Lighting columns and bollards

KWADLUX QM

LED Kwx
+KWADLUX

Markings

- Glazing type
- Height of fixture
- Concrete foundation
- Lenht of arm
- Colour temperature
- Weight
- Flux
- IP rating
- Power
- IK rating
- Efficacy
- Protection class

The idea of KWADLUX brand

The KWADLUX brand means the unique, high-quality lighting products manufactured in Poland by a Polish company with years of experience in outdoor lighting. Meeting the highest European standards was confirmed by obtaining the ENEC certificate in 2017.

The simple and timeless pattern of KWADLUX products naturally harmonizes with modern architecture, and creates perfect and harmonious compositions in relation to classic architecture. In all conditions, it emphasizes the character of the surroundings with the subtlety of its shapes.

Well-thought design of our luminaires creates unlimited possibilities for any configuration of spatial forms and dimensions, leaving room for the creativity for architects. It provides a wide range of photometrics and luminaire power.

With a view to the least possible interference with the environment, KWADLUX lighting has been designed as an energy-efficient product and based on recyclable materials.

The equipment, which generates minimal maintenance and operating expences, responds to the contemporary needs of lighting management entities. The highest reliability and longevity of light sources has been achieved as a result of cooperation with renowned global producers andsuppliers of LED technology.

Energy savings are guaranteed by optimizing the thermal operating conditions of our light sources and the use of individual programming and light operation management of the luminaires (Smart City technologies)

Your **Architecture shown in good light**
Welcome

KWADLUX

KWADLUX

www.kwadlux.com

What is ENEC

The QM series of KWADLU X luminaires are undergoing yearly, demanding verification process and, as a result, is marked with the European ENEC quality mark.

The sign and basics of the ENEC certification rules were created over 25 years ago as a result of agreements between the most important European certification laboratories.

The goal was to introduce an objective, uniform, trustworthy process for examination the functionality and safety of electrical products.

ENEC is a sign confirming the safety of product, compliance with low voltage EU directives and relevant harmonized standards.

Such certification takes place only within the European Union. The certification process is proceeded by to the regular audit of the production plant and research laboratories of the manufacturer and testing the product itself. The right to mark the product is renewed annually. Such a demanding procedure supervized by an independent certification body forces the manufacturer to ensure continuous compliance with the highest quality standards of his products.

ENEC is not only a sign that ensures that a labeled product meets all of the European directives and standards relating to it – it is also a sign that signifies prestige and high quality.

MADE IN POLAND

KWS – 3rd generation module

Since 2021 in our KWADLUX products we have been using new, integrated third-generation LED light modules. What make them unique:

Savings

New, own designed LED modules, developed as the successors to the previous generation, with CREE diodes with the efficiency of 130-160 lumens from one watt.
For example the KWS-M4 module with a power of 42W may replace the traditional 70W sodium lamp, giving 40% savings on electricity without any additional control programs.

Lighting uniformity in all conditions

The six types of light distribution, obtained using the highly transparent lenses integrated with the original plates, made by reputable local manufacturers provides the light appropriate to illuminate any place.

Modularity – easy access

The module has a closed, hermetic block structure which provides maintaining operating parameters, regardless of the method of mounting in the luminaire. Tightness, photometric parameters, temperature distribution have been designed and optimized at the block level of light sources. This approach enables easy replacement of the light source within the luminaire.

Nice light and beautiful colors of goods.

We are trying to do our best to provide our lighting system to be not only modern and energy-saving, but also giving a sense of comfort to its users. That is why our luminaires provide the light which is good for the eye, showing natural colors, similar to these found in nature. In addition, thanks to the color rendering index (Ra) at the level of 85 the colors of goods not differ from these illuminated by the sunlight

Dark sky

Thanks to the use of directional optics, the emitted light is not dispersed within the fixture and towards the sky.
We do not contribute to light pollution.

Flex – adjustment possibilities

The light output can be precisely programmed at the assembling stage of the luminaire to values other than those given in the tables below.
This gives the possibility, in cooperation with a lighting designer, the ideal match the designed lighting parameters to current standards or expectations of user.
The correction of programmed parameters is also possible after installation and commissioning of the system.

Astrodim – regulation of light within the night,

Each luminaire equipped with KWS modules has the ability to execute individual night cycle of operation with different wattages. This results in adjusting the level of illumination of the object to the intensity of its use during the night. (reducing the level of illumination during hours when the facility is not in intensive use, to a level guaranteeing only safety).
Activation of this functionality provides additional, cost-free energy savings of at least 20%. For more information, see the following pages.

Smart city

Lighting systems based on KWS modules are ready to be integrated with an existing systems of light management . They work both with proprietary, and open systems. They are ready for integration with a "smart city" infrastructure along with accepted standards, protocols and hardware outlets.

Additional sensors

Systems based on KWS modules are ready for the application of simple, individual lighting management systems, such as controlling a motion/presence sensor or a twilight sensor. This feature is particularly useful for smaller, backyard installations implemented in a smart home concept.

Continuous development...

