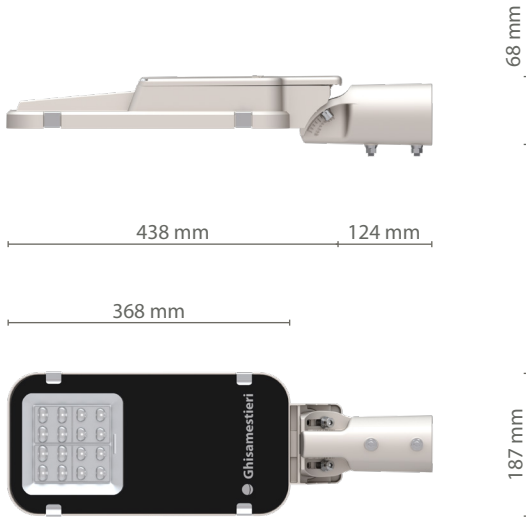




Orn 400

Product code: ORS

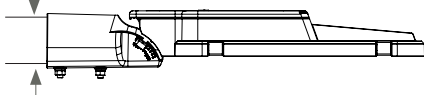


Scale: 1:10

Fixing type



Ø 42-60 mm
 Ø 60-76 mm

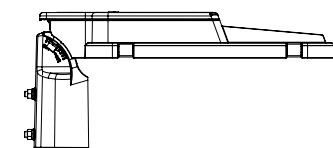


Adjustable with 5° step

+10°
 0°
 -20°



Ø 42-60 mm
 Ø 60-76 mm



Adjustable with 5° step

+20°
 0°
 -15°

Standard reference

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

Conformity	Insulation class	Protection class

Geometry and mechanical features

Size | Weight wiring excluded: L 438 mm · W 187 mm · H 68 mm | 4 Kg
 C x S: Lateral: 0,02 m² | Plan: 0,11 m²

General features

Disconnecter on request:	Cable clamp included cables section Ø 8.5mm÷Ø14mm
Power source:	220-240V 50/60Hz tolerance +/-10% other voltages on request
Current supply:	525 mA 700 mA 800 mA 1000 mA
Power Factor THD:	≥0.95 <10 % (At full load)
Expected life (Ta25°):	> 100.000 h L90B10 module current LED 700mA
Overcharge protection:	Impulse withstand CM/DM 10kV / 6kV
SPD device (optional):	With failsafe green LED indicator (*) and thermal disconnecter. (*) LED green OFF and AC network cut-off. CLASSE 1 10kV / 10kA CLASSE 2 10kV / 10 kA
Light control system: (Details on page 4)	STANDARD: current fixed virtual midnight 1-10V CLO ON REQUEST: DAC DALI PLM FR RRF NTC
IPEA:	≥ A++ according to DM 27/09/2017 (C.A.M.)

Materials and color

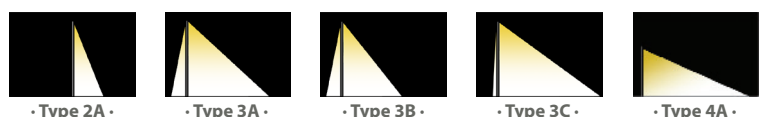
Lighting fixture:	Die cast aluminium EN1706
Optical system:	• Nano-optics in PMMA • Aluminum reflector, 99.9% oxidised and polished purity
Screen:	Ultraclear tempered glass Th. 4mm
Gaskets:	Silicon
Cable gland:	Polyamide PA66 PG16 Ø 14mm MAX
System device:	AISI 304 stainless steel
Screws and bolts:	AISI 304 stainless steel
Color:	Light grey Ghisamestieri®

LED specification

Model:	NVSL219D340/360
LED data 4000K - 700mA:	340 lm/LED 180 lm/W 85°C [Tj] ≤ 3 step macadam
Color temperature:	3.000K 4.000 K 5.700 K CRI ≥ 70
"Flip Chip" Technology:	Thanks to the gold electrodes, the LEDs are absolutely free from corrosion in sulfides saturated environment. A requirement that keeps lumens and CRI unchanged over time.
Operational temperature:	-40 / + 55 °C
Storage temperature:	-40 / + 80 °C
Photobiological safety:	in accordance with IEC/TR62778 risk free, class 0
Photometric classification:	Cut-Off

Available optical systems

(Details on page 2)



Available optical system

All photometric data below were determined in accordance with UNI EN 13032-1 and IES LM 79-08.

