

vizULO



MINI MARTIN



RoHS





Architectural & Landscape

Sports Lighting

Large Outdoor Industrial Area

Agricultural Area

Ventilation cable gland

Combines pressure equalization and cable gland in a single unit. It ensures high air flow rates as well as high water protection capacity

Glass

Flat glass. Glass is fixed to die-cast aluminium frame with metal clips and can easily be replaced

LED module

High quality LED's with optimal thermal resistance and energy consumption characteristic, for high lumen output and long expected life time. Color temperature available: 3000K, 4000K

(5000K, 5700K available on customer request)

Intelligent light control system

Power line or radio frequency

Protection

IP66 for the complete luminaire

Module temperature control

The LED driver will start reducing the light output when the LED's approach critical temperature. The temperature is measured via a sensor placed on the PCB

(function available on customer request)

Body

Die-cast aluminium

Lighting protection

Built-in surge protection starting from 3 kV till 10 kV

Light regulation

MINI MARTIN drivers offer integrated midnight dimming and network-controlled 1-10V and DALI protocols

Impact resistance

IK08 (Vandal protected) for the complete luminaire



Traffic roads

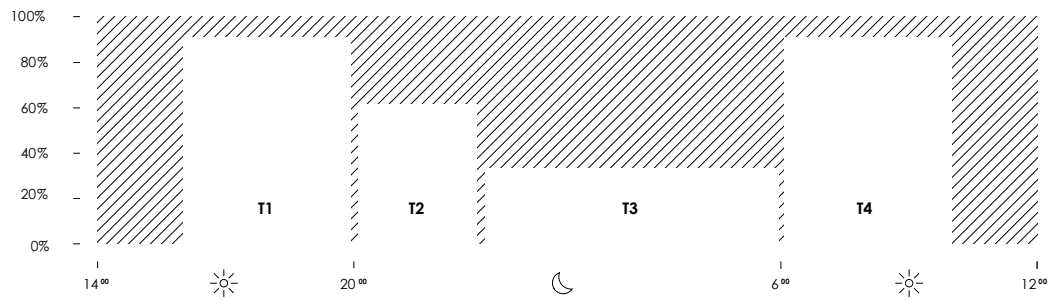
Pedestrian Roads

Residential Street/Area

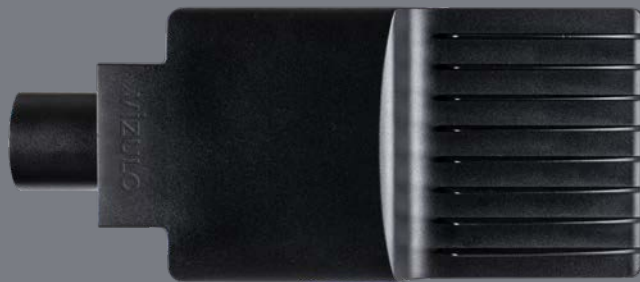
City Centre

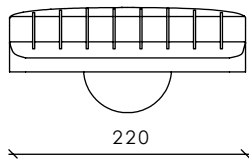
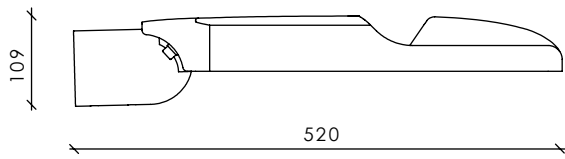
Midnight dimming

Midnight dimming provides multi-stage night-time power reduction based on an internal timer referenced to the power on/off time. There is no need for an external control infrastructure. The unit automatically performs a dimming profile based on the predefined scheduled reference to the midpoint, which is calculated based on the power on / off times.



Mini martin with fins



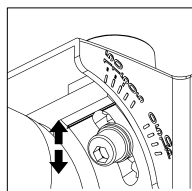
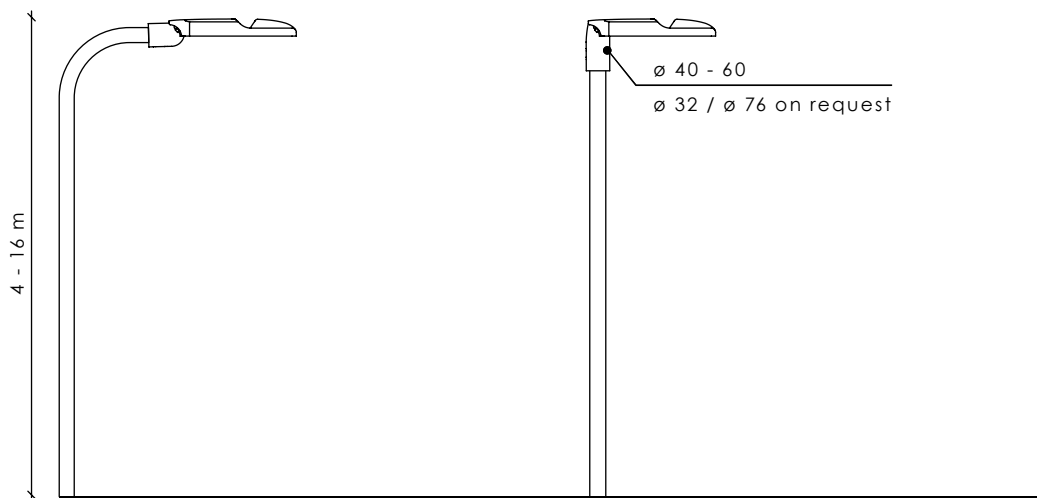


