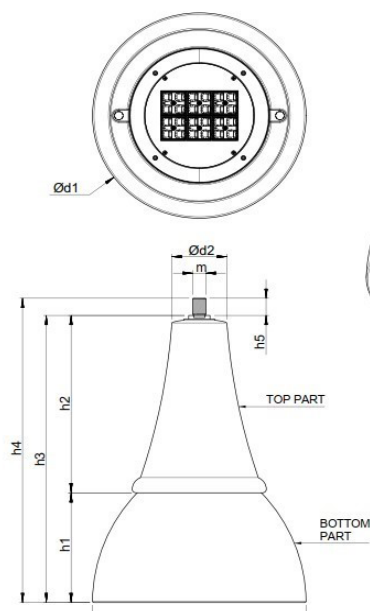
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Installation examples



Technical drawing standard model

Suspended mounting: Modì luminaire  
+ KM-MODI-S mounting kit



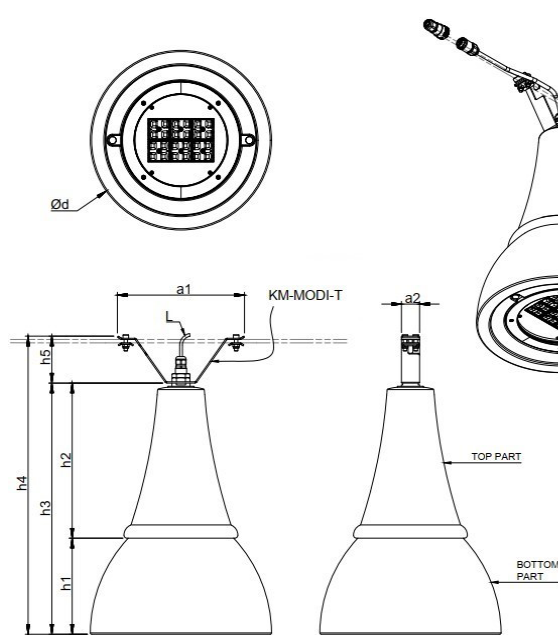
DIMENSION TABLE

$d1 = \varnothing 420$  mm  
 $d2 = \varnothing 110$  mm  
 $h1 = 225$  mm  
 $h2 = 363$  mm  
 $h3 = 588$  mm  
 $h4 = 623$  mm  
 $h5 = 35$  mm  
 $m = \text{Male Thread Standard}$   
 $3/4'' \text{ GAS DIN ISO 228}$

Weight = 8,5 kg  
 Wind exposure:  $Scx = 0,138 \text{ m}^2$  base  
 $= 0,137 \text{ m}^2$  lateral

Technical drawing optional model

Suspended on catenary:  
Modì luminaire + KM-MODI-T mounting kit



DIMENSION TABLE

$d = \varnothing 420$  mm  
 $h1 = 225$  mm  
 $h2 = 363$  mm  
 $h3 = 588$  mm  
 $h4 = 698$  mm  
 $h5 = 110$  mm  
 $a1 = 295$  mm  
 $a2 = 40$  mm  
 Outgoing cable length:  $L = 500$  mm

Weight = 9,1 kg  
 Wind exposure:  $Scx = 0,138 \text{ m}^2$  base  
 $= 0,137 \text{ m}^2$  lateral

## LORELUX - MODÌ DATASHEET

### MAIN FEATURES

|  |   |
|--|---|
| Manufacturer                               | NITEKO S.R.L.   |
| Brand                                      | LORELUX®  |
| Series                                     | Modì  |
| Device type                                | LED urban luminaire   |
| Application areas                          | Street, urban and residential lighting<br>Historic centres, squares, car parks and green areas<br>Pedestrian areas and cycle lanes  |
| Mounting                                   | Mast arm, wall suspended on arm, suspended on catenary, ceiling suspension  |
| Mounting accessories                       | Standard suspended:<br>KM-MODI-S (¾" GAS connection)<br><br>Optional suspended:<br>· KM-MODI-1/2-INCH (½" GAS connection)<br>· KM-MODI-1-INCH (1" GAS connection)<br>· KM-S-60MM-3/4-INCH (60mm adapter - ¾" GAS)<br><br>Optional on catenary:<br>KM-MODI-T (mounting kit for suspension on catenary) |
| Product's protection rating                | External agents: IP66<br>Mechanical impacts: IK10<br>Chemical: VOC Free<br>Electrical: EOS Free  <br>SPD: MC ≤ 12 kV ; MD ≤ 12kV ; I ≤ 10kA<br>Photobiological: RG1 (D > 1,97m)   |
| Material's protection rating               | UV: 15 (15.000 h)<br>Flame: HB<br>Discolouration: max CMC 3 colour deviation for 3.000 h according to ISO 4892-2 B1 cycle   |
| Temperature                                | Operating: -40°C ÷ +45°C (Control via N.T.C.)<br>Storage: -40°C ÷ +80°C   |
| Energy rating                              | >A++  |
| Warranty                                   | Body: 20 years<br>Light source: 10 years  |
| Certifications                             | Product: CE; ENEC; RoHS; EOS free; VOC free; EPD Italy (Pending); IEC/EN 62262<br>Material: UL94; ISO 4892-2; PSV (Plastic Second Life)   |
| Optical compartment / Electric compartment | Separated   Opening of the compartments after removal of the anti-fall fixing screws<br>Optional   Tool Less Opening  |