	TYPE 2A	TYPE 3A	TYPE 3B	TYPE 3C	TYPE 4A
OPTIC					
POLAR					
DESCRIPTION	Asymmetric optic. Asymmetric luminous distribution for installation in cycle-pedestrian paths.	Asymmetric optic. Asymmetric luminous distribution for installation: - street and highway - road wet surface.	Asymmetric optic. Asymmetric luminous distribution for installation in urban and suburban roads.	Asymmetric optic. Asymmetric luminous distribution suitable for installation on roads of very high width, squares, roundabouts.	Asymmetric optic. Asymmetric luminous distribution for installation on pedestrian crossings.

Photometric data

The photometric data refers to GHISAMESTIERI products in the standard version, with 4000K color temperature, optical reference type 3A and ambient temperature of 25 ° C. In the case of lighting calculations with the driving current and / or different color temperature from the standard, using the conversion factors for the luminous flux reported in the tables.

LED MODULES NOMINAL DATA 4000K [ta = 25°C; tj=85°C]

LED code	I [mA]	Luminous flux [lm]	Power [W]	Efficiency [lm/W]
S1Y	525	2.220	12	185
	700	2.610	15	174
	1.000	3.542	22	161
S1J	525	3.145	17	185
	700	4.002	23	174
	1.000	5.313	33	161
S1V	525	4.255	23	185
	700	5.394	31	174
	800	5.796	36	161

Data extrapolated from the Manufacturer documentations.

Photometric data

The photometric data refers to GHISAMESTIERI products in the standard version, with 4000K color temperature, optical reference type 3A and ambient temperature of 25 ° C. In the case of lighting calculations with the driving current and / or different color temperature from the standard, using the conversion factors for the luminous flux reported in the tables.

DEVICE MEASURED DATA [4000K- OPTIC 3A]

LED code	I [mA]	Luminous flux [lm]	Power [W]	Efficiency [lm/W]
S1Y	525	1.863	13	143
	700	2.340	17	138
	1.000	3.021	25	121
S1J	525	2.866	20	143
	700	3.579	26	138
	1.000	4.713	39	121
S1V	525	3.728	26	143
	700	4.820	35	138
	800	5.400	40	135

OPTIC CONVERSION FACTOR LUMINOUS FLUX

Optic type	Flux multiplier
2A	0,94
3B	1,00
3C	0,90
4A	1,06

Tk CONVERSION FACTOR LUMINOUS FLUX

Tk [K]	Flux multiplier
3.000	0,94
4.000	1,00
5.700	1,01

CRI CONVERSION FACTOR LUMINOUS FLUX

CRI (color render index)	Flux multiplier
70	1,00
80	0,90

The values in this data sheet have a tolerance of +/- 5%.

GHISAMESTIERI reserves the right to modify the data contained in this data sheet without prior notice, in order to technologically upgrade their products.

Dimming profiles and additional functions

STANDARD

Dimming profiles

Fixed Output (Costant Current)

The lighting fixture is set to use a fixed current in order to maintain the same power consumption over time.

Virtual midnight - Automatic lighting control

The driver is programmed to automatically switch the light On or Off based on the time of the day ensuring high energy saving. The maximum output is usually set during the first and last hours of operation that statistically are proven to have higher traffic, it will then decrease during the middle hours when there is less traffic. The system is able to automatically regulate itself, identifying the average between the instant it turns on and turns off. This is called "virtual midnight" and is the reference point for reducing the light emission based on the desired profile. The output will automatically adapt to the length of the night throughout the year.

Interface 1-10V - Flux control by analogic control

It is possible to adjust the amount of luminous output by means of an analog input signal that has a minimum level of 1V and maximum of 10V. The device is fitted with L-N-1 / 10V cable connection.

