

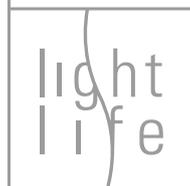
LED luminaire for street lighting

# ITALO 1

Registered models – Design by Massimo Sacconi and Marzia Bandini



**italo1**  
MADE IN ITALY



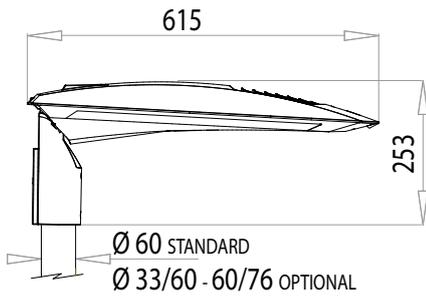


Compact design in line with the “contemporary trend”: ITALO is the exclusive series of AEC luminaires able to meet the needs of the most modern Smart Cities.

Functionality, versatility, and a wide variety of optics feature ITALO 1, designed for the lighting of high traffic urban and suburban streets.

Quality light, excellent colour rendering, optimum energy efficiency. ITALO: a preview on the future of lighting.



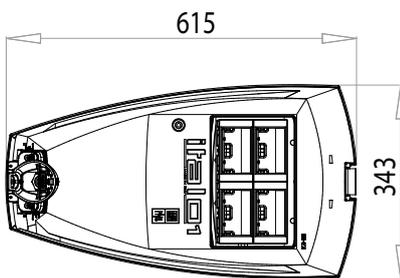
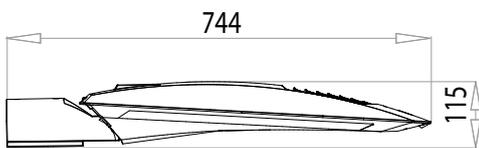


### AVAILABLE COMPOSITIONS:

STEM / STES / STUM / STUS / STW /  
SV optics: from 1 to 4 modules.

### OPTICAL UNIT CHARACTERISTICS:

Modular optical system.  
LED source colour temperature:  
4000K.  
CRI > 70.

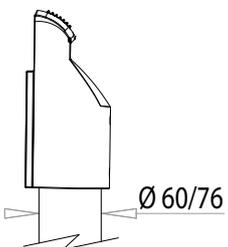


Please download ITALO 1  
photometric data at  
[www.aecilluminazione.com](http://www.aecilluminazione.com)

## OPTIONS

POST TOP ATTACHMENT Ø60÷76mm

HEAT SINK PROTECTION SCREEN



## MECHANICAL CHARACTERISTICS

- Frame and cover in die cast aluminum alloy UNI EN 1706.
- Heat sink in die cast aluminum UNI EN 1706 with lamellar design.
- Polyurethane seal.
- Closure screen in flat tempered glass (4mm thickness) featured by high transparency and optimum thermal and mechanical resistance (IK09).
- Removable optical unit in 99.85% aluminum.
- Removable LED module.
- Removable metal gear plate.
- Watertight membrane grommet.
- Integrated cable clamp.
- Post top or brackets mounting in die cast aluminum alloy UNI EN 1706 for  $\varnothing 60$  mm (standard),  $\varnothing 33 \div \varnothing 60$  mm and  $\varnothing 60 \div \varnothing 76$  mm (optional).  
Post top tilt:  $0^\circ, +5^\circ, +10^\circ, +15^\circ, +20^\circ$ .  
Bracket tilt:  $0^\circ, -5^\circ, -10^\circ, -15^\circ, -20^\circ$ .
- Closure hook in extruded aluminum with stainless steel spring.

IP66 protection degree.

## ELECTRICAL CHARACTERISTICS

- Insulation class: I, II.
- Power supply:  $220 \div 240V - 50/60Hz$ .
- LED current:  $525/700mA$ .
- Power Factor:  $>0.9$  (at full load).
- Connection for cables featured by a maximum cross section of  $4mm^2$ .
- Optional fuse.

- Optical unit lifetime ( $T_a: 25^\circ C$ )  
525mA:  
 $>70.000hr$  B20L80 (included critical failures);  
 $>100.000hr$  L80, TM-21;  
700mA:  
 $>60.000hr$  B20L80 (included critical failures);  
 $>100.000hr$  L80, TM-21.

- Optical unit lifetime ( $T_a: 50^\circ C$ )  
525mA:  
 $>60.000hr$  B20L80 (included critical failures);  
 $>100.000hr$  L80, TM-21;  
700mA:  
 $>50.000hr$  B20L80 (included critical failures);  
 $>100.000hr$  L80, TM-21.

- Available dimming options:  
**DA:** automatic dimming.  
**DAC:** customizable DA profile.  
**PLM:** power line communication light flux adjustment.