DB703

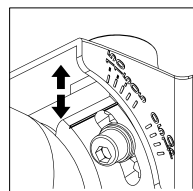


RAL9006

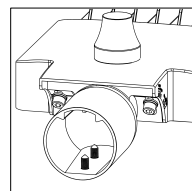
Other colors available on request



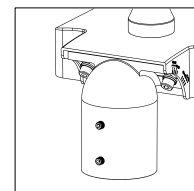
$\leq 5 \dots -20$



$\leq 0 \dots 20$

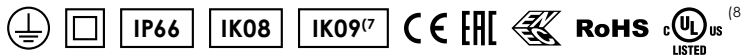


Horizontal entry



Vertical entry

Technical information



V	220 - 240	1-10V; DALI; Midnight dimming
Hz	50 - 60	Radio frequency ⁽³⁾
W	10 - 110	3; 6; 10 kV (optional) ⁽⁴⁾
lm	1100 - 13550	Warranty 5 years
lm/W	110 - 136	100 000h (L80B10C10) ⁽⁵⁾
K	3000 / 4000 ⁽¹⁾	100 000 h (L95B10C10) ⁽⁶⁾
°C	-40 to +50	
CRI	>70 / >80 ⁽²⁾	

<i>Body:</i>	Die-cast aluminum
<i>Spigot:</i>	ø 40-60, with accessories ø 32; ø 76
<i>Neto weight:</i>	5,5 - 6,5 kg
<i>Max.wind load</i>	
<i>area, SCd, m²:</i>	0,038

⁽¹⁾ 5000; 5700 K available on request

⁽²⁾ Luminaries with color rendering index (CRI): Ra >90 on request

⁽³⁾ Optional. Available only with DALI ; 1 - 10 V

⁽⁴⁾ 10 kV (L-N; L/N-PE) surge protection device available on request

⁽⁵⁾ Average lifetime value for ECO model at Ta = 25C is 100 000h L80/B10*

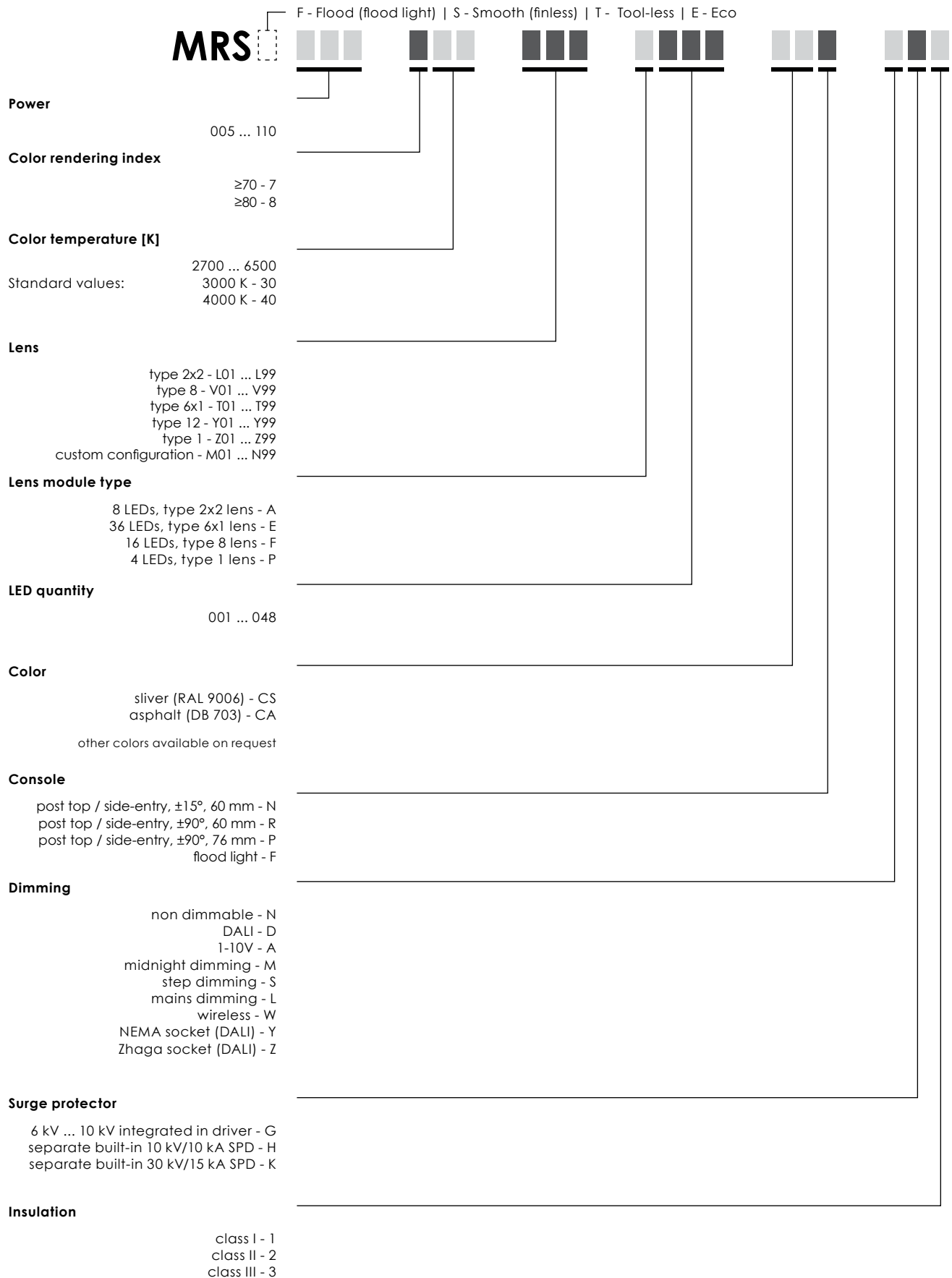
*This value is only informative and may change according to selected article. LED Lifetime is strongly depending from LEDs current and junction temperature – increase in LED current and luminaire power lead to increase of junction temperature and as consequence lifetime decrease. Thus, luminaire models with lower power, lower current (and lower junction temperature) will have higher lifetime than standard models and will reach 100 000h L90/B10. And high power and high current luminaire models may have negative lifetime deviation comparing to standard models. To receive precise value please contact VIZULO export representatives.