CLO - Costant lumen output

Considering LED performance deteriorates with use and time, it may be compensated by using a lower than maximum flux output and maintaining it constant in time by progressively increasing the current. In this case maintenance and management costs of the systems are considerably lower.

DAC - Customised automatic dimming profile

The luminous output dimming can be completely personalised by the user. It is possible to set upto 5 levels of time (per hrs) in 4 steps. The versatility of this system enables a rationalised power consumption based on specific application requirements.

DALI - Digital addressable lighting interface

The DALI standard ("Digital Addressable Lighting Interface") ensures a flexible lighting system by means of digital technology. The DALI system, which is user-friendly for installers and end users, grants unlimited management of the light control, thus ensuring the best energy saving and cost optimization. It is possible to control up to 64 modules simultaneously on the same bus. The tool is compatible with L-N-DALI cables. A cable signal is needed in addition to +/- cables.

PLM - Adjustment by remote control

It's a Power Line Communication system to remotely manage the street lights using existing power lines. Various parameters of each fixture may be adjusted to suitably customise the system according to the users' needs and to monitor power consumption and any failures. For a PLM setup fixtures must be fitted with a receiving PLM accessory and supported driver, for example a Sensor Ready type.

FR - Full range

The lighting fixture can be powered by wide voltage range (120-280V) to ensure operation in variable power situations.

NM - Nema socket

The Nema Socket interface allows the lighting fixture to be controlled wirelessly. It can be installed without any need to access the internal components and may be fitted after the lighting fixture has been already installed. The socket is IP66 and on request it can be provided with a shorting cap to close it when not in use. Internally the fixture is equipped with the necessary technology to support various management protocols, like DALI, 1-10V Interface or On-Off system with a photocell sensor.

LM - Lumawise

Lumawise is a similar to Nema Socket for the control of the lighting fixture. Together with the latest SR (Sensor Reeady) drivers, the Lumawise system guarantees an effective management of the lighting fixture.

RRF - Lighting control from flow regulators

Developed for LED refitting. The lighting fixture will be powered with adapting voltage coming from the luminous flux regulator that varies the current going to the LEDs. Existing energy saving protocols may be used. In order for this system to be implemented in the refitting, the flux regulator must be an amplitude modulated type, not phase cutting.

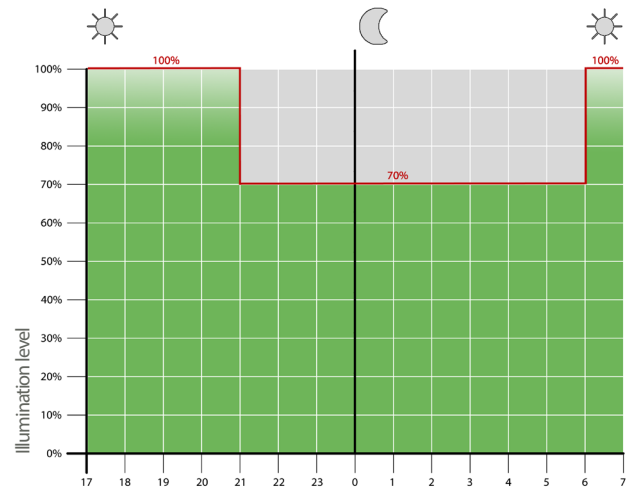
NTC - Negative Temperature Coefficient

It is a temperature sensor that adjusts the current powering the LEDs. In case the transistor junction (Tj) reaches critical high temperatures, the current is decreased in order to preserve the longevity of the LEDs.