# LORELUX - MODI DATASHEET

## OPTICAL FEATURES

|                         |   |
|-------------------------|---|
| Light source            | HI Power LED  |
| LED modules             | PCB, independent and replaceable  |
| Optics                  | Independent and replaceable   |
| Nominal luminous flux   | 2.173 ÷ 13.648 lm   |
| Light source efficiency | <ul style="list-style-type: none"><li>· <math>\eta_{LED} &gt; 180 \text{ lm/W}</math> (CCT &gt; 4.000 K / CRI &gt; 70)</li><li>· <math>\eta_{LED} &gt; 170 \text{ lm/W}</math> (CCT &gt; 3.000 K / CRI &gt; 70)</li><li>· <math>\eta_{LED} &gt; 160 \text{ lm/W}</math> (CCT &gt; 2.700 K / CRI &gt; 70)</li><li>· <math>\eta_{LED} &gt; 150 \text{ lm/W}</math> (CCT &gt; 2.200 K / CRI &gt; 70)</li></ul> |



# LORELUX - MODI DATASHEET

|                             |  |
|-----------------------------|--|
| Colour temperature          | Standard CCT: 3.000K<br>Optional CCT: 2.200K; 2.700K;<br>4.000K; 5.000K; 5.700K<br>Colour stability: 3 Step MacAdam  |
| Colour rendering index      | Standard CRI: 70<br>Optional CRI: 80; 90   |
| Photometries                | Asymmetric; elliptic; rotosymmetric;<br>symmetric; pedestrian  |
| Optical accessories         | B.L.S. ( Back Light Stop)<br>Code: KM - MODI - BLS   |
| Optical performance         | Standard: $\eta_{OPT}$ : 79 ÷ 87 %<br>Optional with KM - MODI - BLS accessory:<br>$\eta_{OPT}$ : 69 ÷ 81%  |
| Lighting fixture efficiency | $\eta_{FIX}$ > 130 lm/W (CCT > 4.000 K / CRI > 70)<br>$\eta_{FIX}$ > 125 lm/W (CCT > 3.000 K / CRI > 70)<br>$\eta_{FIX}$ > 115 lm/W (CCT > 2.700 K / CRI > 70)<br>$\eta_{FIX}$ > 105 lm/W (CCT > 2.200 K / CRI > 70)             |
| Light intensity class       | ≥ G*2  |
| Glare index                 | ≥ D.4  |
| ULR / ULOR                  | 0,00%  |
| Service life                | L98 B10: > 100.000 h (TJ = 85 ° C  <br>IF ≤ 500mA)<br><br>L90 B10: > 120.000 h (TJ = 85 ° C  <br>IF ≤ 500mA)<br><br>L80 B10: > 270.000 h (TJ = 85 ° C  <br>IF ≤ 500mA)<br><br>L70 B10: > 450.000 h (TJ = 85 ° C  <br>IF ≤ 500mA) |