⁽⁶⁾ Standard / High Density at Ta=25°C, this value is only informative and may change according to selected article

⁽⁷⁾ IK09 - screw version with tempered unprinted glass

⁽⁸⁾ Coming soon

Model name principles



Standard modules

*Only with optic 01 / 02 / 03

4000K

Number of LED's	8			16			24			36*		
Nominal current, mA	350	520	700	350	500	700	350	500	700	350	500	710
Power, W	10	15	19	20	26	35	29	39	52	40	55	78
Luminous Flux, lm	1220	1820	2260	2550	3310	4350	3810	5060	6580	5470	7390	9930
Efficacy, lm/W	122	121	119	128	127	124	131	130	127	137	134	127
Power factor, PF	0,84	0,92	0,96	0,91	0,95	0,97	0,93	0,95	0,97	0,95	0,98	0,98

Luminaire efficacy	3000 K	10 - 78 W	1060 - 9610 lm	102 - 124 lm/W
	4000 K	10 - 78 W	1220 - 9930 lm	119 - 137 lm/W
	5000 K	10 - 78 W	1220 - 9930 lm	119 - 137 lm/W

High density modules

Only with optic 01 / 04 / 05 / 20 / 22 / 35

4000K

Number of LED's	16			32			48			
Nominal current, mA	350	500	700	370	500	700	350	500	700	760
Power, W	20	26	35	37	50	68	51	72	102	110
Luminous Flux, lm	2550	3310	4350	5010	6650	8690	7120	9710	13190	13550
Efficacy, lm/W	128	127	124	135	133	128	140	135	129	123
Power factor, PF	0,91	0,95	0,97	0,95	0,97	0,98	0,95	0,97	0,98	0,97

Luminaire efficacy	3000 K	20 - 110 W	2470 - 13620 lm	114 - 131 lm/W
	4000 K	20 - 110 W	2550 - 13550 lm	124 - 140 lm/W
	5000 K	20 - 110 W	2550 - 14070 lm	134 - 140 lm/W

4000K

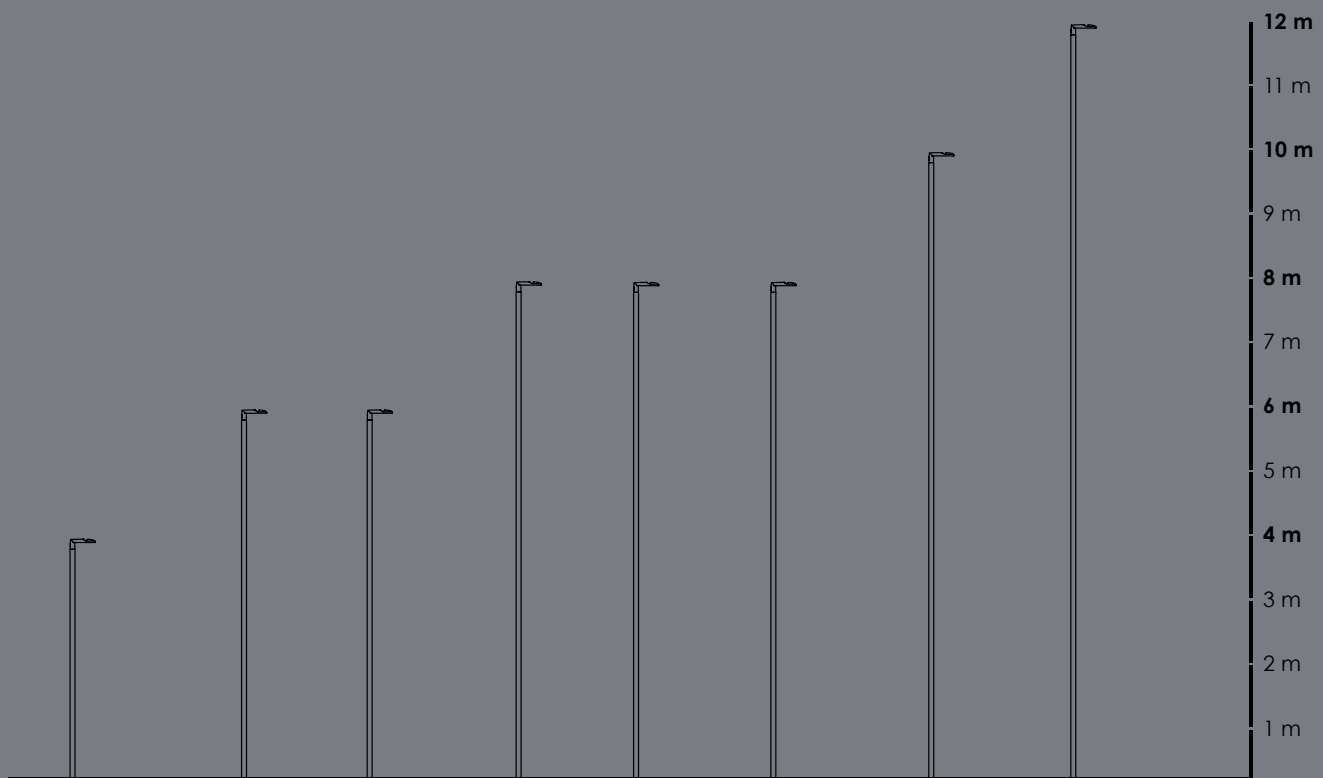
	8			16			24		
Number of LED's									
Nominal current, mA	350	500	700	350	500	700	350	500	700
Power, W	19	26	38	37	52	75	54	76	110
Luminous Flux, lm	2580	3390	4460	5120	6770	8920	7680	10070	13270
Efficacy, lm/W	136	130	117	138	130	119	142	133	121
Power factor, PF	0,85	0,9	0,91	0,94	0,97	0,98	0,97	0,98	0,99