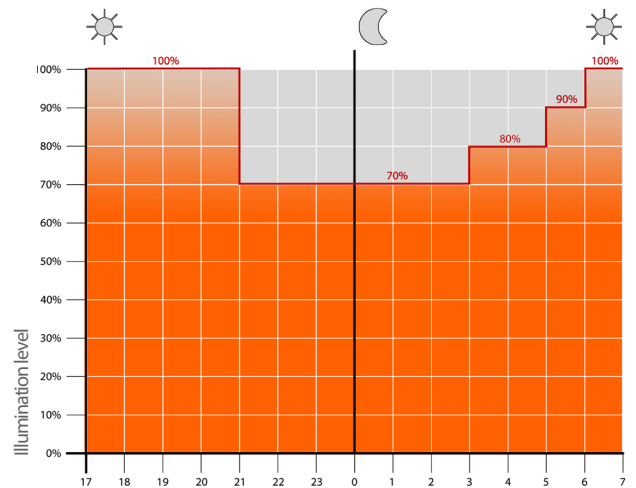
Additional functions

Dimming profiles

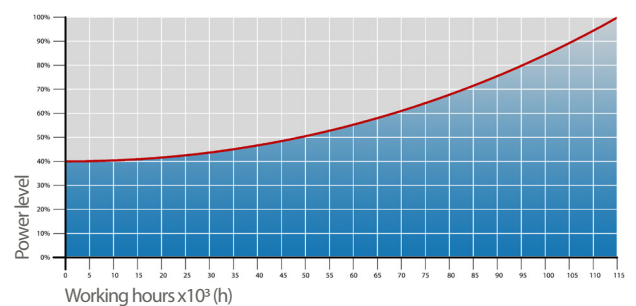
Additional functions



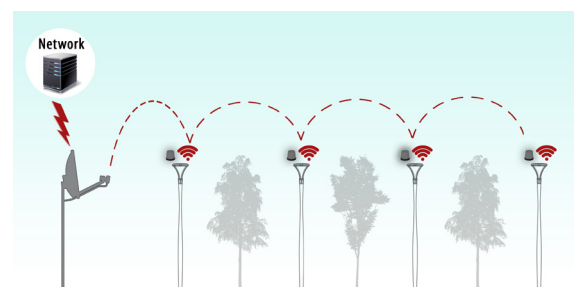
Automatic lighting control



Customized profile automatic dimming



Luminous flux decay compensation



NEMA SOCKET system

Protection cycles

GALVANIZED STEEL

Protection of galvanized steel surfaces for poles

The protection of galvanized steel elements is achieved by following steps:

- Micro sandblasting
- First epoxy layer application followed by: Wilting > Drying > Cooling
- Acrylic glaze layer application followed by: Wilting > Drying > Cooling
- Packing at least after 24-hour-drying at room temperature.

Protection of galvanized steel surfaces for brackets and pastorals

The protection of the galvanized steel elements is achieved thanks to:

- Micro sandblasting
- Phosphoric pickling bath at a ph level ranging from 1.5 to 3
- Rinsing with demineralised water
- First powder layer application
- Kiln firing
- Application of a final powder layer
- Kiln roasting of the final powder layer at 180°
- Cooling.

CAST IRON

Protection of cast iron surfaces for bases

The protection of cast iron elements is achieved by the following treatments:

- Surface micro shotblasting
- Mono-component dip galvanizing followed by: Wilting > Drying > Cooling
- Epoxy micaceous primer application followed by: Wilting > Drying > Cooling
- Acrylic enamel application followed by: Wilting > Drying > Cooling.
- Packing at least after 24-hour-drying at room temperature.

DIE-CAST ALUMINIUM

Protection of die-cast aluminium surfaces for lighting fixtures, tops, collars, brackets and pastorals

Brackets, pastoral, and die-cast accessories undergo a cycle of powder painting which creates a barrier against the corrosion of metal parts. Moreover this barrier makes the finished product comply with design specifications in terms of surface roughness, color and reflectance. The cycle consists of the following steps:

- Micro sandblasting
- Hot pickling bath in a zinc-based phosphodegreasing solution
- Phospho-chromatation for surfeces clearing
- Washing with water
- Rinsing with demineralised water and subsequent drying
- First powder layer application followed by kiln baking at 180°
- Final powder layer application using a High Durability product and final kiln roasting at 180°C.



Salt spray test | FLORIDA TEST

The top quality of such treatments is confirmed by salt spray tests performed in accordance with standard ISO 9227:2017 Neutral Salt Spray test (NSS).

The test was carried out for 5.000 hours at 35 °C and demonstrated through the report test released.



Ghisamestieri the green way of light s.r.l

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