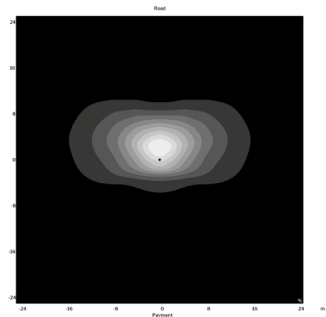
# LORELUX - MODI DATASHEET

## CONFIGURATIONS

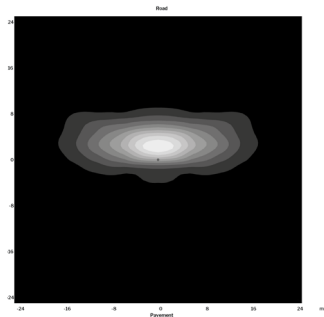
| Model        | Power<br>[W] | Nominal luminous flux<br>[lm]                            |                  |                                      |  |
|--------------|--------------|--|------------------|--------------------------------------|--|
|              |              | 4.000 K   CRI 70<br>5.000 K   CRI 70<br>5.700 K   CRI 70 | 3.000 K   CRI 70 | 2.700 K   CRI 70<br>4.000 K   CRI 80 | 2.200 K   CRI 70<br>2.700 K   CRI 80<br>3.000 K   CRI 80<br>5.700 K   CRI 90 |
| MODI<br>15 W | 15,7         | 2.823  | 2.694            | 2.440                                | 2.173  |
| MODI<br>20 W | 20,8         | 3.860  | 3.672            | 3.333                                | 2.961  |
| MODI<br>30 W | 24,6         | 4.533  | 4.314            | 3.913                                | 3.470  |
|              | 30,9         | 5.582  | 5.298            | 4.816                                | 4.260  |
| MODI<br>40 W | 34,6         | 6.172  | 5.852            | 5.323                                | 4.692  |
|              | 39,2         | 6.882  | 6.519            | 5.930                                | 5.209  |
| MODI<br>50 W | 36,4         | 6.896  | 6.564            | 5.957                                | 5.299  |
|              | 40,7         | 7.721  | 7.343            | 6.667                                | 5.923  |
|              | 46,5         | 8.798  | 8.370            | 7.595                                | 6.739  |
|              | 51,3         | 9.591  | 9.120            | 8.279                                | 7.341  |
| MODI<br>60 W | 54,6         | 10.115   | 9.611            | 8.730                                | 7.738  |
|              | 62,0         | 11.426   | 10.842           | 9.858                                | 8.713  |
| MODI<br>70 W | 64,0         | 11.819   | 11.211           | 10.196                               | 9.002  |
|              | 71,4         | 12.998   | 12.319           | 11.209                               | 9.857  |
| MODI<br>75 W | 75,0         | 13.648   | 12.935           | 11.770                               | 10.350   |

PHOTOMETRIES

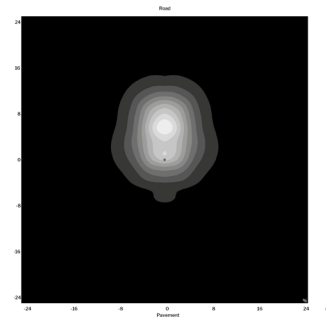
Asymmetric



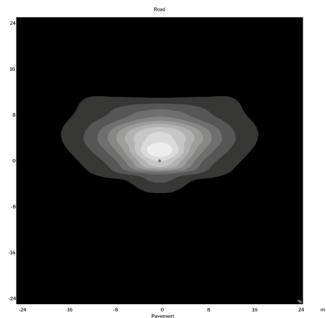
Code A1 ( $\eta = 84\% \mid G^*6$ )



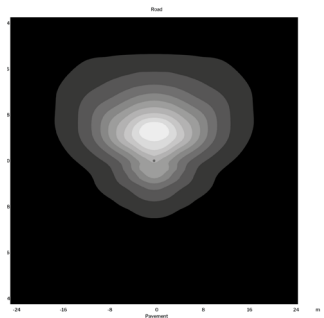
Code A2 ( $\eta = 84\% \mid G^*4$ )



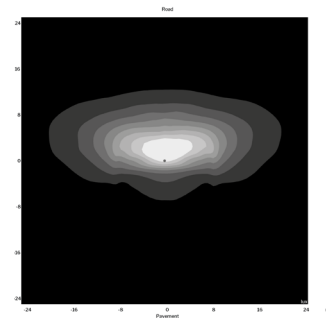
Code A3 ( $\eta = 87\% \mid G^*6$ )



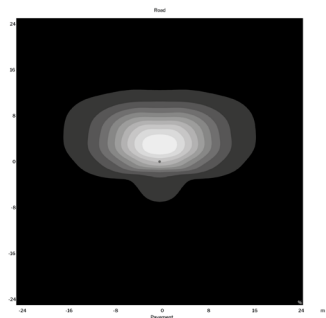
Code A4 ( $\eta = 83\% \mid G^*6$ )



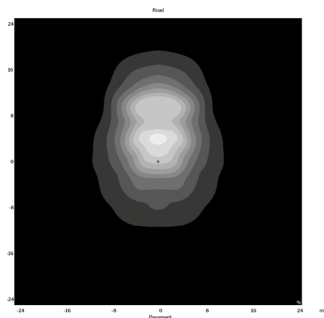
Code A7 ( $\eta = 79\% \mid G^*2$ )



Code A8 ( $\eta = 82\% \mid G^*1$ )

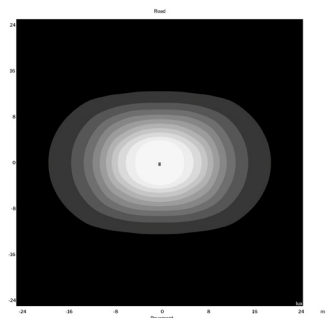


Code A9 ( $\eta = 85\% \mid G^*4$ )



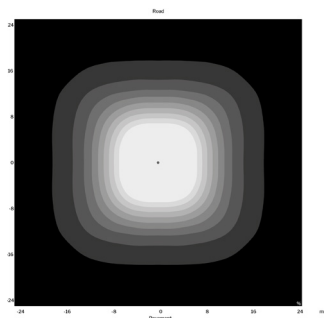
Code A13 ( $\eta = 81\% \mid G^*6$ )

Elliptic



Code E3 ( $\eta = 87\% \mid G^*6$ )