Logistic information

Carton size/cm L*W*H	Quantity per carton/pcs	Pallet quantity in 20' sea container	Pallet quantity in 40' sea container	QTY per pallet/pcs	Full palette size/cm L*W*H	Number of luminaires per row	Number of rows
54,5 x 23,5 x 16,5	1	20	25	70	120 x 80 x 177	7	10

	NETO WEIGHT/KG		BRUTO WEIGHT/KG	
	Per 1 pcs	Per pallet	Per 1 pcs	Per pallet
MINI MARTIN 1 module luminaires	5,5	385	6,1	427
MINI MARTIN 2 module luminaires	5,55	388,5	6,15	430,5
MINI MARTIN 3 module luminaires	5,6	392	6,2	434
MINI MARTIN 4 module luminaires	5,65	395,5	6,25	437,5

Pole height proposition



Pole height	4m	6 - 8 m	8 m	8 - 10 m	10 m	14 - 16 m
Standard modules	18 W	37 W	52 W			
High-power modules				78 W		
High-density modules		37 W		68 W	102 W	110 W



Reykjavik | Iceland



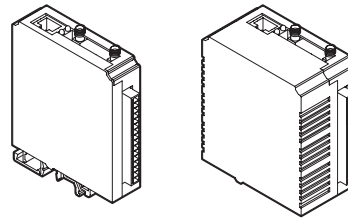
Hestheimar horse farm | Iceland

Accessories

Citintelly Segment controller

Art. 70010004

Segment Controller receives commands from Citintelly server via GSM and transmits tasks to Luminaire Controller via radio frequency communication.

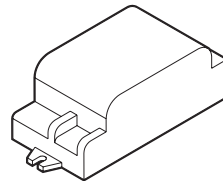


Citintelly Luminaire controller

Luminaire Controller is wireless mesh-networking device that uses 868 MHz for communication with Segment Controller and other Luminaire Controllers. It is delivered in various configurations to meet the needs of your applications.

Art. 70010001 /
LC2M-23-05-R Luminaire
Controller - 2 relays

Art. 70010002 /
LC2M-12-05-R Luminaire
Controller - 1 relay



Citintelly Surge Protection device

Art. 70020001

Surge Protection device offers protection against lighting surges;

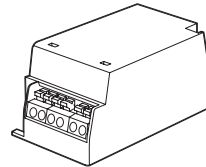
Voltage Protection level up (L-N) $\leq 1,5$ kV

Voltage Protection level up (L/N-PE) $\leq 2,0$ kV

$U_{oc} = 10$ kV

$I_{max} = 10$ kA

$I_{nom} = 5$ kA



Radio Frequency Antenna

Art. 70000108

Heavy duty IP67 enclosure
Mounted in cabinet or luminaire body
with 14 mm screw
SMA connector



NEMA Socket

2213362-3, 5 pin NEMA socket 105°C wires

Art. 70000362

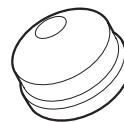
2213362-4, 7 pin NEMA socket 105°C wires

Art. 70000333



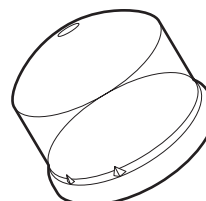
Dummy Link for NEMA Socket

Art. 70000113



MSLC205RGL Luminaire controller, Zhaga, 80mm

Art. 70010029



Zhaga socket no cap

Art. 70000612



Zhaga socket with cap

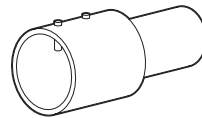
Art. 70000613



Console adapter

Spigot size 60 - 76mm

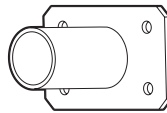
Art. 70044002



Wall mounting bracket

Spigot size 40 - 60 mm

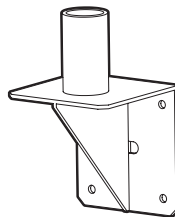
Art. 70044001



Wall mounting bracket

Vertical

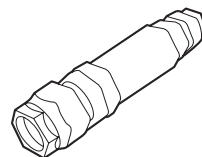
Art. 70044004



Connector

IP66 rated connector offers easy installation of the street luminaires.
3 wire cable connector

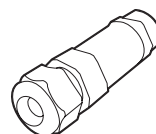
Art. 70000313



Connector

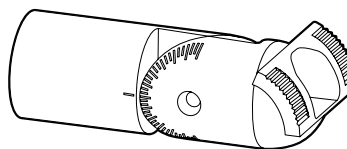
IP66 rated connector offers easy installation of the street luminaires.
5 wire cable connector

