

## Compliance

- In compliance with EN 60598-1; EN 60598-2-3; EN 62031;  
 EN 55015 EMC; EN 61547 EMC; EN 62471



## Mounting

- Suitable for mounting on head post or bracket.  
 - Central flange with hole Ø 28 mm on the bottom frame.

## Dimensions - Weight - Area exposed to wind pressure

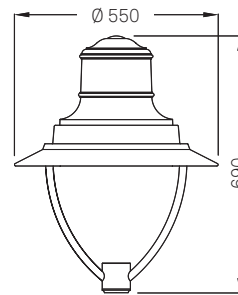
Height	width	length	Diameter	Weight	Area
690 mm			550 mm	10,5 Kg	0,105 m <sup>2</sup>

## Materials

- Die-cast and sheet aluminum.  
 - Hot galvanized steel.  
 - Stainless steel fasteners.

## Structure - Main components

- Upper frame tilting, made in die-cast and sheet aluminum, for access to the optical and wiring compartment.  
 - Bottom frame composed of a ring in die-cast aluminum and two curved uprights in hot galvanized steel, connected to a central flange with hole Ø 28 mm, for fixing to the support with a cap in plastic material.  
 - Neoprene gasket between the upper and bottom frames  
 - LED module Philips Fortimo LED™ LLM, with thermic dissipation directly on the frame.  
 - Protection screen made in tempered transparent extra-clear silk-screened glass (IK 08 - EN 62262).  
 - Electronic power supply unit with auto diagnostics functions.  
 - Electrical disconnecter when remove the plate with LED module.



LED module Philips Fortimo LLM

## General features

Voltage V	Frequency Hz	Insulation class	Protection rating IP	Cos. φ (PFC)	Operating temperature
230	50	II	66	0,95	-30°C +50°C
Rated power from 38 to 75 W (variable depending on configuration).					
Terminals for wires with a max. section of 2,5 mm <sup>2</sup>					

## LED source - Optic system - Height of utilization - Classifications

LED Module	Thermic dissipation	Estimated life-expectancy	Optic type Geometry	Lens - reflector material
Philips Fortimo LLM	Directly on the frame	70.000 h L80 - Ta 25°C	NLG 31 Roadway	Reflector Pre-anodized Aluminum
Flux from 3.000 to 6.000 lm (variable depending on configuration)				
Height of installation from 3,5 to 5 meters				
CE-S - Lighting classes (Roadway geometry)				
Full cut-off - IES Classification				
Colour Rendering Index CRI > 70				
Minimum efficiency of the individual LEDs > 107 lm/W.				
No photobiological risk				

## Configurations (Colour temp. - Flux - Power - Efficiency)

The energetic values in the table are referred to the complete system.

Colour Temperature 3,000K				Colour Temperature 4,000K *			
Code	Flux (lm)	Watt	lm/W	Code	Flux (lm)	Watt	lm/W
1F3	3,000	38	78.9	3F3	3,000	36	83.3
1F4	4,500	53	84.9	3F4	4,500	50	90
1F5	6,000	75	80.0	3F5	6,000	67	89.5

## unctions driver configuration

Electronic driver with self-diagnostic functions and monitoring for dangerous temperatures.

Cod.	Function
02	1-10V control + constant flux control (1-10V + NCL)
06	DALI control + constant flux control (DALI + NCL) **
14	6 hours flux reduction + constant flux control (NVL 6H + NCL)

## Operation and Maintenance

- For access to the optical and wiring compartment, unscrew two screws and rotate the upper frame.  
 - Disconnecter switch when remove the support plate with LED Module.  
 - Separate electronic driver from LED module, individually replaceable.  
 - During installation, follow the instructions for the correct orientation on the support.  
 - No maintenance required except for periodical cleaning of the screen to remove dust and dirt.

## Code construction

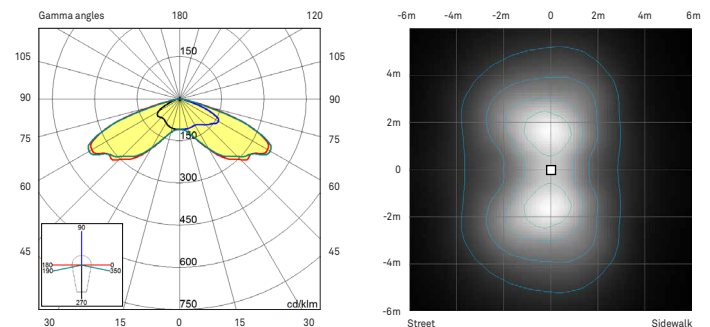
- To get the complete code of the product configured, replace the X's at the top of the code, by entering in sequence the parts of the code from the configuration tables of the LED module and driver. Example: **PN213L31 3F2 02**

## On demand - Features on request

- Classe I of insulation (in this case the product code is to be requested).  
 - (\*) 4.000 K Color light temperature

## Note

- (\*\*) For the configurations with 6,000 lm, is available also the driver function 06.



NLG-31 Optics for CE-S lighting classes - Full cut-off

## Compliance

- In compliance with EN 60598-1; EN 60598-2-3; EN 62031;  
 EN 55015 EMC; EN 61547 EMC; EN 62471



## Mounting

- Suitable for mounting on head post or bracket.  
 - Central flange with hole Ø 28 mm on the bottom frame.

## Dimensions - Weight - Area exposed to wind pressure

Height	width	length	Diameter	Weight	Area
690 mm			550 mm	10,5 Kg	0,105 m <sup>2</sup>

## Materials

- Die-cast and sheet aluminum.  
 - Hot galvanized steel.  
 - Stainless steel fasteners.

## Structure - Main components

- Upper frame tilting, made in die-cast and sheet aluminum, for access to the optical and wiring compartment.  
 - Bottom frame composed of a ring in die-cast aluminum and two curved uprights in hot galvanized steel, connected to a central flange with hole Ø 28 mm, for fixing to the support with a cap in plastic material.  
 - Neoprene gasket between the upper and bottom frames  
 - LED module Philips Fortimo LED™ LLM, with thermic dissipation directly on the frame.  
 - Protection screen made in tempered transparent extra-clear silk-screened glass (IK 08 - EN 62262).  
 - Electronic power supply unit with auto diagnostics functions.  
 - Electrical disconnecter when remove the plate with LED module.

## General features

Voltage V	Frequency Hz	Insulation class	Protection rating IP	Cos. φ (PFC)	Operating temperature
230	50	II	66	0,95	-30°C +50°C
Rated power from 36 to 75 W (variable depending on configuration).					
Terminals for wires with a max. section of 2,5 mm <sup>2</sup>					

## LED source - Optic system - Height of utilization - Classifications

LED Module	Thermic dissipation	Estimated life-expectancy	Optic type Geometry	Lens - reflector material
Philips Fortimo LLM	Directly on the frame	70.000 h L80 - Ta 25°C	NLG 31 Mixed areas Cycle paths	Reflector Pre-anodized Aluminum
Flux from 3.000 to 6.000 lm (variable depending on configuration)				
Height of installation from 3,5 to 5 meters				
S - Lighting classes (Geometry for mixed areas - cycle paths)				
Full cut-off - IES Classification				
Colour Rendering Index CRI > 70				
Minimum efficiency of the individual LEDs > 107 lm/W.				
No photobiological risk				

## Configurations (Colour temp. - Flux - Power - Efficiency)

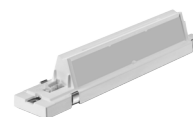
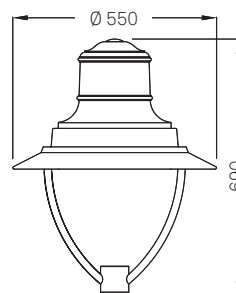
The energetic values in the table are referred to the complete system.

Colour Temperature 3,000K				Colour Temperature 4,000K *			
Code	Flux (lm)	Watt	lm/W	Code	Flux (lm)	Watt	lm/W
1F3	3,000	38	78.9	3F3	3,000	36	83.3
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1F5	6,000	75	80.0	3F5	6,000	67	89.5

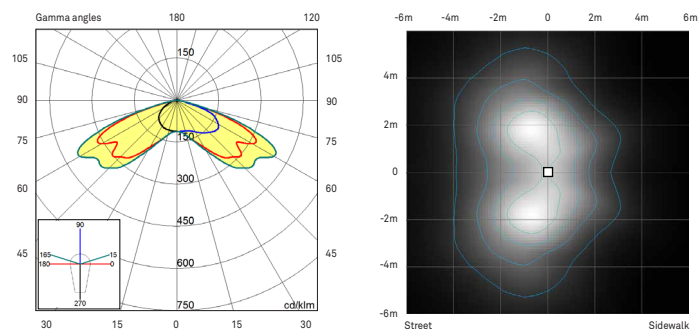
## Functions driver configuration

Electronic driver with self-diagnostic functions and monitoring for dangerous temperatures.

Cod.	Function
02	1-10V control + constant flux control (1-10V + NCL)
06	DALI control + constant flux control (DALI + NCL) **
14	6 hours flux reduction + constant flux control (NVL 6H + NCL)



LED module Philips Fortimo LLM



NLG-32 Optics for S lighting classes - Full cut-off

## Operation and Maintenance

- For access to the optical and wiring compartment, unscrew two screws and rotate the upper frame.  
 - Disconnecter switch when remove the support plate with LED Module.  
 - Separate electronic driver from LED module, individually replaceable.  
 - During installation, follow the instructions for the correct orientation on the support.  
 - No maintenance required except for periodical cleaning of the screen to remove dust and dirt.

## Code construction

- To get the complete code of the product configured, replace the X's at the top of the code, by entering in sequence the parts of the code from the configuration tables of the LED module and driver. Example: **PN213L32 3F2 02**

## On demand - Features on request

- Classe I of insulation (in this case the product code is to be requested).  
 - (\*) 4.000 K Color light temperature

## Note

- (\*\*) For the configurations with 6,000 lm, is available also the driver function 06.

## Compliance

- In compliance with EN 60598-1; EN 60598-2-3; EN 62031;  
EN 55015 EMC; EN 61547 EMC; EN 62471



## Mounting

- Suitable for suspended installation.  
- Thread tube 3/4"G (UNI 338 - ISO 228/1 BSP/G).

## Dimensions - Weight - Area exposed to wind pressure

Height	width	length	Diameter	Weight	Area
345 mm			550 mm	8.0 Kg	0,09 m <sup>2</sup>

## Materials

- Die-cast and sheet aluminum.  
- Hot galvanized steel.  
- Stainless steel fasteners.

## Structure - Main components

- Upper frame made in die-cast and sheet aluminum, with threaded tube 3/4"G (ISO 228/1 BSP/G) for fixing to suspended support, with cable gland inside.  
- Bottom frame tilting, for access to the optical and wiring compartment, composed of a ring in die-cast aluminum.  
- Neoprene gasket between the upper and bottom frames  
- LED module Philips Fortimo LED™ LLM, with thermic dissipation directly on the frame.  
- Protection screen made in tempered transparent extra-clear silk-screened glass (IK 08 - EN 62262).  
- Electronic power supply unit with auto diagnostics functions.  
- Electrical disconnecter when remove the plate with LED module.

## General features

Voltage V	Frequency Hz	Insulation class	Protection rating IP	Cos. φ (PFC)	Operating temperature
230	50	II	66	0,95	-30°C +50°C
Rated power from 36 to 75 W (variable depending on configuration).					
Terminals for wires with a max. section of 2,5 mm <sup>2</sup>					

## LED source - Optic system - Height of utilization - Classifications

LED Module	Thermic dissipation	Estimated life-expectancy	Optic type Geometry	Lens - reflector material
Philips Fortimo LLM	Directly on the frame	70.000 h L80 - Ta 25°C	NLG 31 Roadway	Reflector Pre-anodized Aluminum
Flux from 3.000 to 6.000 lm (variable depending on configuration)				
Height of installation from 3,5 to 5 meters				
CE-S - Lighting classes (Roadway geometry)				
Full cut-off - IES Classification				
Colour Rendering Index CRI > 70				
Minimum efficiency of the individual LEDs > 107 lm/W.				
No photobiological risk				

## Configurations (Colour temp. - Flux - Power - Efficiency)

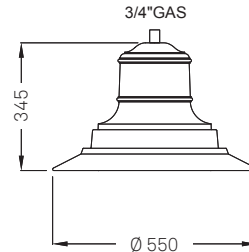
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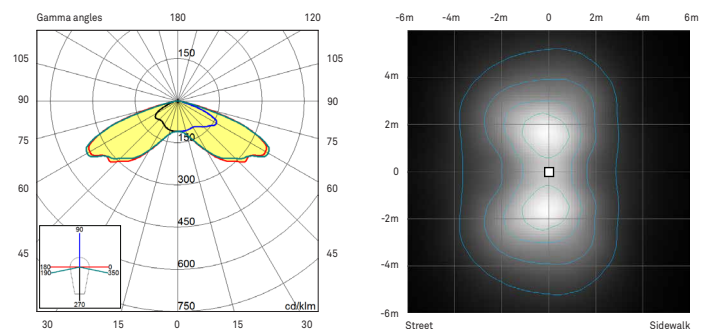
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NLG-31 Optics for CE-S lighting classes - Full cut-off

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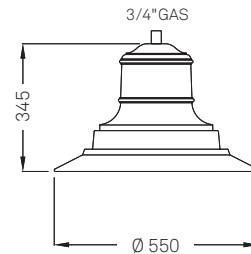
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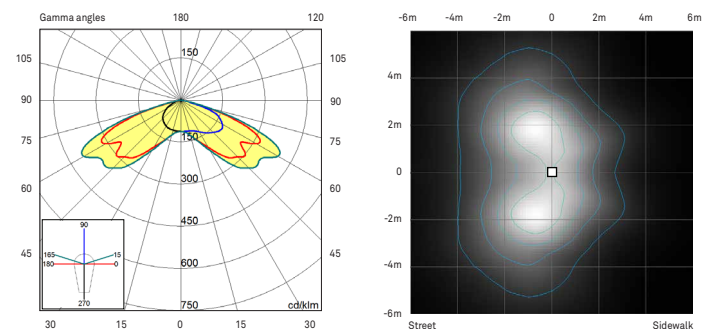
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NLG-32 Optics for S lighting classes - Full cut-off

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