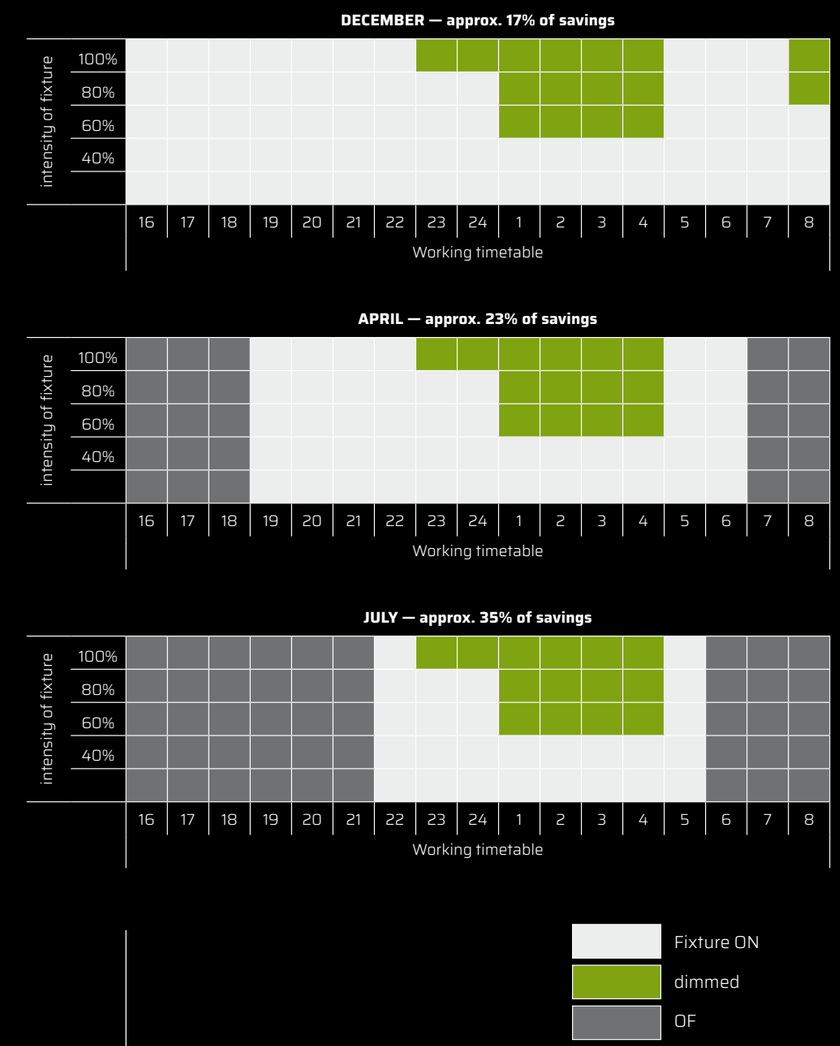
...we understand as the need to improve the products already offered and work on creating new designs. Therefore, current solutions may differ slightly from those presented in our catalog.
We do our best to update our offer in real time in our website.
Thanks to the fact that all components of KWADLUX products are developed in our company, we can guarantee our customers a supply of the necessary spare parts, also for models withdrawn from production

ASTRODIM and programming

At the production stage, the luminaire is programmed either to work with constant parameters according to the tables shown below, or according to the user's special demands (FLEX function). Implementing the ASTRODIM function gives you the opportunity to obtain additional savings in electricity consumption by automatic dimming the luminaires to the assumed levels in the middle of the night, when traffic is at its lowest.

It is possible to program up to 5 different levels of light intensity at assumed hours in one daily cycle. Distribution of cycles over night when once programmed, is set automatically taking into account the moment when system switches on / off, geographic location and process of "Self-learning" which proceeds during the first few days of work.

An example of dimming schedule during different seasons is shown on the opposite page. Energy savings are marked green



1

0,8–7 m

KWADLUX QM

Lighting columns and bollards

1.1. **Single and double arm lighting columns with symmetrical light distribution** (height 0.8-2 m)

1.2. **Single and double arm lighting columns with symmetrical or asymmetric (street) light distribution** (height 3-5 m)

1.3. **Single and double arm lighting columns with symmetrical or asymmetric (street) light distribution** (height 6-7 m)

0,8–2 m

1.1. QM

Single and double arm lighting bollards with symmetrical light distribution

Application:

Private gardens, parks, housing estates, public zones, commercial buildings

Advantages and Features:

Flux range from 1170 to 3200 lm at the arm.
Luminous efficacy from 133 to 147 lm / W.
The colour of light warm (3000 K) or neutral (4000 K).
Power supply 230 V, 50 Hz.
Connection by means of a round, 3-core cable with an outer diameter ranging from 7 to 12 mm.
Surge protection up to 10 kV (premium version - applies to posts with a height of 2.0 m).
Power factor ≥ 0.95.
Wide light distribution suitable for the low height of the light source.
Material – aluminium, stainless steel, transparent acrylic diffuser.
Uniform shape, without visible joints and weldings.
Varnished details are preliminary protected by in the preceding, multi-stage preparation bath process with the presence of metal compounds.
Profile section 100 mm × 100 mm.
No flush door version. Optional version with flush door for fuse compartment is made of a 120x120 mm profile for the heights above 1 m.
Recommended installation on a LXF 0415 concrete foundation or, optionally, on stainless steel / aluminium anchor – see „Accessories" brochure.