Art. 70000304



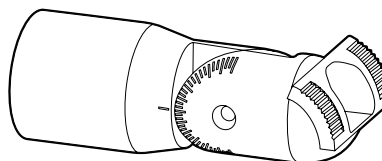
Adjustable Console ±90°
60 mm - Mini Martin / Micro Martin

Art. 70055005



Adjustable Console ±90°
76 mm - Mini Martin / Micro Martin

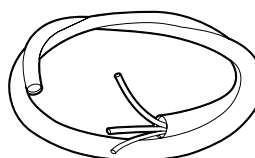
Art. 70055006



Pre-installed cable sets

For internal power supply:

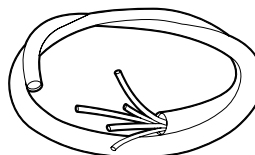
3 x 1,5 mm - 0,5 m long cable.....	Art. 70000319
3 x 1,5 mm - 5 m long cable.....	Art. 70000320
3 x 1,5 mm - 6 m long cable.....	Art. 70000321
3 x 1,5 mm - 8 m long cable.....	Art. 70000322
3 x 1,5 mm - 10 m long cable.....	Art. 70000323
3 x 1,5 mm - 12 m long cable.....	Art. 70000324
3 x 1,5 mm - 18 m long cable.....	Art. 70000325
3 x 1,5 mm - 20 m long cable.....	Art. 70000425
3 x 1,5 mm - 22 m long cable.....	Art. 70000426
3 x 1,5 mm - 25 m long cable.....	Art. 70000427
3 x 1,5 mm - 32 m long cable.....	Art. 70000430
3 x 1,5 mm - 42 m long cable.....	Art. 70000431
3 x 1,5 mm - 50 m long cable.....	Art. 70000432



Pre-installed cable sets

For internal power supply:

5 x 1,5 mm - 0,5 m long cable.....	Art. 70000305
5 x 1,5 mm - 5 m long cable.....	Art. 70000316
5 x 1,5 mm - 6 m long cable.....	Art. 70000317
5 x 1,5 mm - 8 m long cable.....	Art. 70000318
5 x 1,5 mm - 10 m long cable.....	Art. 70000306
5 x 1,5 mm - 12 m long cable.....	Art. 70000307
5 x 1,5 mm - 18 m long cable.....	Art. 70000308
5 x 1,5 mm - 20 m long cable.....	Art. 70000428
5 x 1,5 mm - 22 m long cable.....	Art. 70000429
5 x 1,5 mm - 25 m long cable.....	Art. 70000429
5 x 1,5 mm - 32 m long cable.....	Art. 70000433
5 x 1,5 mm - 42 m long cable.....	Art. 70000434
5 x 1,5 mm - 50 m long cable.....	Art. 70000435



VIZULO

Starta street 1
Riga, LV – 1026, Latvia

Sales: + 371 67 383 023
Production: + 371 67 383 024

office@vizulo.com
www.vizulo.com



VIZULO



VIZULO_PHOTO



VIZULO SIA
Mukusalas street 41,
Riga, LV-1004, Latvia

EU DECLARATION OF CONFORMITY

Riga, 04.04.2017.

Internal reference No: DC-MRS-040417-EN

Manufacturer: VIZULO SIA, Mukusalas street 41, Riga, LV-1004, Latvia
Product name: VIZULO MINI MARTIN
Type: LED street luminaire
Model: MRS 000 000 000 0000 00 001 (see anex): 220 ... 240 V, 8 ... 110 W, 2700 ... 6500 K, Class I, IP66
MRS 000 000 000 0000 00 002 (see anex): 220 ... 240 V, 8 ... 110 W, 2700 ... 6500 K, Class II, IP66

The product (range) is in conformity with the provisions:

- | | |
|--|---|
| <p>1. Electromagnetic Compatibility Directive
EN 55015

EN 61547
EN 61000-3-2

EN 61000-3-3</p> | <p>EMC 2014/30/EU
Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
Equipment for general lighting purposes - EMC immunity requirements
Electromagnetic compatibility (EMC) - Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)
Electromagnetic compatibility (EMC) - Limits – Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection</p> |
| <p>2. Low Voltage Directive
EN 60598-1
EN 60598-2-3

EN 62031
EN 61347-1
EN 61347-2-13

EN 62493
EN 62384</p> | <p>LVD 2014/35/EU
Luminaires – General requirements and tests
Luminaires – Particular requirements - Luminaires for road and street lighting
LED modules for general lighting – Safety specifications
Lamp controlgear – General and safety requirements
Particular requirements for d.c. or a.c. supplied electronic controlgear for LED modules
Assessment of lighting equipment related to human exposure to electromagnetic fields
DC or AC supplied electronic control gear for LED modules - Performance requirements</p> |
| <p>3. Restriction of Hazardous Substances in Electrical and Electronic Equipment
EN 62321</p> | <p>ROHS 2011/65/EU
Electrotechnical products - Determination of levels of six regulated substances</p> |
| <p>4. Radio equipment directive</p> | <p>RED 2014/53/EU</p> |
| <p>5. Other
EN 60068-2-6
EN 60068-2-27
EN 62717</p> | <p>Environmental testing - Part 2-6: Tests - Test Fc: Vibration (sinusoidal)
Environmental testing - Part 2-27: Tests - Test Ea and guidance: Shock
LED modules for general lighting - Performance requirements</p> |

