

Timeless and familiar design, versatile and robust, low power consumption and reduced glare.

Nova system performs outstandingly against the most stringent standards in energy-efficient urban lighting.

Able to elegantly blend into its surrounding, the system three luminaire types, three configurations and six different optics give Nova the unique capacity to meet any installation requirements.

DECORATIVE



COMFORT



PERFORMANCE



NOVA

Scale 1:20
Dimensions in mm/in

The system features three luminaire types with LED lights and different post heights, with either a linear or a swan neck bracket.

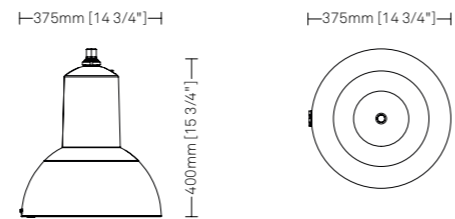
Materials

The posts are made of steel, with components made of cast iron, while the luminaires are made of die-cast aluminium.

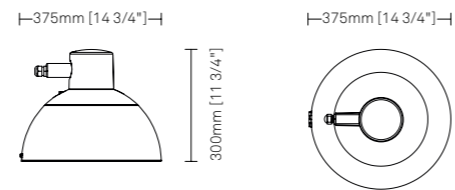
Finishes

The standard colour is the so-called Neri Grey that is obtained from a chromatic combination, which has been developed after a long aesthetic research. The posts are painted using a water-based and highly eco-friendly process.