IP66 IK08 KL.I

Astrodim, Flex and programming:

At the production stage, the luminaire is programmed either to work with constant parameters according to the tables shown below, or according to the user's special demands (FLEX function). Implementing the ASTRODIM function gives you the opportunity to obtain additional savings in electricity consumption by automatic dimming the luminaires to the assumed levels in the middle of the night, when traffic is at its lowest. *(detailed description on page 8)*

Versions:

	premium	standard
0-10 V	YES	YES
ASTRODIM	YES	NO
DALIREADY	YES	NO
FLEX	YES	YES
10 kV	YES	NO

Options:

WN – Execution with flush doors for fuse compartment in case of bollards above 1 m in height.
PG – Execution for fixing below the ground level (invisible flange)
MS – Decorative flange cover
ST – Custom flange dimensions

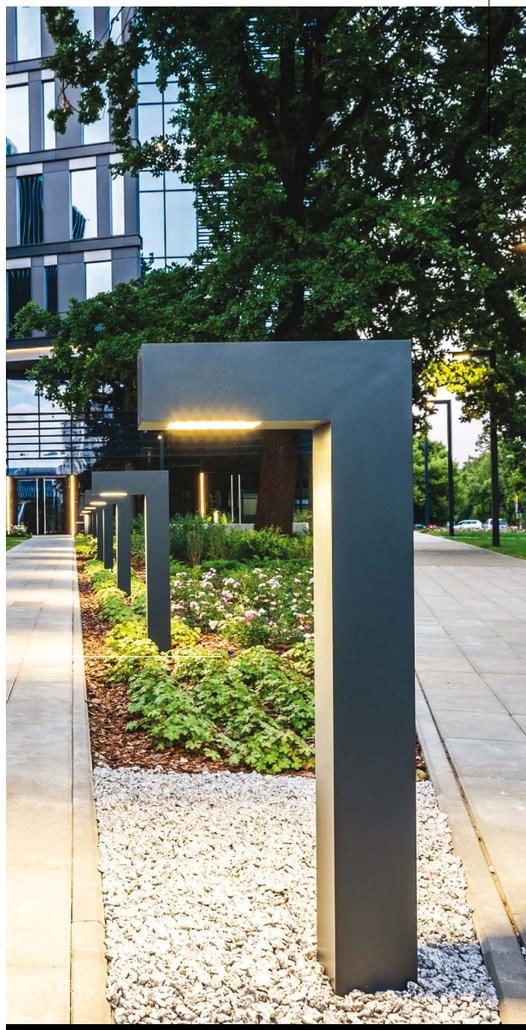
Accordance:

EN 60598-1, EN 60598-2-3, EN 62471, EN 55015, EN 61547, EN 61000-3-2, EN 61000-3-3

Standard colours:

RAL 7016 **RAL 9005** **RAL 9006**

Varnishing in any color available from the RAL palette – NO ADDITIONAL COSTS



GRAFFIT office building, Warsaw

0,8–2 m

Single arm, L-shape

	H	P[W] STANDARD*	Φ[lm]	lm/W	A	M[kg]		°K
QM 081.M1B	800	8	1170	146	300	8,5	LXF 0415	C – warm white colour, 3000K N – neutral white colour, 4000K
QM 101.M1B	1000	8	1170	146		9,5		
QM 101.M1A		12	1600	133		10		
QM 151.M1A	1500	12	1600	133	450	11,5		
QM 151.M2B		16	2350	147		12		
QM 151.M2A		24	3200	133		12		
QM 201.M1A	2000	12	1600	133	500	13,5		
QM 201.M2B		16	2350	147		14		
QM 201.M2A		24	3200	133		14		

Double arm, T-shape

	H	P[W] STANDARD*	Φ[lm]	lm/W	A	M[kg]		°K
QM 082.M1B	800	16	2350	147	500	11,5	LXF 0415	C – warm white colour, 3000K N – neutral white colour, 4000K
QM 102.M1B	1000	16	2350	147		12,5		
QM 102.M1A		24	3200	133		13		
QM 152.M1A	1500	24	3200	133	800	15		
QM 152.M2B		32	4700	147		15,5		
QM 152.M2A		48	6400	133		15,5		
QM 202.M1A	2000	24	3200	133	900	17		
QM 202.M2B		32	4700	147		17,5		
QM 202.M2A		48	6400	133		17,5		

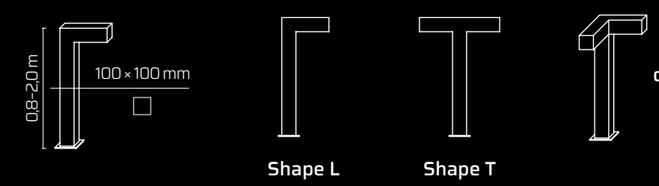
* STANDARD means a factory-set parameter, possible modifications in accordance with the guidelines of the customer (FLEX function).
* Given luminous fluxes and efficiencies are for the neutral white colour (4000 K). For a warm colour (3000 K), the correction rate 0.95 should be applied
* Inrush current: 15 A / 500 µs