Other qualifications:

The management system of VIZULO SIA including the implementation meets the requirements of the standards:
ISO9001:2008; ISO14001:2004

The Mini Martin range has been successfully tested to photobiological safety according EN 62471:

8 ... 110 W, ≤ 4000 K RG1 (risk group 1)
8 ... 78 W, > 4000 K RG1 (risk group 1) after 3.61 m

Authorized signature

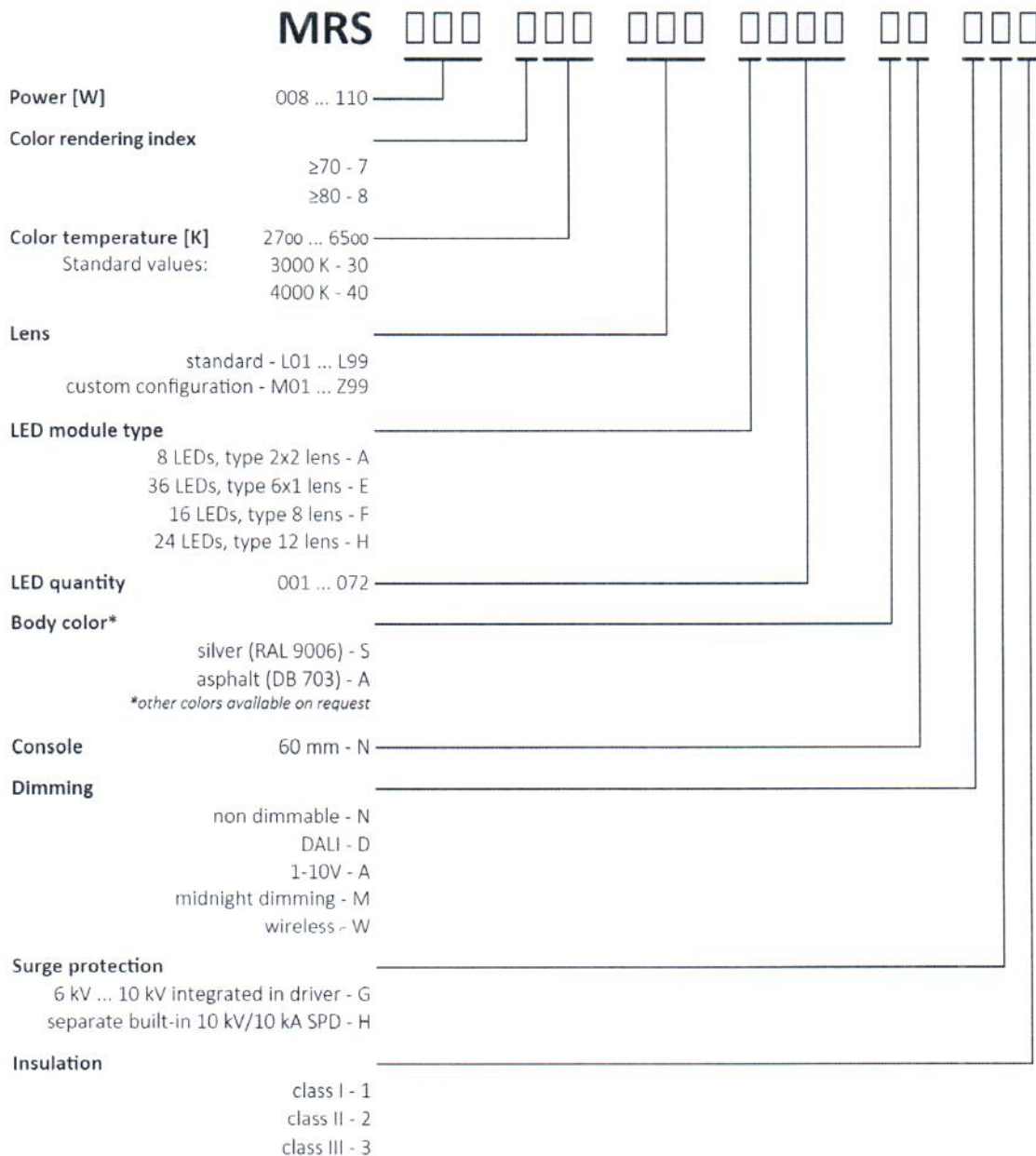

Sergejs Burtovojis
Senior Research and Development Engineer

The CE marking was affixed in: 15



Annex

Models and description



Authorized signature


Sergejs Burtovojs
Senior Research and Development Engineer

CERTIFICATE

Issued to:
Applicant:
SIA VIZULO
Ganibu dambis 7a
LV-1045 Riga
Latvia

Manufacturer/Licensee:
SIA VIZULO
Ganibu dambis 7a
LV-1045 Riga
Latvia

Product : Street luminaires with LED light source
Trade name : VIZULO
Model : MINI MARTIN
Type reference key : MRS □□□ □□□ □□□ □□□ □□ □□ (See Appendix I for more details).

The product and any acceptable variation thereto is specified in the Annex to this certificate and the documents therein referred to.

DEKRA hereby declares that the above-mentioned product has been certified on the basis of:

- a type test according to the standard EN 60598-1:2015, EN 60598-2-3:2003
- an inspection of the production location according to CENELEC Operational Document CIG 021
- a certification agreement with the number 2171759

DEKRA hereby grants the right to use the ENEC KEMA-KEUR certification mark.