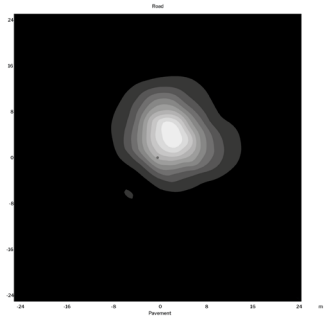
Rotosymmetric



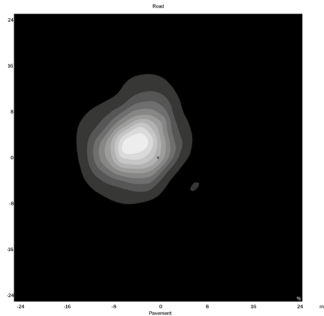
Code R1 ( $\eta = 82\% \mid G^*6$ )

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Pedestrian



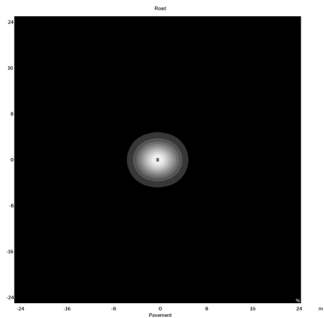
Codice PCDX ( $\eta = 85\% \mid G^*6$ )



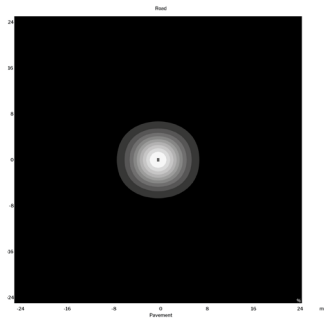
Codice PCSX ( $\eta = 85\% \mid G^*6$ )

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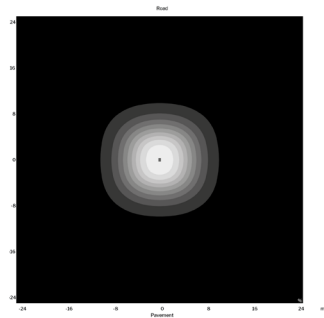
Symmetric



Code 25 ( $\eta = 90\% \mid G^*6$ )



Code 50 ( $\eta = 90\% \mid G^*6$ )



Code 100 ( $\eta = 86\% \mid G^*6$ )

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Optional

Other photometries available on request.

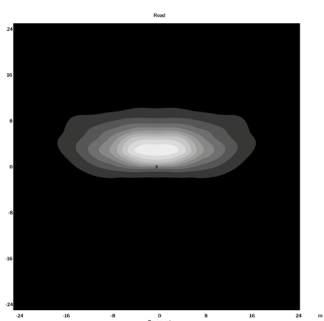
## OPTICAL ACCESSORIES

### Code KM-MODI-BLS

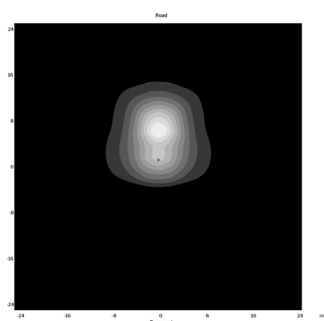


## PHOTOMETRIES WITH KM-MODI-BLS OPTICAL ACCESSORY

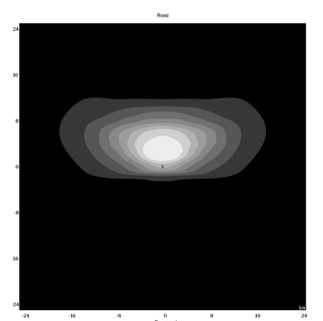
### Asymmetric



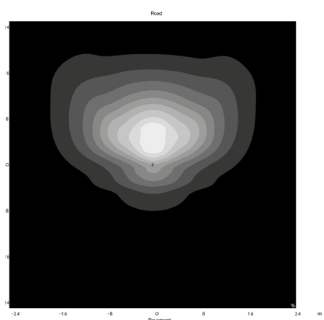
Code BA2 ( $\eta = 79\%$  |  $G^*6$ )



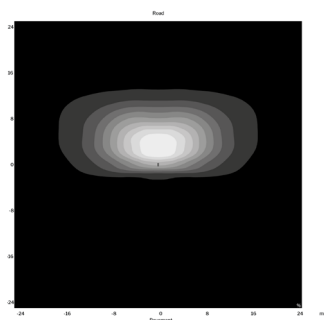
Code BA3 ( $\eta = 81\%$  |  $G^*4$ )



Code BA4 ( $\eta = 77\%$  |  $G^*6$ )



Code BA7 ( $\eta = 69\%$  |  $G^*6$ )



Code BA9 ( $\eta = 81\%$  |  $G^*2$ )

