Cutoff | Optical Flexibility | Low Glare | A++ | Photobiological safety Exemp group

Nottingham HS

Product code: NOT HS

Timeless

Regenerable luminaire: replaceable LEDs and drivers without tools.

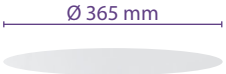
Scale: 1:12

On request

Diffusers - polycarbonate with UV protection

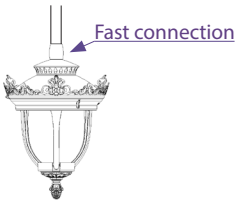
Glass thickness 4mm

Lira



Fixing type

Suspended
Standard: fast connection
On request: Ø ¾" Gas



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
CE EAC		IP 66 · IK 08

Geometry and mechanical features

Size | Weight:	Ø 480 mm · H 695 mm | 6,08 Kg
C x S:	Lateral: 0,13 m² | Plan: 0,18 m²

General features

Disconnector included:	Cable clamp included | cables section Ø 8.5mm÷Ø14mm
Power source:	220-240V | 50/60Hz | tolerance +/-10% | other voltages on request
Current supply:	525mA | 700mA | 1.000mA
Power Factor | THD:	≥0.95 | <10 % (At full load)
Expected life (Ta25°):	> 100.000 h | L90B10 | module current LED 700mA
Overcharge protection:	Impulse whitstand CM/DM 10kV / 6kV
SPD device (optional):	With falsafe green LED indicator (*) and thermal disconnector. (*) LED green OFF and AC network cut-off. CLASSE 1 | 10kV / 10kA CLASSE 2 | 10kV / 10 kA
Light control system: (Details on page 3)	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

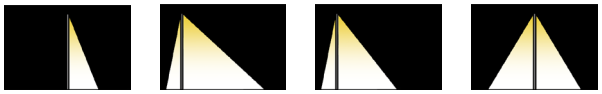
Lighting fixture:	Die cast aluminium | EN1706
Optical system:	Nano-optics in PMMA
Gaskets:	Silicon
Cable gland:	Polyamide PA66 | PG16 | Ø 14mm MAX
System device:	inox steel AISI 304L
screws and bolts:	inox steel AISI 304L
Color:	Dark grey (ferromicaceo) Ghisamestieri®

LED specification

Model:	NICHIA NVSL219D340/360
LED data 4000K - 700mA:	340 lm/LED | 180 lm/W | 85°C [Tj] | ≤ 3 step macadam
Color temperature:	2.200 K | 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.
Number of modules:	From 1 to 2
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

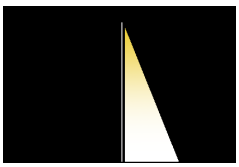
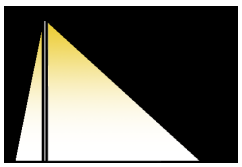
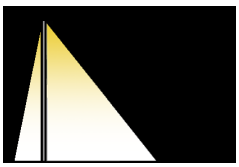
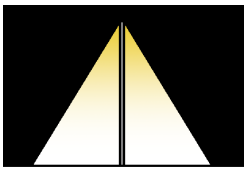
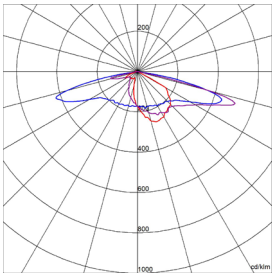
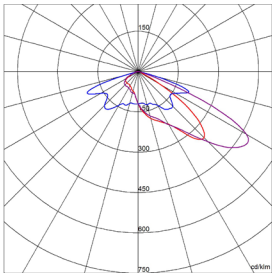
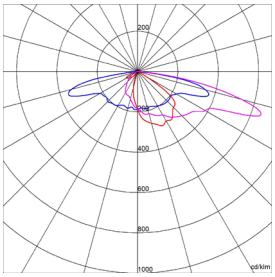
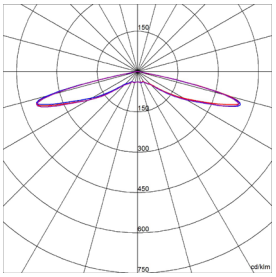
Available optical system

(Details on page 2)



Available optical systems

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

	TYPE 2A	TYPE 3A	TYPE 3B	TYPE 5A
OPTICS				
POLAR				
DESCRIPTION	Asymmetric optic. Asymmetric luminous distribution for installation in cycle-pedestrian paths.	Asymmetric optic. Asymmetric luminous distribution for installation in street and highway.	Asymmetric optic. Asymmetric luminous distribution for installation in urban and suburban roads.	Rotational symmetric optics. Luminous distribution with rotational symmetry suitable for installation in large areas, squares, parks and parking lots.

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]
A1Y	525	2.220	12	185
	700	2.610	15	174
	1.000	3.542	22	161
A1J	525	3.145	17	185
	700	4.002	23	174
	1.000	5.313	33	161
A2Y	525	4.255	23	185
	700	5.394	31	174
	1.000	7.084	44	161
A2J	525	6.475	35	185
	700	8.004	46	174
	1.000	10.626	66	161

Data extrapolated from the Manufacturer documentations.

DEVICE MEASURED DATA [4000K- OPTIC 3A]

LED code	I [mA]	Luminous flux [lm]	Power [W]	Efficiency [lm/W]
A1Y	525	1.816	13	140
	700	2.294	17	133
	1.000	2.887	25	117
A1J	525	2.728	19	141
	700	3.436	26	133
	1.000	4.546	39	117
A2Y	525	3.616	26	140
	700	4.637	35	132
	1.000	6.028	52	116
A2J	525	5.425	39	140
	700	6.841	52	132
	1.000	8.960	77	116

OPTIC CONVERSION FACTOR LUMINOUS FLUX

Optic type	Flux multiplier
2A	0,94
3B	1,00
5A	1,00

Tk CONVERSION FACTOR LUMINOUS FLUX

Tk [K]	Flux multiplier
2.200	0,79
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

Constant current

The driving current of the lighting fixture is fixed. In this way energy consumption and the luminous flux remain constant.

Automatic lighting control - Virtual midnight

Automatic luminous flux control. According to a programmable profile, the driver automatically adjusts the light intensity depending on the time. The maximum flux will be concentrated during the first and last hours of power of the lighting fxture, decreasing the consumption during the central part of the night, statistically less busy. The reduction of consumption modalities adapts itself to changes of length of the night- time period during the year. The driver is programmed inside the company.

1-10V - Flux control by analogic control

The adjustment of the lighting fixture allows to drive the louminous level by an analog signal. The minimum level corresponds to 1V and the maximum level to 10V. The device is designed for cable connection L-N-1 / 10V.

Additional functions

CLO - Costant lumens output

LEDs life time is subject to an ordinary performance deterioration. To maintain constant the luminous flux in exit, the decrease of the performances can be compensated through a progressive increase of the current in entrance to the LEDs. In this way, a higter factor of maintenance can be used in comparison to the ordinary one, guaranteeing an energetic saving that comports a reduction of the management's costs of the plant.

ON REQUEST

Dimming profiles

DAC - Customized profile automatic dimming

The adjustment of the luminous flux can be totally customized by the user. It is possible to set up till to 5 levels of hourly adjustment in 4 steps. The versatility of this system allows to rationalize consumption in function of specific application requirements.

DALI - Digital addressable lighting interface

DALI is the standard digital technology for the management of devices based on a digital signal, able to direct uniquely up to 64 modules on a same bus. The device is designed for cable connection N-L-DALI. In addiotion to a cable signal, a +/- cables is required.

PLM - Adjustment by remote control

Through remote control you can check each single device. Associating to this system a control unit LCU, you can vary a number of parameters, customizing the adjustment of the single lighting fixture. Thanks to remote control systems you can also monitor the energy consumption and possible malfunctions of the plant, and make corrections without operator on site.

Additional functions

FR - Full range

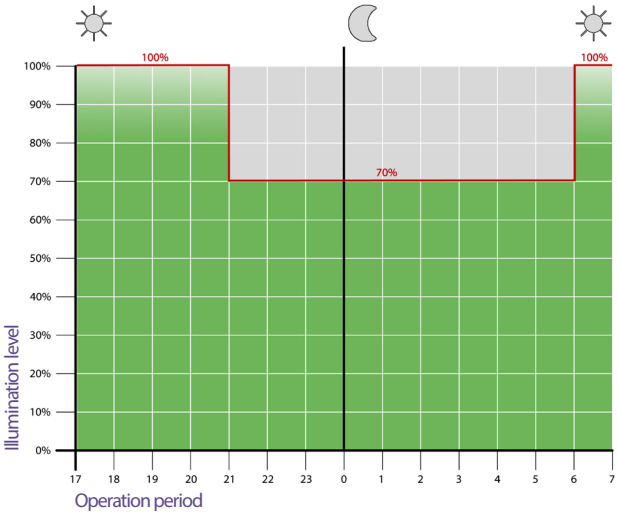
The luminaire is supplied with an extended voltage (120-280V). In this way, device operation is guaranteed even in the variable-power situations.

RRF - Lighting control from flow regulators

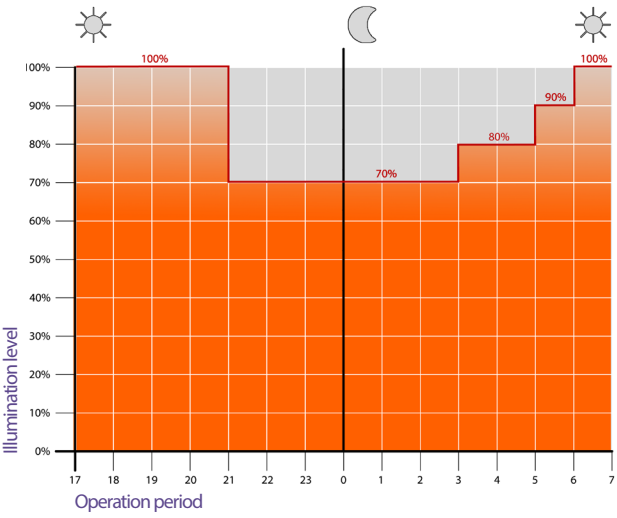
Identified for refitting LED solution. The LED luminaire follows the voltage regulation given by the flow regulator, and varying the input current to the LED. In this way they can be used for reducing consumption of existing protocols. In order that system is implemented in refitting. The regulator needs to be modulated in amplitude and not in phase cutting.

NTC - Temperature sensor

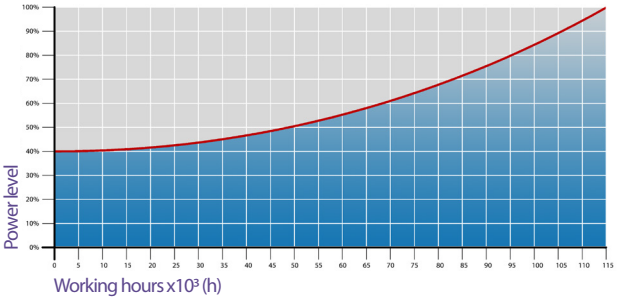
It is a temperature sensor that regulates the input current to LEDs. In case of critical temperature levels on the junction (Tj), the current supply is decreased in order to preserve the integrity of LEDs.



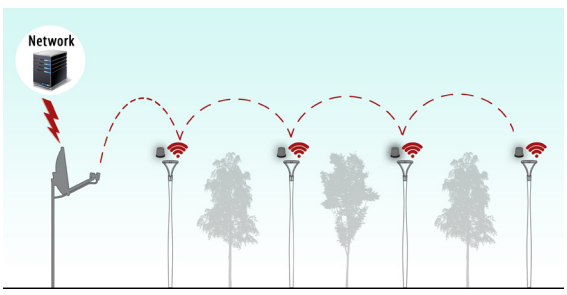
Automatic lighting control



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 bowder 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 the succesfull results of specific salt spray test (all products exceed widely 2.500 hours) and the strictest international tests, among which FLORIDA TEST.
The salt spray test is made in accordance with standard UNI EN ISO 9227.

Ghisamestieri the green way of light s.r.l

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