## PROTECTION AGAINST OVERVOLTAGE

A lighting device installed in a standard electrical system may be subjected to voltage fluctuations and external disturbances due to different factors such as discontinuous loads on the line, faults on the lines (upstream or downstream) and atmospheric electrical discharges (in outdoor installations).

In those LED installations where the electronic components are predominant, an adequate resistance to surges is synonymous with reliability and proper functionality.

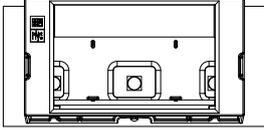
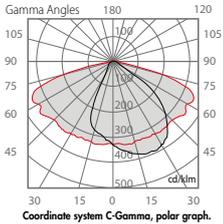
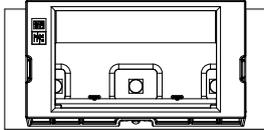
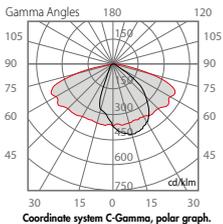
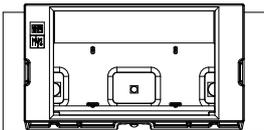
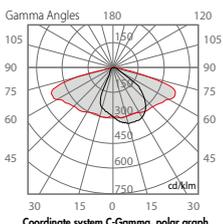
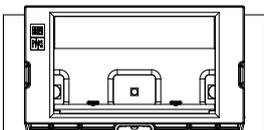
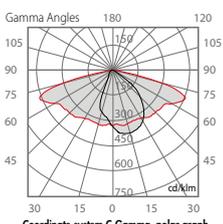
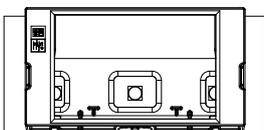
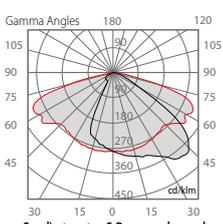
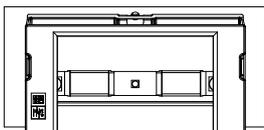
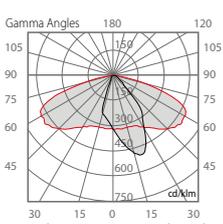
Thanks to the research and the experimentation performed in its own laboratories, AEC offers its customers customized solutions according to every specific installation.

**CLASS I:** protection up to 10kV.

**CLASS II:** protection from 6kV up to 9kV.

For more information about the protection against overvoltage, please download the technical report at [www.aecilluminazione.com](http://www.aecilluminazione.com).

### AVAILABLE OPTICS

NAME	DESCRIPTION	DRAWING	PHOTOMETRY	OPERATING ENVIRONMENTS
STE-M	SUBURBAN STREET OPTIC Asymmetrical optic for street and motorway lighting. Specific optic for roadways where the width is equivalent to the pole height.		 Coordinate system C-Gamma, polar graph.	
STE-S	SUBURBAN STREET OPTIC Asymmetrical optic for street and motorway lighting. Specific optic for roadways where the width corresponds to 0,75 times the pole height.		 Coordinate system C-Gamma, polar graph.	
STU-M	URBAN STREET OPTIC Asymmetrical optic for street and cycle path lighting. Specific optic for roadways where the width is equivalent to the pole height.		 Coordinate system C-Gamma, polar graph.	
STU-S	URBAN STREET OPTIC Asymmetrical optic for street and cycle path lighting. Specific optic for roadways where the width corresponds to 0,75 times the pole height.		 Coordinate system C-Gamma, polar graph.	
STW	WIDE EMISSION STREET OPTIC Asymmetrical optic for wide streets and wet asphalt. Specific optic for roadways where the width corresponds to 1,25 times the pole height.		 Coordinate system C-Gamma, polar graph.	
SV	STREET JUNCTIONS OPTIC Asymmetrical optic for motorway junctions and narrow street lighting. Specific optic for roadways where the width corresponds to 0,5 times the pole height.		 Coordinate system C-Gamma, polar graph.	



# Dimming options

LED technology offers easy and reliable light flux adjustment. The devices are equipped with an electronic power supply capable of adjusting light emission by directly regulating the optical assembly LED input current. The standard version of the device is supplied with a constant LED input current of 525mA or 700mA.

The following options are available:

## DA (DIM-AUTO) OPTION

### Automatic light flux regulation

The power supply is configured using an automatic dimming profile which fully utilises the maximum light intensity during the first and last few hours of system operation, thereby reducing energy consumption in the middle of the night when a lower level of illumination is often sufficient. The reduction profile automatically adapts to the duration of the nighttime period during the year.

## DAC OPTION (DIM-AUTO CUSTOM PROFILE)

The power supply is configured using a dimming profile totally customizable by the user (up to 5 levels in 4 steps).