## ELECTRICAL FEATURES

|                       |   |
|-----------------------|---|
| Power supply          | Standard 240V AC : 175 ÷ 264 V AC;<br>50 / 60 Hz<br>Optional 240V AC: 120 ÷ 277 V AC;<br>50 / 60 Hz<br>Optional 12V DC: 9 ÷ 18 V DC<br>Optional 24V DC: 18 ÷ 32 V DC  |
| LED power current     | $I_f \leq 500 \text{ mA}$   |
| Insulation class      | Standard: class II<br>Optional: class I   |
| Power                 | 15 ÷ 75W  |
| Power factor          | PF > 0,97 (Active PFC)  |
| Electrical efficiency | $\eta_{EL} : 83 \div 92 \%$   |
| Electrical connection | External power cable<br>(IP66 protected electrical connector).<br>Standard length: 1,0 m<br><br>Standard Cable (Class II): H07RN-F 2x1,5mmq;<br>Optional Cable (Class I): H07RN-F 3x1,5mmq;<br>Optional Cable (DALI): H07RN-F 5x1,5mmq; |
| Electrical protection | Built-in SPD:<br>C.M. $\leq 12 \text{ kV}$ ; D.M. $\leq 12 \text{ kV}$ ; I $\leq 10 \text{ kA}$   |

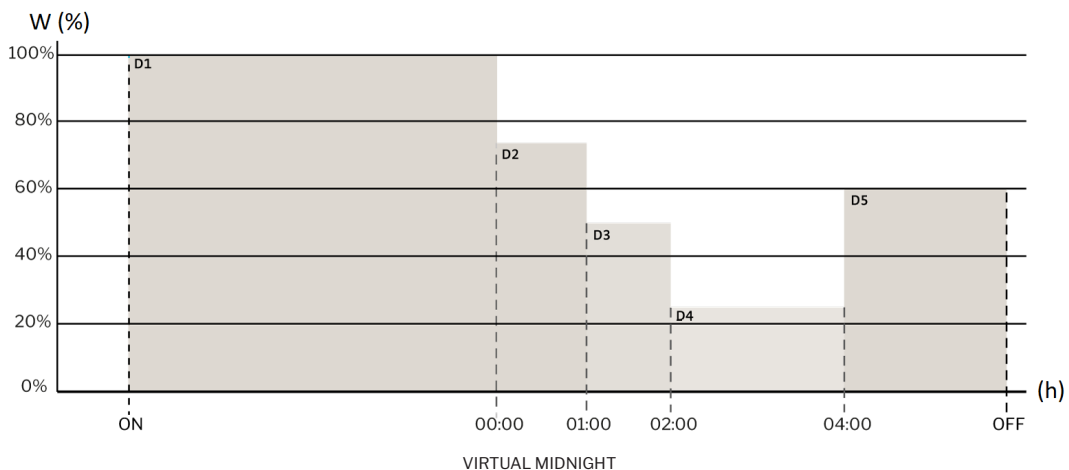


## CONTROL FEATURES

|                                   |  |
|-----------------------------------|--|
| <b>Autonomous dimming</b>         | K-MODI-PRG5: automatic control up to 5 daily profiles                                |
|                                   | K-MODI-CLO.LITE: constant lighting control during the lifetime with a single profile |
|                                   | K-MODI-CLO.FULL: constant lighting control during the lifetime up to 20 profiles     |
| <b>Control cable dimming</b>      | K-MODI-DIM: 1-10V analogue control   |
|                                   | K-MODI-DALI: DALI digital control  |
|                                   | K-MODI-D4i: DALI 2.0 / AUX 24 V DC digital control                                   |
| <b>Power Line control dimming</b> | K-MODI-PLV: Power Line Voltage control   |
| <b>Radio wave control</b>         | K-MODI-NEMASCK: control with NEMA device   |
|                                   | K-MODI-ZAGHASCK: control with ZHAGA device   |