Sample marking:

QM 15 1 . M2 B . C

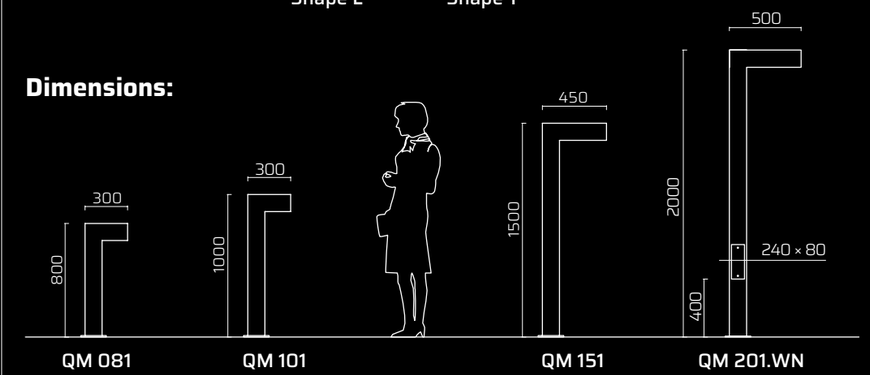
- C – colour temperature
- B – power/flux version
- M2 – number of LED modules
- 1 – amount of arms
- 15 – height

Shape:



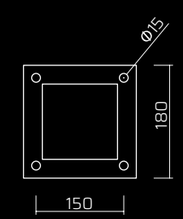
The execution in 90 degrees angle of arms is possible

Dimensions:

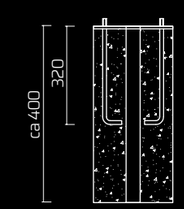


Fixing:

FLANGE

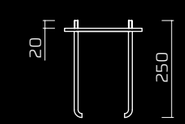


FOUNDATION

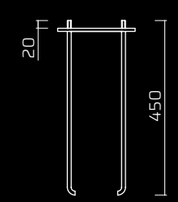


LXF 0415
4 × M12 INOX

ANCHOR (OPTION)



KQ 180.12.25
4 × M12 INOX



KQ 180.12.45
4 × M12 INOX

3–5 m

1.2. QM

Single and double arm lighting columns with symmetrical or asymmetric (street) light distribution

Application:

Public areas, commercial buildings, parks, squares, streets, parking lots, pedestrian and bicycle paths.

Advantages and Features:

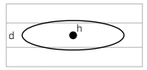
Flux range from 1600 to 9590 lm at the arm.
Luminous efficacy from 133 to 152 lm / W.
The colour of light warm (3000 K) or n eutral (4000 K).
Power supply 230 V, 50 Hz.
Surge protection up to 10 kV (premium version).
Power factor ≥ 0.95.
Six different shapes of light distribution to choose from.
All columns equipped with fuse box compartment
High standard, quality and safety of columns confirmed by the ENEC mark
Material – aluminum, stainless steel, transparent acrylic diffuser.
Uniform shape, without visible joints and weldings.
Varnished details are preliminary protected by in the preceding, multi-stage preparation bath process with the presence of metal compounds.
Profile cross-section 120 mm × 120 mm.
Fuse boxes to be applied – see „Accessories" brochure.
Installation on a concrete foundation – see „Accessories" brochure.

IP66 IK08 KL.I

Optics:

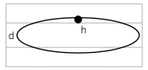
We provide designers with photometric curves (d – area width, h – height of the light source), enabling designing of lighting using our luminaires, grouped according to the following types:

TYPE 1
SLT1



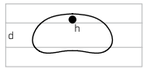
Pedestrian zones, catenary lighting, roofings, d<2h

TYPE 2
ASMT2, ASMT21



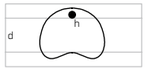
Housing estates, low installations, narrower streets, d<1.75h

TYPE 3
ASUT3, ASUT31M



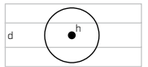
Main city streets, higher installations,- d<2.75h

TYPE 4
ASUT4



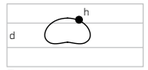
Illuminations, lighting from facades, main streets, d<2.75h

TYPE 5
SOST5, SOT5, SOW



Road crossings, projector lighting, pedestrian zones, squares, illuminations

TYPE 6
ASMPP



Pedestrian crossings

Astrodim, Flex and programming:

At the production stage, the luminaire is programmed either to work with constant parameters according to the tables shown below, or according to the user's special demands (FLEX function). Implementing the ASTRODIM function gives you the opportunity to obtain additional savings in electricity consumption by automatic dimming the luminaires to the assumed levels in the middle of the night, when traffic is at its lowest. *(detailed description on page 8)*

Versions:

	premium	standard
0-10 V	YES	YES
ASTRODIM	YES	NO
DALIREADY	YES	NO
FLEX	YES	YES
10 kV	YES	NO
ENEC	YES	YES

Options:

PG – Execution for fixing below the ground level (invisible flange)
MS – Decorative flange cover
ST – Custom flange dimension

Accordance:

EN 60598-1, EN 60598-2-3, EN 62471, EN 55015, EN 61547, EN 61000-3-2, EN 61000-3-3

Standard colours:

RAL 7016 **RAL 9005** **RAL 9006**

Varnishing in any color available from the RAL palette – NO ADDITIONAL COSTS

3–5 m

Single arm, L-shape

	H	P[W] STANDARD*	Φ[lm]	lm/W	A	M[kg]		°K
QM 301.M1A	3000	12	1600	133	600	27	LXF 0820	C – warm white colour, 3000K N – neutral white colour, 4000K
QM 301.M2B		16	2350	147		29		
QM 301.M2A		24	3200	133		29		
QM 351.M1A	3500	12	1600	133	700	30,5		
QM 351.M2B		16	2350	147		32,5		
QM 351.M2A		24	3200	133		32,5		
QM 401.M2B	4000	16	2350	147	800	36		
QM 401.M2A		24	3200	133		36		
QM 401.M3B		32	4340	136		38		
QM 401.M3A		36	4790	133		38		
QM 451.M2B	4500	16	2350	147	850	40	LXF 1020	
QM 451.M2A		24	3200	133		40		
QM 451.M3B		32	4340	136		42		
QM 451.M3A		36	4790	133		42		
QM 501.M2A	5000	24	3200	133	900	45		
QM 501.M3B		32	4340	136		47		
QM 501.M3A		36	4790	133		47		
QM 501.M4A		42	6390	152		49		
QM 501.M5A		50	6800	136		51		
QM 501.M6A		72	9590	133		53		

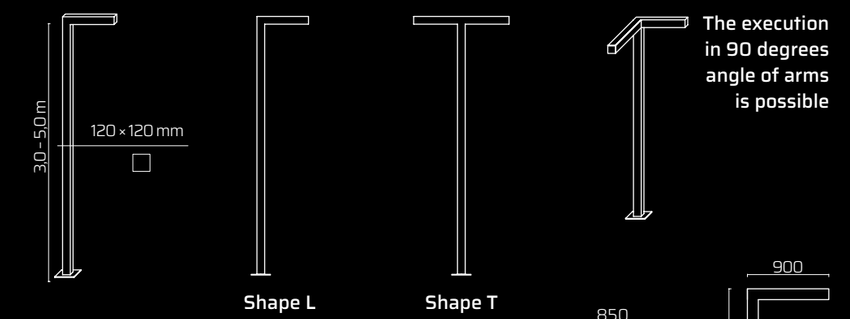
* STANDARD means a factory-set parameter, possible modifications in accordance with the guidelines of the customer (FLEX function).
* Given luminous fluxes and efficiencies are for the neutral white colour (4000 K). For a warm colour (3000 K), the correction rate 0.95 should be applied
* Inrush current: 15 A / 500 µs

Sample marking:

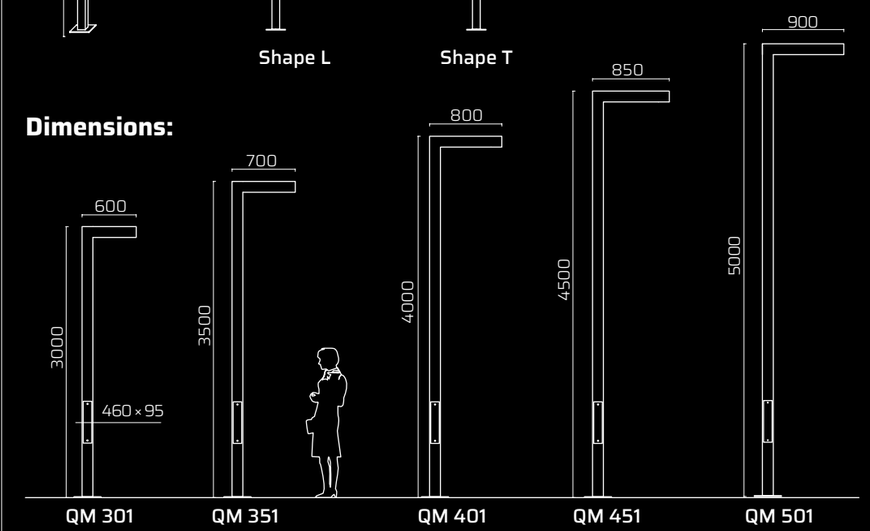
QM 40 1 . M3 A . C . ASMT2

- type of optics
- colour temperature
- power/flux version
- number of LED modules
- amount of arms
- height

Shape:

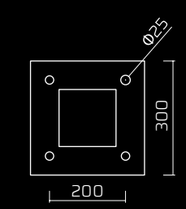


Dimensions:



Fixing:

FLANGE



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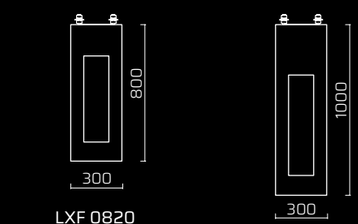