The ENEC KEMA-KEUR certification mark may be applied to the product as specified in this certificate for the duration of the ENEC KEMA-KEUR certification agreement and under the conditions of the ENEC KEMA-KEUR certification agreement.

This certificate is issued on: 14 June 2016 and expires upon withdrawal of one of the above mentioned standards.

Certificate number: 2193409.03

DEKRA Certification B.V.



drs. G.J. Zoetbrood
Managing Director



Danielle Trijbels
Certification Manager

© Integral publication of this certificate is allowed

ACCREDITED BY THE
DUTCH ACCREDITATION
COUNCIL



SPECIFICATION OF THE CERTIFIED PRODUCT**Product data**

product	:	Street luminaires with LED light source
trade name	:	VIZULO
model	:	Mini Martin LED street luminaire
type reference key	:	MRS □□□ □□□ □□□ □□□□ □□ □□□ (See Appendix I for more details)
rated voltage	:	220-240 V
nature of supply	:	ac
rated frequency	:	50-60 Hz
rated current	:	40mA - 340mA
rated input power range	:	8 - 78 W
ambient temperature range (ta)	:	-30 ... +50 °C (for ROAL and Tridonic LED drivers only) -40 ... +50 °C (for all other LED drivers)
class	:	I
degree of protection against dust and moisture	:	IP66
degree of protection against external mechanical impact	:	IK08 for glass cover, IK09 for housing.
description	:	Street lighting luminaire for post or pole mounting

Additional information

- For explanation of the type reference product key code, see Appendix I.
- These products have been tested according the EN 62471:2008 - Photo-biological safety.
8 W up to 78 W, up to 4000 K versions comply with non-GLS - Risk-group1 (no labeling required).
8 W up to 78 W, 5000 K and higher versions comply with non-GLS – Risk Group 2 (warning label required). RG2 to RG1 threshold distance is 3.61m (based upon evaluation of whole luminaire according to IEC TR 62778).

TESTS**Test requirements**Main test requirements:

EN 60598-1:2015

EN 60598-2-3:2003 + A1:2011

Additional test requirements:

EN 62031:2008 + A1:2013 + A2:2015

Test results

The test results are laid down in DEKRA test file 2193409.00.

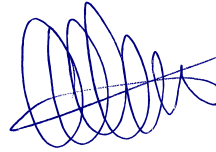
Remark

This certificate supersedes certificate no. 2187670.03, dated 13 January 2016 which is herewith declared invalid.

Conclusion

The examination proved that all test requirements were met.

Tested by : A.P. van der Veen

A handwritten signature in blue ink, consisting of several overlapping loops and a long horizontal stroke at the end.

Checked by : T.H.J.M. Michels

A handwritten signature in blue ink, written in a cursive style with the name "Michels" clearly legible.

Factory location

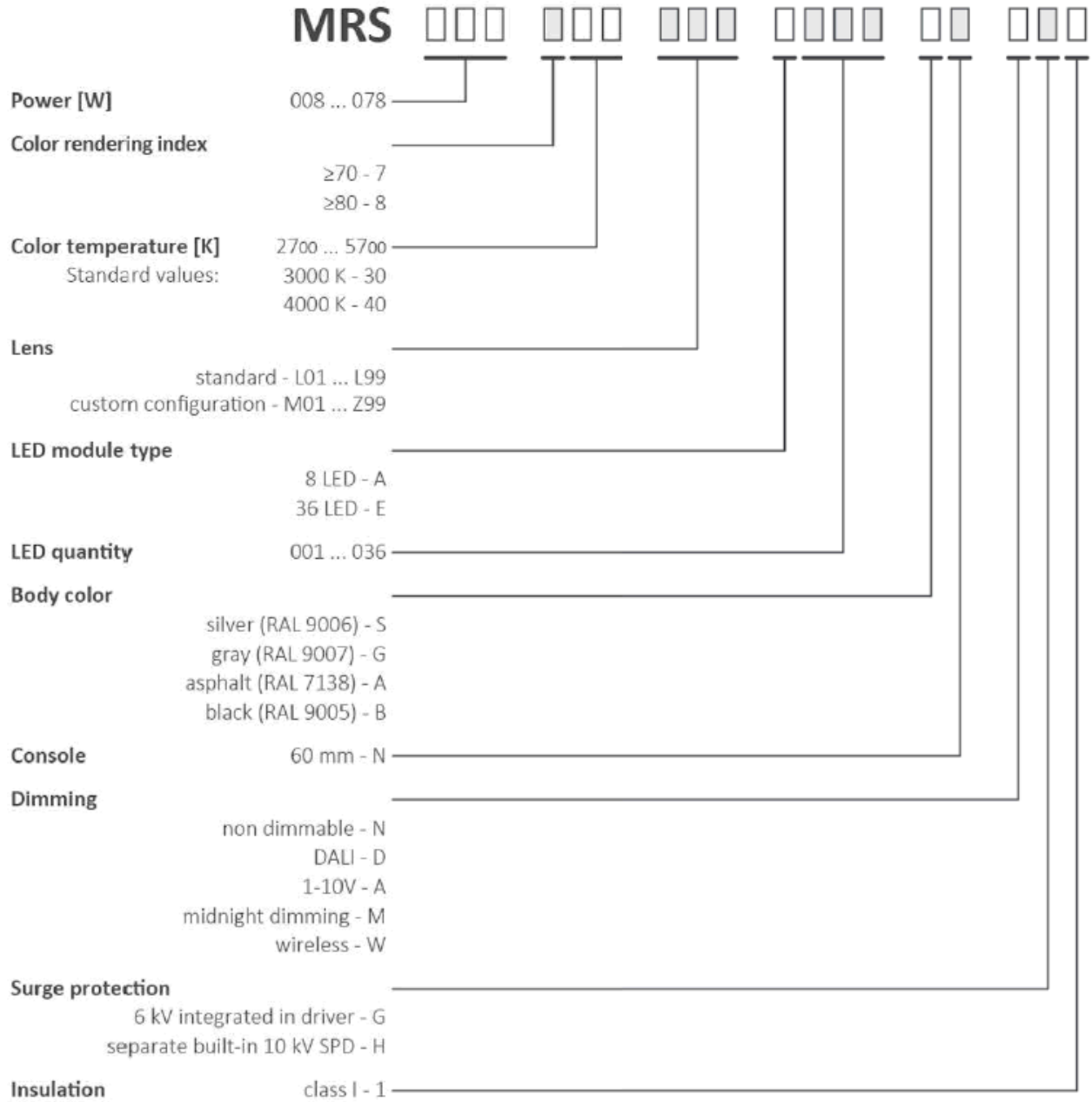
SIA VIZULO
Ganibu dambis 7a
LV-1045, Riga
Latvia

List of components

Component	Trade name	Type/model	Approval mark
LED driver	Osram	OT 40/120...277/1A0 4DIMLT2 E	ENEC
LED driver	Osram	OT 60/170...240/1A0 4DIMLT2 E	ENEC
LED driver	Osram	OT 90/170...240/1A0 4DIMLT2 E	ENEC
LED driver	Osram	OT 165/170...240/1A0 4DIMLT2 E	ENEC
LED driver	Osram	OT 50/120...277/800 2DIMLT2 P	ENEC
LED driver	Osram	OT 100/120...277/800 2DIMLT2 P	ENEC
LED driver	Osram	OT 50/120...277/700 P5	ENEC
LED driver	Osram	OT 100/120...277/700 P5	ENEC
LED driver	Tridonic	LCA 30W 250–700mA one4all C PRE OTD	ENEC
LED driver	Tridonic	LCA 60W 350–1050mA one4all C PRE OTD	ENEC
LED driver	Tridonic	LCA 75W 250–750mA one4all C PRE OTD	ENEC
LED driver	Tridonic	LCA 120W 350–1050mA one4all C PRE OTD	ENEC
LED driver	Tridonic	LCA 30W 200–550mA 1–10 V C ADV OTD	ENEC
LED driver	Tridonic	LCA 60W 300–1050mA 1–10 V C ADV OTD	ENEC
LED driver	Tridonic	LCA 120W 300–1050mA 1–10 V C ADV OTD	ENEC
LED driver	Roal	RSOZ70, 70W 0.35-2.1A	ENEC
Surge protection device	Philips	929000886906, Xtreme Surge Protector I, Uc = 255 V, Uoc = 10 kV	KEMA-KEUR
LED module	Vizulo	VBSR-013-L-01 (8 LEDs, class I) VBSR-014-L-01 (8 LEDs, class I/II) VBSR-014-L-02 (36 LEDs, class I)	*
Cable	E.M.C. Colosio	H05RR-F - 3/5 x 0,75/1/1,5 mm ²	<HAR>
Cable	LAPP cable	H05RR-F - 3/5 x 0,75/1/1,5 mm ²	<HAR>
Cable	EUPEN	H05RR-F - 3/5 x 0,75/1/1,5 mm ²	<HAR>
Cable	ICC	H05RR-F - 3/5 x 0,75/1/1,5 mm ²	<HAR>
Cable	IRCE	H05RR-F - 3/5 x 0,75/1/1,5 mm ²	<HAR>
Wiring	Alphawire	1855; 6715	*
Wiring	E.M.C. Colosio	H05V2-U, 0,75 mm ² , 90°C, 300 V	<HAR>
Connector	Wago	2061 series, 320 V, 12 A	*
Terminal block	Stucchi	1673/A/43, 2 pole with PE	ENEC
Connector	Colosio	M140MN/3, 2 pole with PE, IP68	ENEC
Connector	Colosio	M140MN/6, 5 poles with PE, IP68	ENEC

Component	Trade name	Type/model	Approval mark
MCPCB	Polytronic Technology Corp	-	*
LED	Lumileds	Luxeon T; Luxeon TX	*/UL
LED	Cree	XT-E	*/UL
1) * indicates a component tested as part of the appliance			

APPENDIX I - Type reference key code:





FROM: SIA "VIZULO Solutions"
Reg.Nr: 40103841199
Mukusalas iela 41
Riga, LV-1004,
Latvia, European Union

Warranty

Riga, March 23rd, 2017

VIZULO SOLUTIONS confirms FIVE (5) year warranty for VIZULO outdoor luminaires Vizulo Stork, Vizulo Stork Little Brother, Vizulo Mini Martin, Vizulo Owl which are being sold in Estonian Market.

Five (5) years warranty is in force if installation and exploitation instructions from VIZULO have been followed.

Export Manager



/ Ingus Priedītis /

Vizulo Solutions SIA,
7a Ganību dambis, Rīga,
Latvia, LV-1045

Confirmation to: Elektrilevi tīkrtāvavalgustuse osakond, Tallinn.

All components used in VIZULO Stork and VIZULO Stork little brother street luminaires will be able to replace with the same components or they alternatives in the period of 10 years after sales.

In order to keep sufficient stock we will need Tallin City prognoses how many luminaires or they components they will need for each realized project separately.

Research & Development
Department Director



Linda Zeltiņa