## CONTROL FUNCTIONS

### PRG5 module

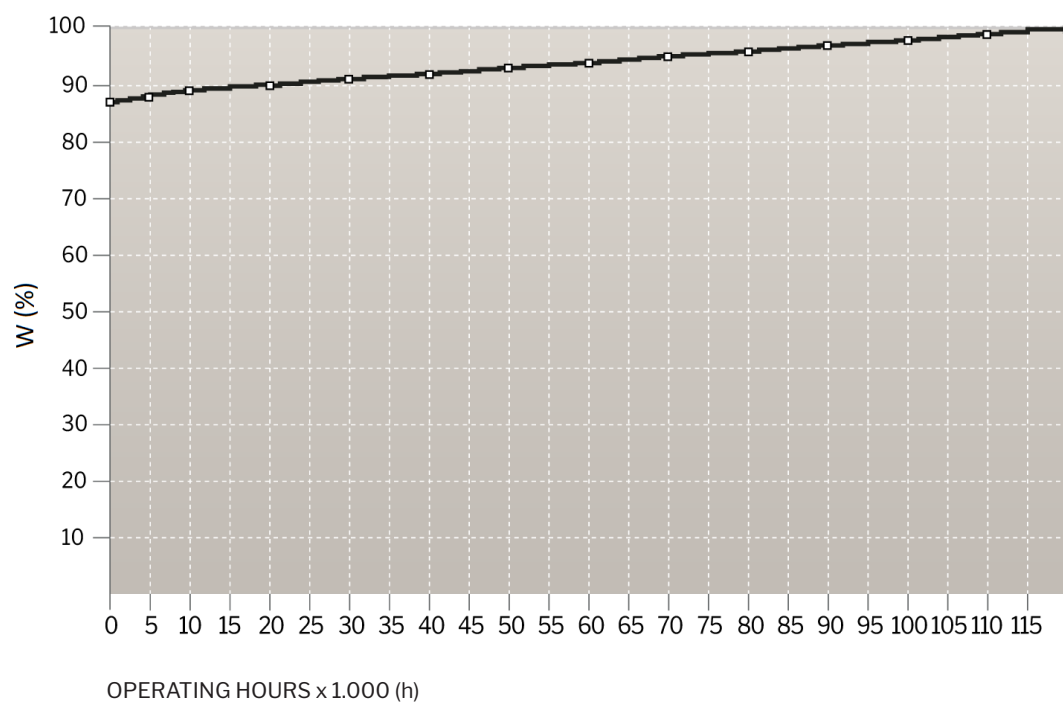


The PRG module allows to control and reduce the luminous flux of the lighting fixture from 10% to 100% of the maximum value, without the use of dedicated cables

- D1: time slot ON - 23:59 → power 100%
- D2: time slot 00:00 - 00:59 → power 75%
- D3: time slot 01:00 - 01:59 → power 50%
- D4: time slot 02:00 - 03:59 → power 25%
- D5: time slot 04:00 - OFF → power 60%



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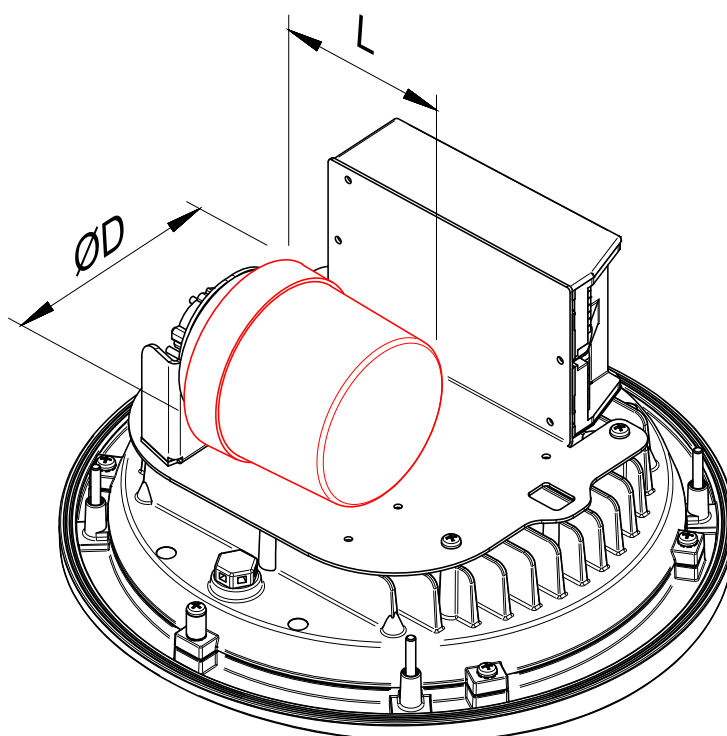
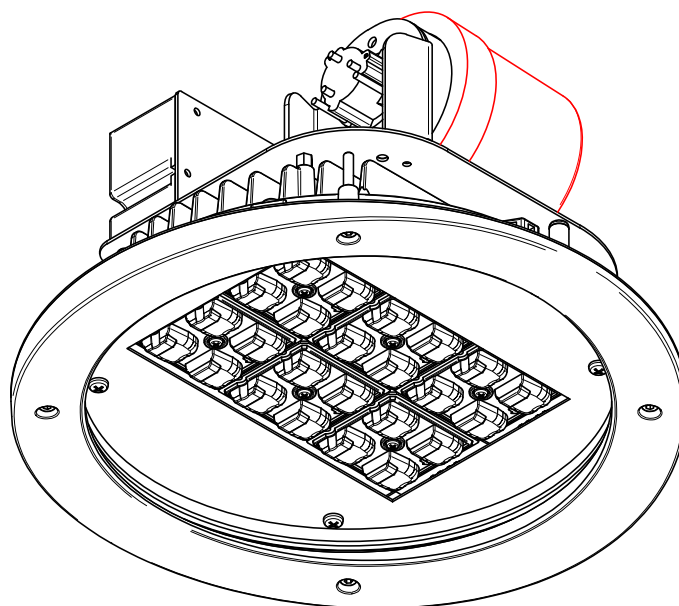
CLO module