LXF 0820
4 × M18 × 60 mm

LXF 1020
4 × M18 × 60 mm

3–5 m

Double arm, T-shape

	H	P[W] STANDARD*	Φ[lm]	lm/W	A	M[kg]		°K
QM 302.M1A	3000	24	3200	133	1000	33	LXF 0820	C - warm white colour, 3000K N - neutral white colour, 4000K
QM 302.M2B		32	4700	147		34		
QM 302.M2A		48	6400	133		34		
QM 352.M1A	3500	24	3200	133	1200	37,5		
QM 352.M2B		32	4700	147		38,5		
QM 352.M2A		48	6400	133		38,5		
QM 402.M2B	4000	32	4700	147	1400	43		
QM 402.M2A		48	6400	133		43		
QM 402.M3B		64	8680	136		44		
QM 402.M3A		72	9590	133		44		
QM 452.M2B	4500	32	4700	133	1500	48	LXF 1020	
QM 452.M2A		48	6400	133		48		
QM 452.M3B		64	8680	136		49		
QM 452.M3A		72	9590	133		49		
QM 502.M2A	5000	48	6400	133	1600	54		
QM 502.M3B		64	8680	136		55		
QM 502.M3A		72	9590	133		55		
QM 502.M4A		84	12780	152		56		
QM 502.M5A		100	13600	136		57		
QM 502.M6A		144	19180	133		58		

* STANDARD means a factory-set parameter, possible modifications in accordance with the guidelines of the customer (FLEX function).
* Given luminous fluxes and efficiencies are for the neutral white colour (4000 K). For a warm colour (3000 K), the correction rate 0.95 should be applied
* Inrush current: 15 A / 500 µs

Sample marking:

QM 50 2 . M4 A . N . SLT1

- type of optics
- colour temperature
- power/flux version
- number of LED modules
- amount of arms
- height

Nowy Targ square, Wroclaw

1.3. QM

Single and double arm lighting columns with symmetrical or asymmetric (street) light distribution

Application:

Residential estates, public zones, commercial buildings, parks, squares, streets, parking lots.

Advantages and Features:

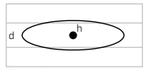
Flux range from 4340 to 9590 lm.
Luminous efficacy from 133 to 152 lm / W.
The color of light warm (3000 K) or neutral (4000 K).
Power supply 230 V, 50 Hz.
Surge protection up to 10 kV (premium version).
Power factor ≥ 0.95.
There are six different shapes of light distribution to choose from.
All columns equipped with fuse box compartment
High standard, durablity, quality and safety of columns confirmed by the ENEC mark.
Material – aluminum, stainless steel, transparent acrylic diffuser.
Uniform shape, without visible joints and weldings.
Varnished details are preliminary protected by in the preceding, multi-stage preparation bath process with the presence of metal compounds.
Profile cross-section 150 mm × 150 mm.
Version with fuse compartment.
Fuse boxes to be applied and concrete foundations – see “Accessories” brochure

IP66 IK08 KL.I

Optics:

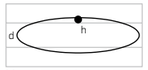
We provide designers with photometric curves (d – area width, h – height of the light source), enabling designing of lighting using our luminaires, grouped according to the following types:

TYPE 1
SLT1



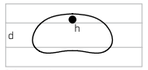
Pedestrian zones, catenary lighting, roofings, d<2h

TYPE 2
ASMT2, ASMT21



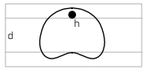
Housing estates, low installations, narrower streets, d<1.75h

TYPE 3
ASUT3, ASUT31M



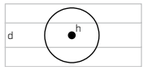
Main city streets, higher installations,- d<2.75h

TYPE 4
ASUT4



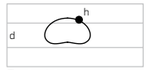
Illuminations, lighting from facades, main streets, d<2.75h

TYPE 5
SOST5, SOT5, SOW



Road crossings, projector lighting, pedestrian zones, squares, illuminations

TYPE 6
ASMPP



Pedestrian crossings

Astrodim, Flex and programming:

At the production stage, the luminaire is programmed either to work with constant parameters according to the tables shown below, or according to the user’s special demands (FLEX function). Implementing the ASTRODIM function gives you the opportunity to obtain additional savings in electricity consumption by automatic dimming the luminaires to the assumed levels in the middle of the night, when traffic is at its lowest. *(detailed description on page 8)*

Versions:

	premium	standard
0-10 V	YES	YES
ASTRODIM	YES	NO
DALIREADY	YES	NO
FLEX	YES	YES
10 kV	YES	NO
ENEC	YES	YES

Options:

PG – Execution for fixing below the ground level (invisible flange)
MS – Decorative flange cover
ST – Custom flange dimension