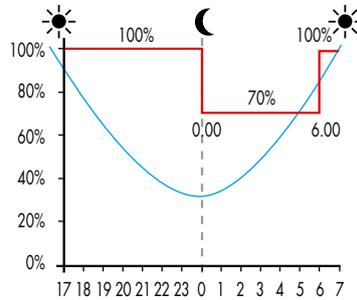
## PLM OPTION

### Light flux regulation using power line communication

Light flux reduction can be associated with punctual and remote monitoring of the individual device via the power line communication remote control. This option, used in conjunction with an **LCU** (Light Control Unit), makes it possible to control an individual lighting point, allowing the creation of customised lighting scenarios. More complex remote control panels can be used as part of a wireless or GSM/GPRS network, to remotely monitor the energy consumption of the system and provide fault indications as necessary without the need for on-site maintenance procedures.

## LCU

The Light Control Unit offers flexible system control. The reduction profile can be customised with simple local or remote programming. Devices can be divided into sub-groups with different dimming profiles. Option of using an astronomical clock or interfacing with external switching devices. Simplified installation, wiring and testing. Programming software free of charge.



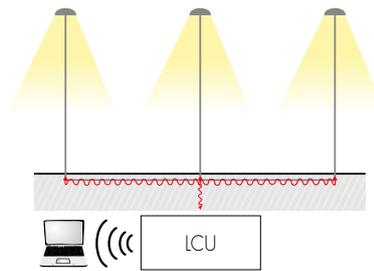
\*Saving in relation to the fixed power version.

**L1:** 100%

**L2:** 70%

**Tdim:** 6hr

**Saving\*:** 15%



## OPTIONS ON REQUEST (SUBJECT TO FEASIBILITY CHECK)

<p><b>D10 (DIM-10) OPTION</b>  <b>Flux adjustment via 1-10V analogue control</b>          Allows lighting device adjustment via an analogue voltage signal between 1V and 10V, the minimum and maximum brightness levels respectively. The device is designed for connection of L-N-1/10V cables.</p>	
<p><b>DALI (DIGITAL ADDRESSABLE LIGHTING INTERFACE) OPTION</b>  <b>Flux adjustment via digital interface</b>          DALI is the standard digital technology for the management of luminaires; it is based on a digital signal capable of univocally addressing up to 64 modules on the same bus. The device is designed for connection of L-N-DALI cables.</p>	
<p><b>DB (DIM-BIP) OPTION</b>  <b>Bi-power light flux adjustment with pilot cable</b>          Option mainly designed for underpasses or small systems where a simple and synchronised flux reduction is required. The device is supplied with a bi-power switch which will establish an operating regime at full or reduced power, depending on whether in additional conductor (pilot cable) is also present or not.</p>	
<p><b>DR (DIM-REG) OPTION</b>  <b>Light flux adjustment with flux controllers</b>          LED retrofit systems may include a discharge lamp flux controller. This option allows the LED device to follow up the voltage adjustment carried out within the system, varying the LED input current as a result. This means both HID and LED devices can be installed within the same system, thereby fully utilising existing energy saving systems. Operation is only guaranteed if amplitude modulation controllers are used instead of phase cut controllers.</p>	

### ADDITIONAL OPTIONS:

(can be combined with all other flux reduction options, subject to feasibility check)

<p><b>FLC OPTION - LED light flux recovery</b>          The natural depreciation of the light flux produced by the LEDs can be offset by progressively increasing the input current of the LEDs during operation. This option guarantees a virtually constant light flux output. The lighting system can therefore be designed while taking account of a maintenance factor which is higher than that usually used with the standard product, offering instant savings in terms of the energy consumed and/or the initial cost of the system. The FLC option also means the useful life of the system can be extended.</p>	
<p><b>FR (FULL RANGE) OPTION - Extended input voltage range</b>          Option of supplying the device with an extended input voltage (example: 120-277V). This option maintains device operation even in systems where the power supply voltage is adjusted by flux controllers.</p>	
<p><b>FC (PHOTOCELL) OPTION</b>          Possibility to install a twilight switch that allows to automatically turn the unit on at sunset and to turn it off at sunrise.</p>	

### SYSTEM FEATURES AND ADJUSTMENT SYSTEM INSTALLATION:

	DA/DAC	PLM & LCU	PLM	DB	DR	DALI	D10
Independent adjustment system	x						
Central adjustment system (switch / control unit / cabinet)		x	x	x	x	x	x
Remote reduction profile change		x	x	x	x	x	x
Use of additional cables				x		x	x
Remote management software required			x				
Free configuration software (LED and electronic HID systems only)		x					
Interfacing with external regulation systems (e.g. PIR sensors, traffic sensors, switches)		x	x		x	x	
Commissioning by specialist personnel			x		x	x	x



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