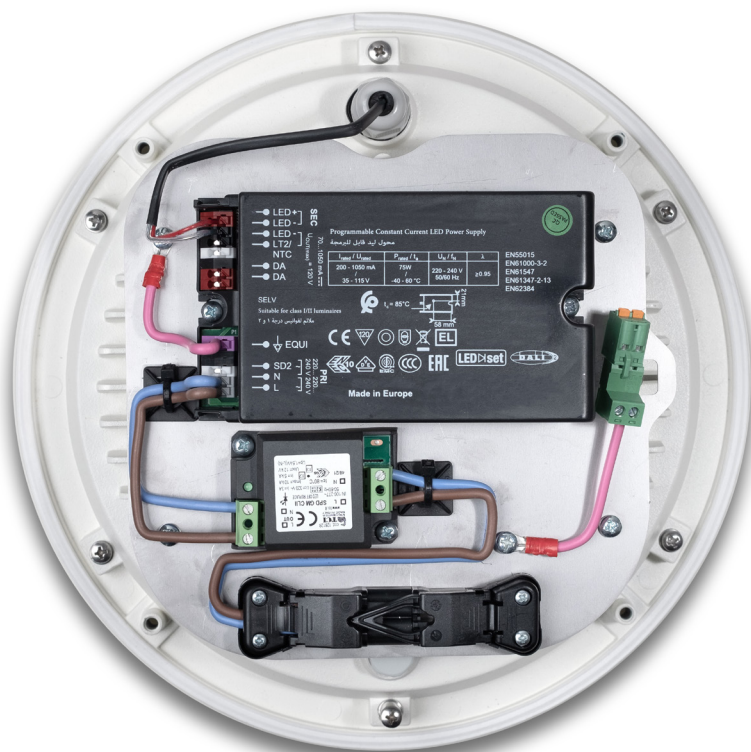
The CLO function allows to gradually increase the level of light output over time from a lower initial luminous flux up to 100%, thus compensating the luminous flux degradation of the LED module during the lighting fixture entire lifetime. It can also serve as a means to reduce energy consumption.

ELECTRIC COMPARTMENT

Maximum possible  
dimensions for  
remote-control devices:

Ø84 x h74mm

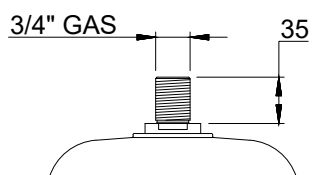




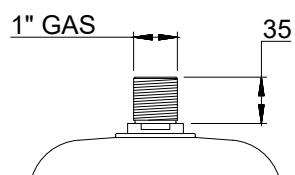
## MECHANICAL FEATURES

|   |  |
|---|--|
| <b>Materials</b>  | <p>Body: UV stabilised, self-cleaning, anti-discolouration and PSV (Plastic Second Life) certified polyethylene</p> <p>Heat sink: die-cast aluminium</p> <p>LED modules: aluminium</p> <p>Optics: PMMA, PC</p> <p>Screen: tempered flat glass, 5 mm thickness</p> <p>Gaskets: silicone</p> <p>Anti-condensation valves: PA (polyamide)</p> <p>Accessories: stainless steel</p> <p>Screws: stainless steel</p> <p>Packaging: FSC cardboard</p>              |
| <b>Recycled plastic content</b>   | <p>Black: 98%</p> <p>Coloured: 50%</p> <p>Floral: 75%</p>  |
| <b>Service life</b>   | <p>Body: &gt;50 years</p> <p>Components: &gt;10 years</p>  |
| <b>Dimensions and weight</b>  | <p>Suspended model:<br/>Ø420 x h623 mm   8,50 kg</p> <p>On catenary model:<br/>Ø420 x h698 mm   9,10 kg</p>  |
| <b>Wind exposure</b>  | <p>Base: 0,138 mq</p> <p>Lateral: 0,137 mq</p>   |
| <b>Packaging free from both polystyrene and internal cardboard inserts</b>                      | <p>Primary (suspended):<br/>W440 x L440 x H660 mm   10,0 kg<br/>1 pcs / box (eco-friendly packaging)</p> <p>Tertiary (suspended):<br/>W900 x L1.320 x H1.570 mm   135,0 kg<br/>12 pcs / pallet (eco-friendly packaging)</p> <p>Primary (on catenary):<br/>W440 x L440 x H800 mm   11,0 kg<br/>1 pcs / box (eco-friendly packaging)</p> <p>Tertiary (on catenary):<br/>W900x L1.320 x H1.850 mm   150,0 kg<br/>12 pcs / pallet (eco-friendly packaging)</p> |
| <p>Tolerance: luminous flux +/-5%; power consumption +/- 5%; dimensions +/-1%; weight +/-3%</p> |  |