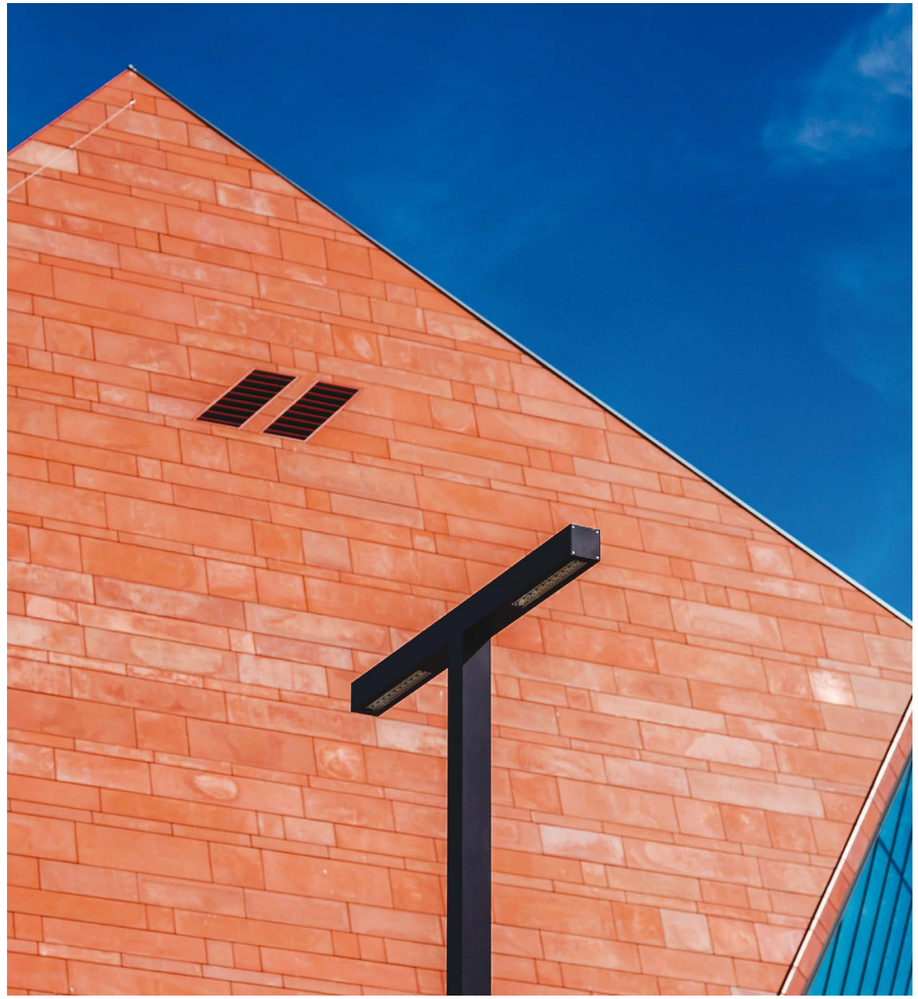
Accordance:

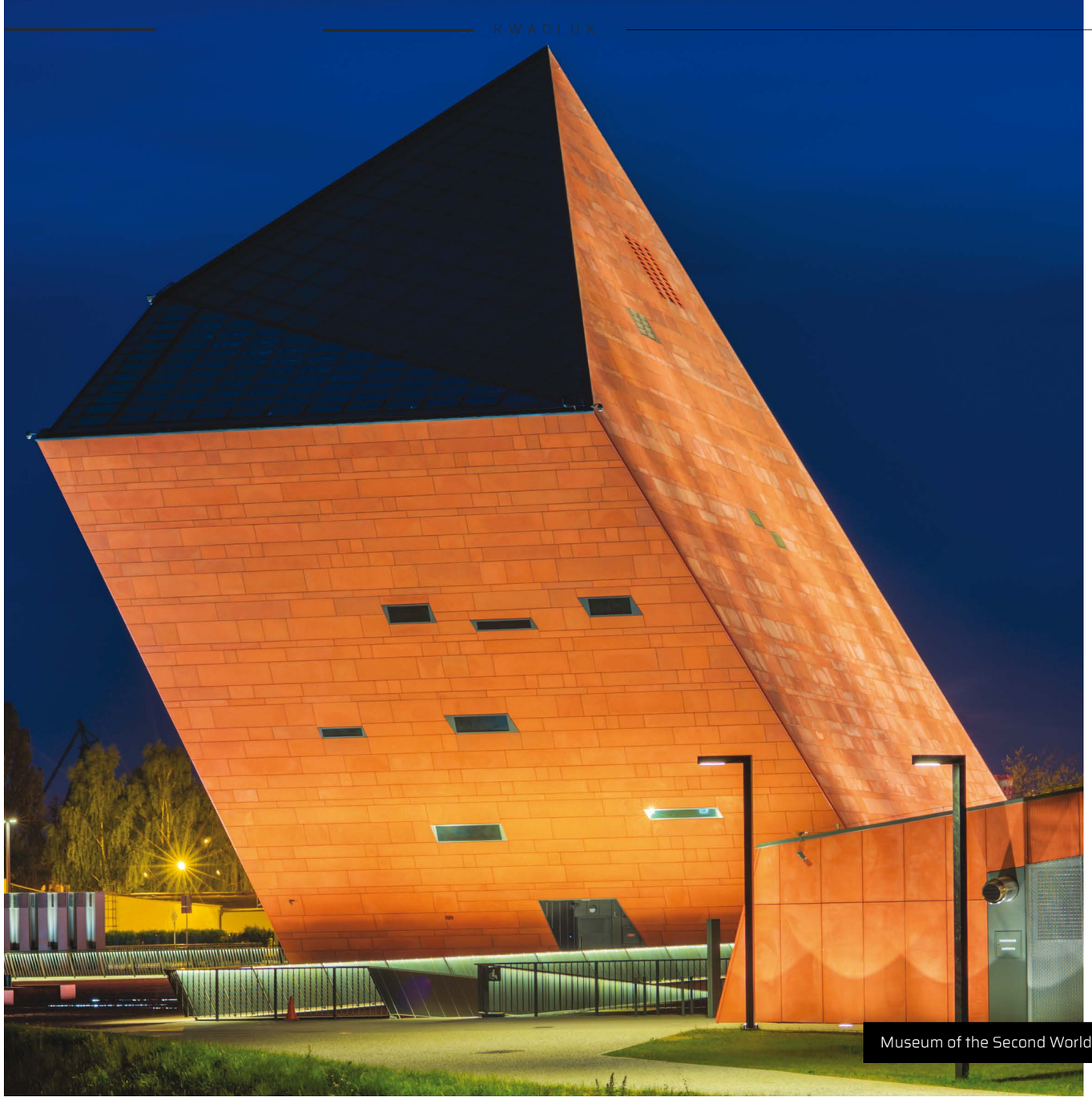
EN 60598-1, EN 60598-2-3, EN 62471, EN 55015, EN 61547, EN 61000-3-2, EN 61000-3-3