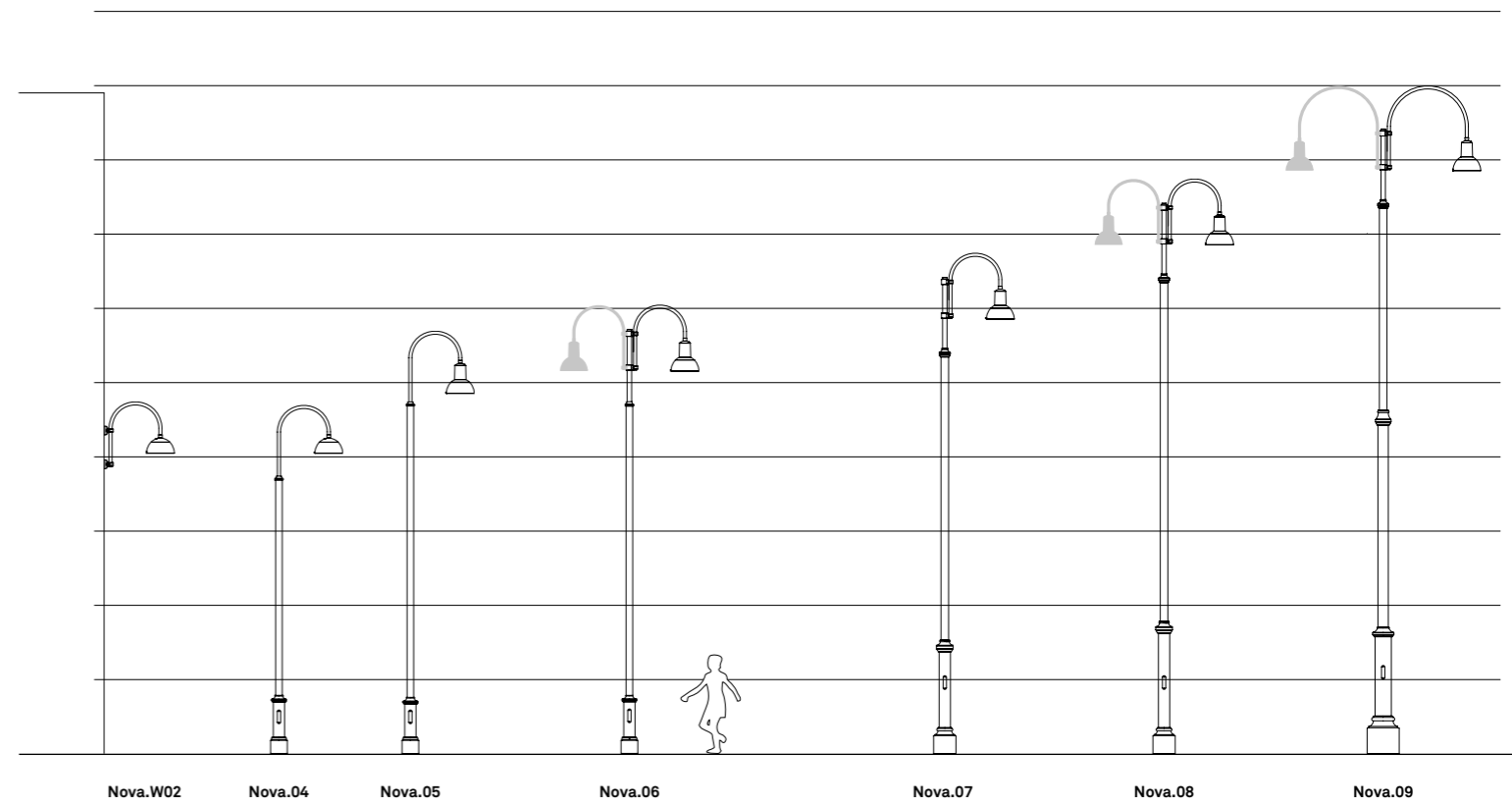
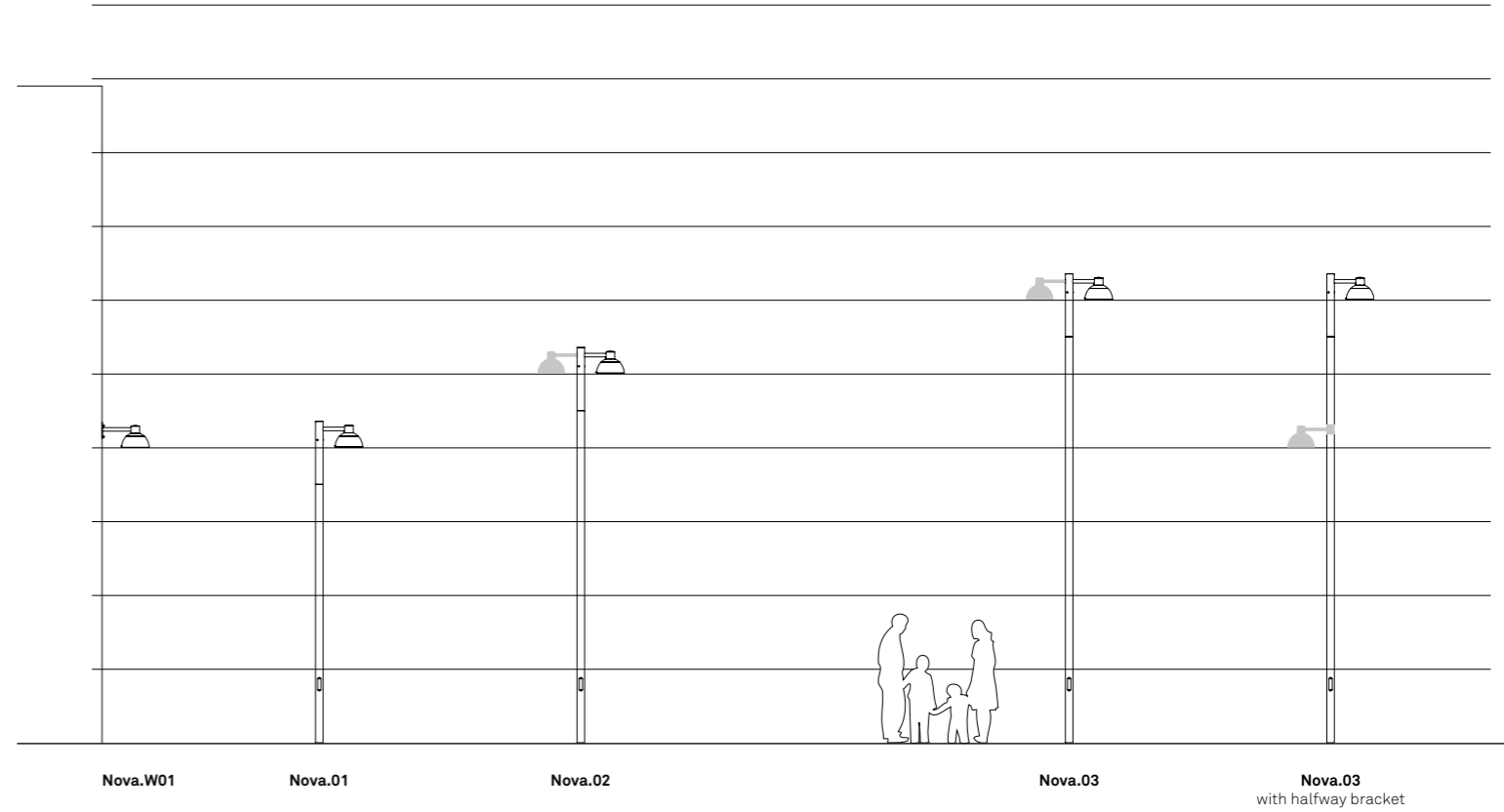
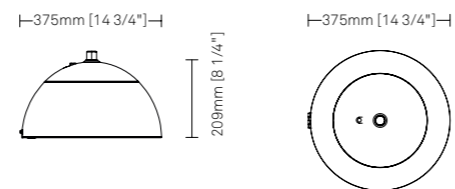
Nova – SNN03



Nova M – MNN13



Nova S – SNN23





Versions

Suspended, catenary, side-entry

Applications

Roads, squares and parks, pedestrian and cycling paths, residential areas, retail, offices

Performance

Latest generation LED technology combined with multilayer lenses, energy savings, heat dissipation

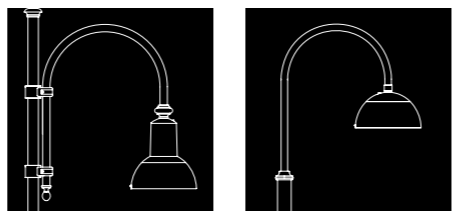
Maintenance

Ease of installation and parts replacement

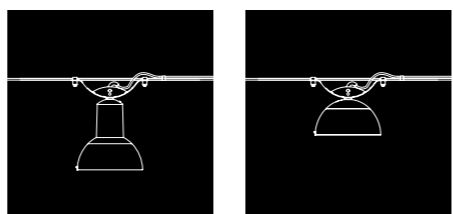
VERSIONS

Nova is designed to adapt to the different scenarios typical of cities and to guarantee consistency throughout thank to the different versions and related accessories available: suspended (with male G3/4), catenary, side-entry (column or wall).

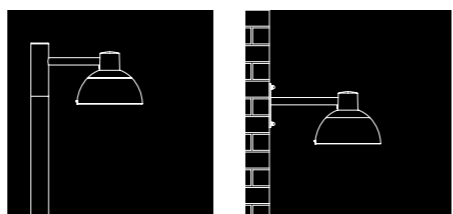
Suspended with male G3/4



Catenary



Side-entry column/wall



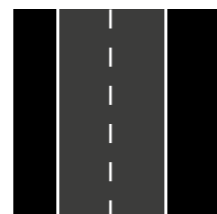


The size of the luminaire designed for the side-entry version allows installations at lower heights, making Nova versatile and ideal for both outdoor and indoor.

APPLICATIONS

Roads

High efficiency and reduced glare are guaranteed for the different road optics.



Squares and parks

Uniform light with high colour rendering makes public spaces pleasant and safe to enjoy.



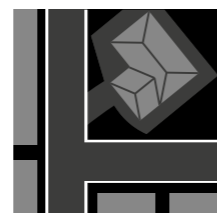
Pedestrian and cycling paths

Light is concentrated on the path, so that disturbances and visual pollution of green areas are prevented. Effective illumination is guaranteed in harmony with the surroundings.



Residential areas, retail, offices

The combination of functionality and aesthetics allows the product to integrate easily in architectural contexts, either outdoors or indoors.





MULTILAYER TECHNOLOGY

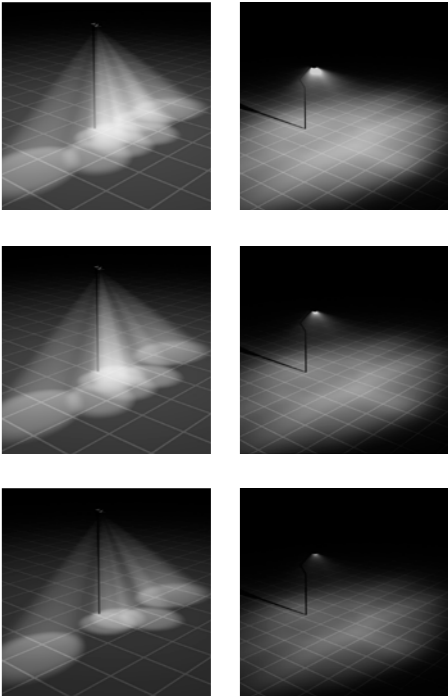
Reduced glare thanks to the wide emission surface. Latest generation LED Cree XP-G2 and PMMA multilayer lenses provide high and constant performance over time, even in case of failure of a single source.

The optical system is composed of overlapping PMMA lenses with high performance and constant light transmission.

Nova is equipped with highly efficient latest generation of LED Cree XP-G2 positioned on a ceramic base to provide high thermal conductivity and electrical insulation for a longer service life.

The wide emission surface and the perimeter reflector increase the emission efficiency maintaining reduced glare values.

Customised distributions of light can be obtained thanks to the flexibility in composing the lenses.



On the left, from top to bottom, diagrammatic views of LEDs without multilayer lenses. On the right, from top to bottom, LEDs with multilayer lenses.

**PERFORMANCE:
ENERGY SAVING**

Proper management of electronic luminous flux means benefits in terms of energy saving and life cycle of the product.

Thanks to electronic ballasts equipped with intelligent systems the lighting management guarantees high energy savings. The driver chosen for Nova can be equipped with the features below:

NCL (Neri Constant Lumen)

Keeping flows consistent

The driver allows the initial flow to be kept consistent throughout the product life cycle by calibrating the current supply of the LEDs and ensuring the same luminous flux over time.

NVL (Neri Variable Lighting)

Stand-alone setting

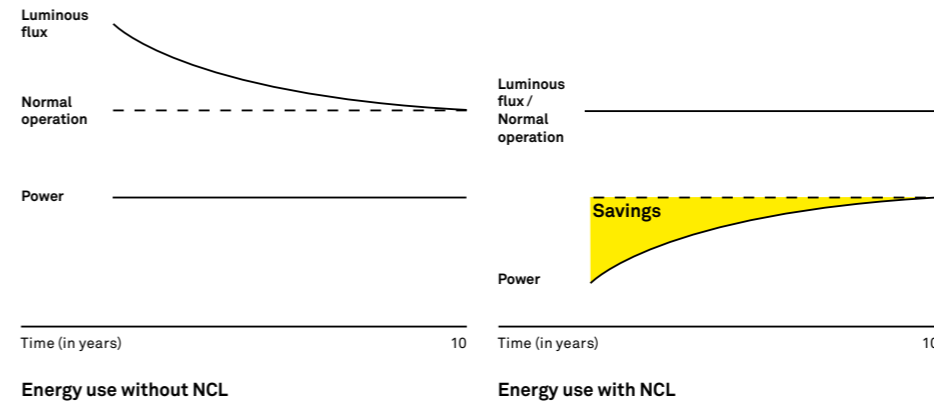
The driver is equipped with a stand-alone control that automatically adjusts the light flow during the operational period, which is automatically set according to the seasons. The standard control uses step dimming, and up to 5 dimming levels on request.

DALI, 1-10V

Remote lighting management system

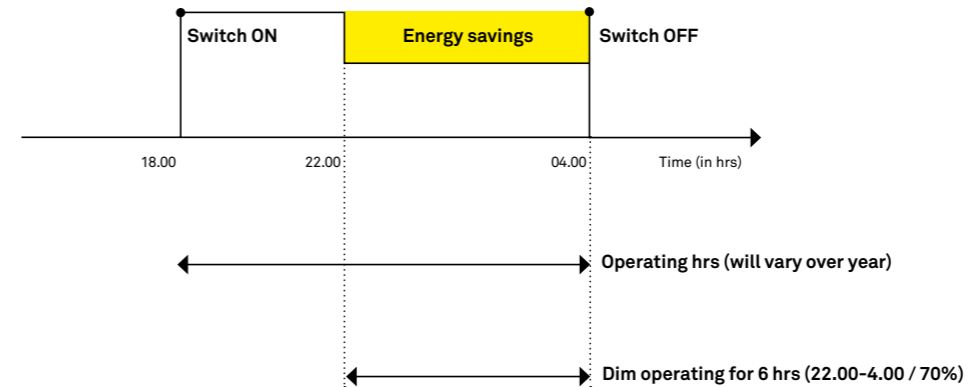
With the two-way digital DALI protocol lighting levels can be adjusted, consumption and system diagnostics monitored. By the analog signal 1-10V, the illumination levels regulation is enabled. Inside the products on the cabling board, space has been made to accommodate an electronic unit for remote management functionalities.

NCL - KEEPING FLOWS CONSISTENT



The light output of the system is kept consistent throughout the life of the product by acting on the current supplied and compensating for the decay of the source.

NVL - STAND-ALONE SETTING



Dimming preset cycle: from the switching on to 22:00 the 100% of luminous flux is guaranteed; from 22:00 until shut-down the guaranteed flux is 70%.



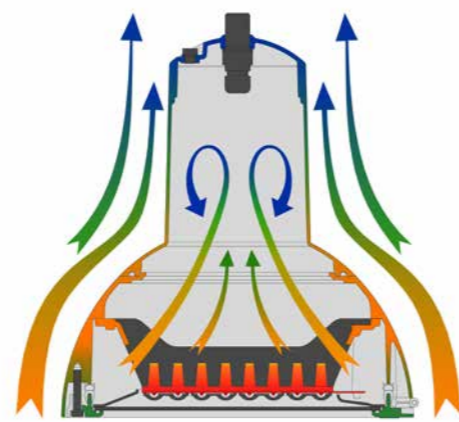
Driver Philips Xitanium Constant Current Xtreme



PERFORMANCE: HEAT DISSIPATION

Thermal management is critical to the proper functioning and long life of LED sources. Nova is equipped with a heat dissipation system able to maintain the junction temperature low, extending in this way the life of the light source.

The heat dissipation works by conduction: the aluminum body of the heat sink allowing the exchange of heat with the outside, while the shape of the internal structure allowing natural air circulation and minimising accumulation of localised heat.

Because of such a heat dissipation system is able to keep the LED junction temperature below the limits that guarantee the expected useful life, the luminaire can be used at temperatures up to 50°C.



 conduction
 air circulation



MAINTENANCE

Luminaire opening



During the maintenance operations no screw or component separates from the luminaire structure. A routine maintenance, other than cleaning the outside of the structure and the screen from dust and smog, is not required.

To access the optic simply unscrew and rotate the frame.



Automatic disconnecter takes off electricity at electrical component.

Removing gear tray



The gear tray is fully replaceable by simply disconnecting the two connectors and loosening the screws holding it.

The luminaire can also be refitted via a simple replacement of the wiring and/or the LED module.



TECHNICAL FEATURES

Fixing

- Suspended (with male G3/4 or with clevis)
- Catenary
- Side-entry (column or wall)

Materials

- Die-cast aluminum
- Extra-clear transparent flat glass
- Fixing elements in stainless steel
- Internal reflector in PC

Finishes

- Top in Neri Grey, bottom in white RAL 9010 (SNN03L, MNN13L)
- Colour RAL 9010 (SNN23L)

Main components

- Aluminum frame with fixing and heat dissipation function
- Opening aluminium lower ring with screen to access wiring and optical compartment
- Silicone gasket between top and bottom parts
- Screen is flat glass with impact resistance IK08
- Plastic reflector to recover flux and reduce glare
- 2x2 refractive modular lenses in PMMA
- Osmotic valve to balance internal/external pressure
- Appropriate space for any auxiliary for remote control devices (Smart City Ready) and additional surge protection devices

Electrical auxiliaries

- Programmable electronic power supply with auto diagnostic function
- Automatic disconnecter when opening
- Terminals wires max. section of 2.5mm²
- PG16 cable gland
- Surge protection for differential/common mode up to 10kV/10kV

Power supply

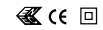
- Estimated life (EN 62722-2-1, LM80 data): 100.000h L85B10 (T_q = 25°C)



TECHNICAL FEATURES: LED MODULE

Performance

MAIN TECHNICAL DATA



SUPPLY VOLTAGE

230V, 50/60Hz frequency

SURGE PROTECTION

6kV L-N / 10kV L/N-frame

POWER SUPPLY

Programmable electronic

POWER FACTOR CORRECTION

PFC > Cos φ 0.9

ELECTRICAL INSULATION

Class II

ENCLOSURE PROTECTION

Water and dust IP66

Mechanical impacts IK08

PLANNING INFORMATION

For information related to the combinations between flux size options, power and colour temperature see the web site

Neri SpA reserves the right to modify its products and documentation without obligation to give prior warning

SCREEN SHAPE

EXTRA-CLEAR TRANSPARENT FLAT GLASS – Full Cutoff

OPTIC SYSTEM

TYPE I – SYMMETRIC ROAD (NLG 28)

TYPE II – ASYMMETRIC ROAD OR CYCLE PATH (NLG 20)*

TYPE III – ASYMMETRIC ROAD (NLG 21)

TYPE III – ASYMM. ROAD WITH SIDEWALK AND CYCLE PATH (NLG 22)*

TYPE IV – STRONG ASYMMETRIC (NLG 17)*

TYPE V – ROTOSYMMETRICAL (NLG 18)

COLOUR TEMPERATURE

3,000K

4,000K

FLUX SIZES

Colour Temp.	Flux (lm)	Power (W)	Efficiency (lm/W)
3,000K	2,500lm	21W	119lm/W
3,000K	3,500lm	31W	111lm/W
3,000K	4,500lm	38W	118lm/W
3,000K	6,000lm	53W	114lm/W
3,000K	7,500lm	69W	108lm/W *
4,000K	2,500lm	19W	134lm/W
4,000K	3,500lm	27W	130lm/W
4,000K	4,500lm	35W	129lm/W
4,000K	6,000lm	48W	124lm/W
4,000K	7,500lm	61W	124lm/W *
4,000K	9,000lm	77W	117lm/W *

DRIVER FUNCTIONS

1 - 10V + NCL

DALI + NCL

NVL + NCL

ELECTRICAL DEVICES

AUTOMATIC DISCONNECTOR

* Options available only for SNN03L and MNN13L versions.

Planning

TYPE I – SYMMETRIC ROAD (NLG 28)

CLASS	H 6.5m, W 6m		TI (%)	H 7m, W 7m		TI (%)
	Spacing	Flux		Spacing	Flux	
C2	28m	9,000lm	-	-	-	-
C3	-	-	-	33m	9,000lm	-
M3	28m	6,000lm	14%	31m	7,500lm	12%
M4	28m	4,500lm	12%	-	-	-

TYPE II – ASYMMETRIC ROAD OR CYCLE PATH (NLG 20)

CLASS	H 7m, W 6m		H 7m, W 7m	
	Spacing	Flux	Spacing	Flux
CE2 (20 lux)	32m	9,000lm	30m	9,000lm
ME3b	30m	9,000lm	26m	6,000lm
ME4a	30m	6,000lm	-	-
S1	36m	7,500lm	36m	7,500lm
S2	41m	7,500lm	41m	7,500lm

TYPE III – ASYMMETRIC ROAD (NLG 21)

CLASS	H 7m, W 8m		H 7m, W 9m	
	Spacing	Flux	Spacing	Flux
CE2 (20 lux)	28m	9,000lm	29m	9,000lm
CE4 (10lux)	28m	4,500lm	29m	4,500lm
ME3b	24m	6,000lm	24m	9,000lm

TYPE III – ASYMM. ROAD WITH SIDEWALK (a) AND CYCLE PATH (b) (NLG 22)

CLASS	H 7m, W 7m		W 2m W 2m		H 8m, W 7m		W 2m W 2m	
	Spacing	Flux	(a)	(b)	Spacing	Flux	(a)	(b)
CE1 (30 lux)	21m	9,000lm	S1	S2	23m	9,000lm	S2	S4
CE2 (20lux)	27m	9,000lm	S2	S2	24m	7,500lm	S2	S4
ME3b	26m	7,500lm	S2	S3	22m	7,500lm	S2	S4

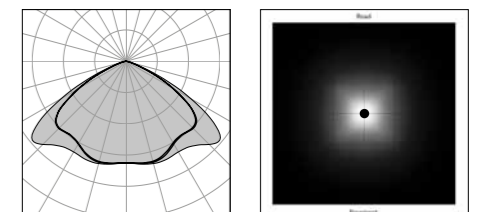
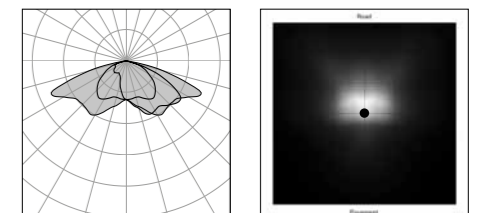
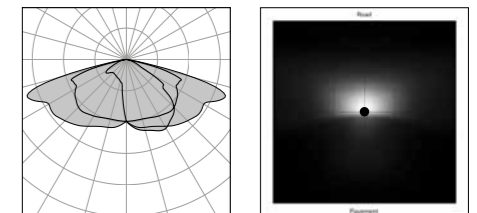
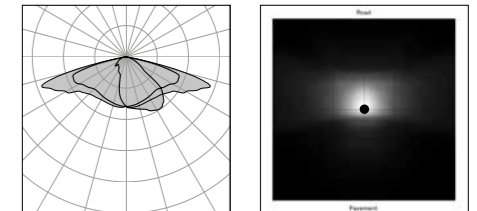
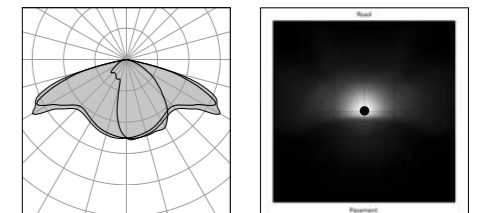
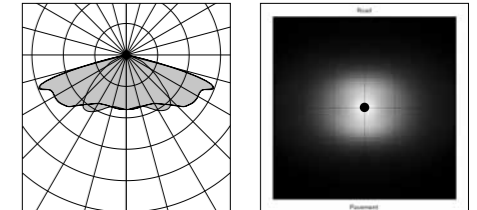
TYPE IV – STRONG ASYMMETRIC (NLG 17)

CLAS	H 7m, W 15m		H 8m, W 15m	
	Spacing	Flux	Spacing	Flux
S1	21m	9,000lm	24m	9,000lm
S2	18m	7,500lm	23m	6,000lm

TYPE V – ROTOSYMMETRICAL (NLG 18)

CLASS	H 7m		H 8m		H 4m	
	Spacing	Flux	Spacing	Flux	Spacing	Flux
S1	-	-	24x24	9,000lm	-	-
S2	22x22	9,000lm	24x24	7,500lm	14x14	3,500lm
S4	-	-	-	-	16x16	3,500lm

Photometric light distribution



SURGE PROTECTION

In the street lighting area, because of their exposed position, the devices are subject to voltage surges and external disturbances (discontinuous insertion of loads on the line, faults on the lines up or downstream, direct or nearby lightning) that may cause damage or malfunctions. Furthermore, in the LED lighting devices, where electronic components are predominant, resistance to voltage surges becomes even more necessary.

Given a class I or class II system, the installed device must correspondingly be a class I or class II device (recommended from a product protection point of view).

Protection of Neri products

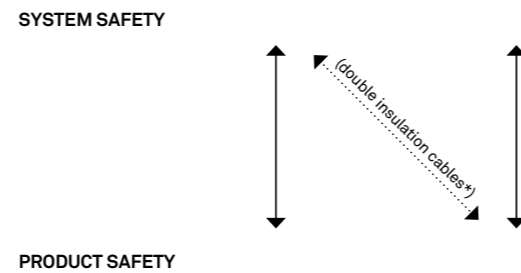
CL II 6kV/10kV (standard protection)

- Equipotential connection useful for protecting drivers and LED modules
- Use of components approved by safety standards
- Additional differential protection can be inserted up to 10kV/10kV

CL I 6kV/10kV (standard protection)

- Protective earth connection
- Presence of SPD to guarantee 10kV/10kV (on request)

The supplementary power dischargers (SPD) can be present only on class I devices and systems, since they have the function of discharging the overvoltage energy to ground. Ground tests must therefore be conducted on every product.



* If the system is a CL I system and you want to install a CL II product, the product input cables must be double or reinforced insulation in order to guarantee the safety of the product itself.

NERI LUMINAIRE	DM/CM STANDARD PROTECTION	DM/CM CUSTOM PROTECTION
CLASS II	6kV/10kV	10kV/10kV
CLASS I	6kV/10kV	10kV/10kV

HIGHLIGHTS

Main features

- Nova is a *Performance* category device
- Particularly suited for roads and lanes with mixed traffic, and for different urban contexts, from the city centre to residential areas
- Designed in full compliance with the lighting standards, with minimal energy consumption, using LEDs and high performance optical solutions
- Designed to reduce glare, without compromising the lighting effectiveness

Flux sizes

- The main factors in lighting design are system flux and photometry
- Neri presents products with their flux sizes and photometries, to ensure values and geometries remain constant over time

This approach allows:

- Same flux regardless of the solution chosen
- Adoption of the best technology on the market

Multilayer

Nova adopts a technology with multilayer lenses:

- Each LED is associated to a lens
- All lenses are equal and cover the entire area to be illuminated; in case of failure of a single source, there is no loss in the uniformity of illumination on the ground

Light emitting area

The glaring effect, typical of the individual point sources, is drastically reduced due to some technical devices:

- White color PCB
- Perimeter reflector
- Large light emitting area



VERSIONS AND CODES

In order to configure the Nova luminaire, type of mounting, optic, luminous flux related to colour temperature and driver functions need to be chosen. Their related codes have then to be added in sequence one to the other, following the order of the tables below, starting from type of mounting (eg: **SNN03L**), optic (eg: **17**), luminous flux (eg: **1N1**) and driver (eg: **02**). The code of the chosen configuration will be: **SNN03L 17 02 1N1**.

Nova – Performance

CODE	Mounting
SNN03L	G3/4
SNN23L	G3/4
MNN13L	Side-entry

CODE	Optic
17*	Type IV
18	Type V
20*	Type II
21	Type III
22*	Type III
28	Type I

CODE	CCT	Flux
1N0	3,000K	2,500lm
1N1	3,000K	3,500lm
1N2	3,000K	4,500lm
1N3	3,000K	6,000lm
1N4*	3,000K	7,500lm
3N0	4,000K	2,500lm
3N1	4,000K	3,500lm
3N2	4,000K	4,500lm
3N3	4,000K	6,000lm
3N4*	4,000K	7,500lm
3N5*	4,000K	9,000lm

CODE	Driver functions
02	1-10V + NCL
06	DALI + NCL
14	NVL + NCL

The product with male G3/4 can be mounted directly on different Neri systems. The side-entry product can be mounted on different Neri systems using specific brackets.

* Options available only for SNN03L and MNN13L versions.

Neri S.p.A.
S.S. Emilia 1622
47020 Longiano (FC) · Italy
T +39 0547 652111
F +39 0547 54074

Neri France S.à.r.l.
3, rue du Colonel Moll
75017 Paris · France
T +33 1 42 79 57 43

Neri North America Inc.
1547NW 79th Avenue
Miami, FL 33126, USA
T +1 786 315 4367
F +1 786 693 7763

Neri Lighting India Pvt. Ltd.
181 Evoma
14 Bhattaralli · K R Puram
Bengaluru · 560 066
T +91 80 3061 3658

Neri S.p.A. (DMCC Branch)
29-29 Reef Tower Cluster O
JLT – Jumeirah Lake Towers
P.O. Box: 5003348 · Dubai · UAE
T +971 4 448 7246
F +971 4 448 7112