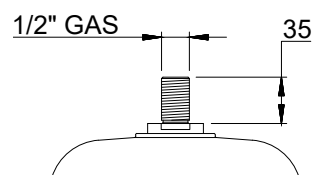
MOUNTING ACCESSORIES



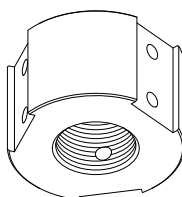
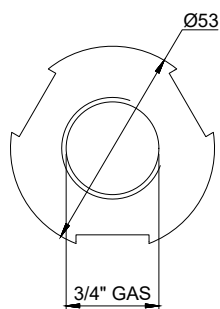
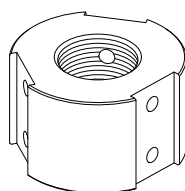
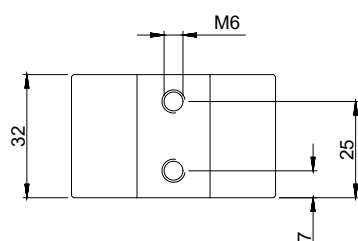
Standard:  
Code KM-MODI-S



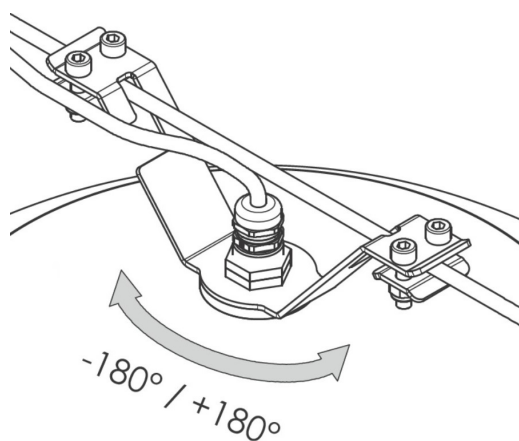
Optional:  
Code KM-MODI-1-INCH



Optional:  
Code KM-MODI-1/2-INCH



Optional:  
3/4" GAS adapter for Ø60mm poles.  
Code KM-S-60MM-3/4-INCH

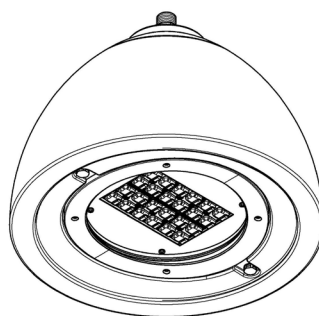


Optional:  
Code KM-MODI-T

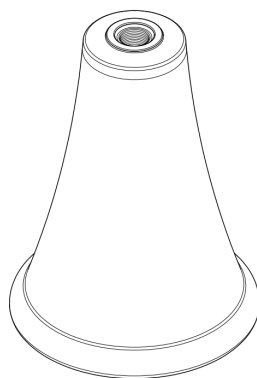
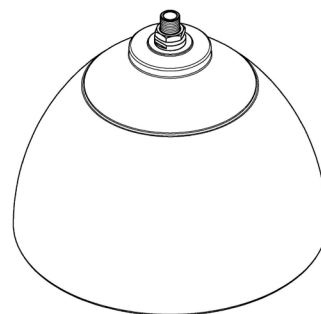
## FINISHES

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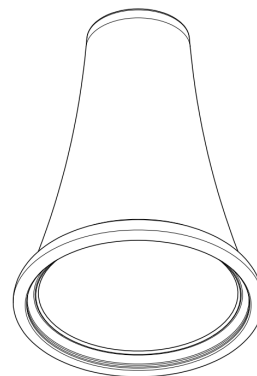
The lighting body consists of two parts (skirt and neck) for which it is possible to combine two different type of colour effects, choosing between floral or batch-dyed textures.



SKIRT



NECK



FINISHES

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Batch-dyed colours



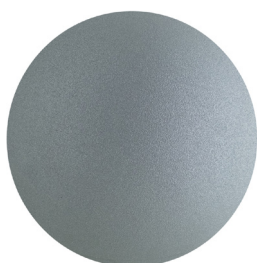
VBLK (graphite black)



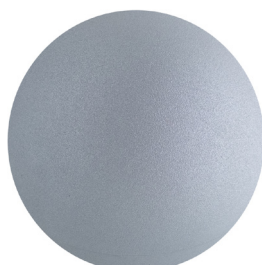
VNTH (anthracite)



VBZM (metallic bronze)



VGRM (metallic grey)



VGY1 (grey)



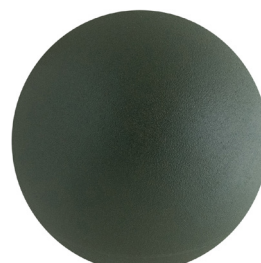
VWH1 (white)



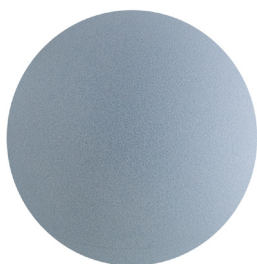
VCRT (marte)



VCR1 (venere)



VGRN (green)



VTQ1 (urano)

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Floral



RTTN (antares)



RBLK (callisto)