Standard colours:

RAL 7016 **RAL 9005** **RAL 9006**

Varnishing in any color available from the RAL palette – NO ADDITIONAL COSTS





Museum of the Second World War, Gdansk

6–7 m

Single arm, L-shape

	H	P[W] STANDARD*	ϕ[lm]	lm/W	A	M[kg]		°K
QM 601.M3B	6000	32	4340	136	1100	62	LXF 1020	C – warm white colour, 3000K N – neutral white colour, 4000K
QM 601.M3A		36	4790	133		62		
QM 601.M4A		42	6390	152		64		
QM 601.M5A		50	6800	136		66		
QM 601.M6A		72	9590	133		68		
QM 701.M3A	7000	36	4790	133	1100	72	LXF 1230	
QM 701.M4A		42	6390	152		74		
QM 701.M5A		50	6800	136		76		
QM 701.M6A		72	9590	133		78		

Double arm, T-shape

	H	P[W] STANDARD*	ϕ[lm]	lm/W	A	M[kg]		°K
QM 602.M3B	6000	64	8680	136	2000	73	LXF 1230	C – warm white colour, 3000K N – neutral white colour, 4000K
QM 602.M3A		72	9580	133		73		
QM 602.M4A		84	12780	152		74		
QM 602.M5A		100	13600	136		75		
QM 602.M6A		144	19180	133		76		
QM 702.M3A	7000	72	9590	133	2000	83		
QM 702.M4A		84	12780	152		84		
QM 702.M5A		100	13600	136		85		
QM 702.M6A		144	19180	133		86		

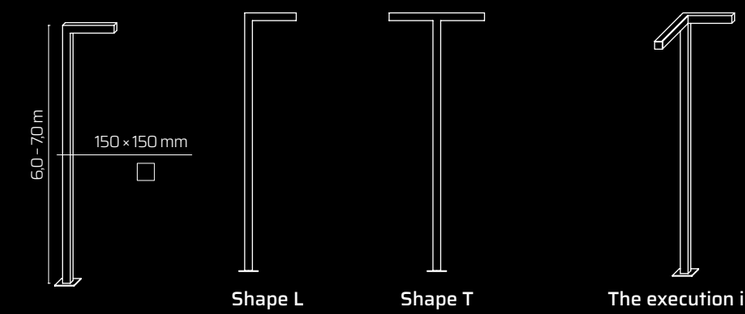
* STANDARD means a factory-set parameter, possible modifications in accordance with the guidelines of the customer (FLEX function).
* Given luminous fluxes and efficiencies are for the neutral white colour (4000 K). For a warm colour (3000 K), the correction rate 0.95 should be applied
* Inrush current: 15 A / 500 µs

Sample marking:

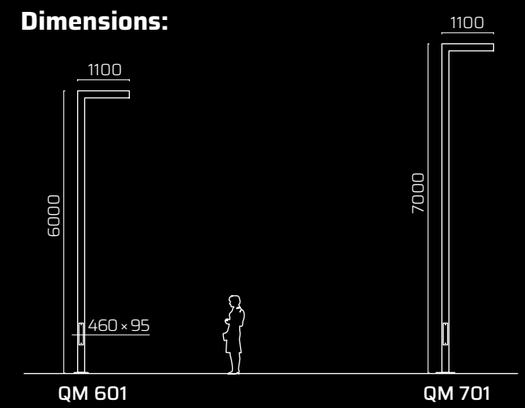
QM 70 2 . M5 A . C . 50

- type of optics
- colour temperature
- power/flux version
- number of LED modules
- amount of arms
- height

Shape:



Dimensions:



Fixing: