



PROGRAMMABLE control gear up to 58W. IP20



CORE technology benefits

iLC CORE series is a cost-effective solution which incorporates multiple regulation methods and programmable functionalities. Due to their wide operating window, long lifetime and robustness, Core series joins the range introduced by our iLC PRO control gears, allowing to select the ideal street lighting solution for every lighting point.

Features

- Double or reinforced insulation control gear, for built-in-use. Ingress Protection IP20
- Suitable for installation in Class I and Class II luminaires
- Wide input voltage range
- High power factor
- Low total harmonic distortion
- Low output ripple current
- High quality light without flickering
- Wide operating window
- Configurable functionalities:
 - Adjustable output current (AOC)
 - LED module constant lumen output (CLO)
- Regulation methods:
 - 1-10V
 - ActiDIM: stand-alone and dynamic dimming system that adapts to night hours
 - ON/OFF: no regulation
- Wide output current regulation range
- Short circuit, overload and open circuit protection
- Control gear thermal protection
- Protection against mains voltage variations and power surges
- Electronic circuit fully protected against humidity
- Excellent thermal performance and extensive working temperature ranges
- Lifetime up to 100.000 hours

Applications

- Street lighting
- Road lighting
- Architectural lighting
- Sport facilities lighting
- Industrial lighting
- Tunnel lighting



ELECTRICAL DATA

Input parameters

Nominal input voltage	220...240 Vac
Permitted input voltage range	198...264 Vac
Brownout input voltage	135-145 Vac
Brown-in input voltage	190-195 Vac
Input frequency	50...60 Hz
Input current ⁽¹⁾	0,045...0,350 A
Power factor ⁽²⁾	0,98
Total harmonic distortion THD ⁽³⁾	< 7 %
Typical efficiency ⁽⁴⁾	Up to 91 %
Typical leakage current	< 0,5 mA
Inrush current (peak / width)	27 A / 195 us
1-10V voltage range	-20...20 Vdc
1-10V potentiometer	560 kΩ
1-10V maximum output current	120 μA

(1) Depending on the connected load, the output current adjustment, the regulation point and the mains voltage value

(2) See PF vs. load graph

(3) See THD vs. load graph

(4) See efficiency vs. load graph

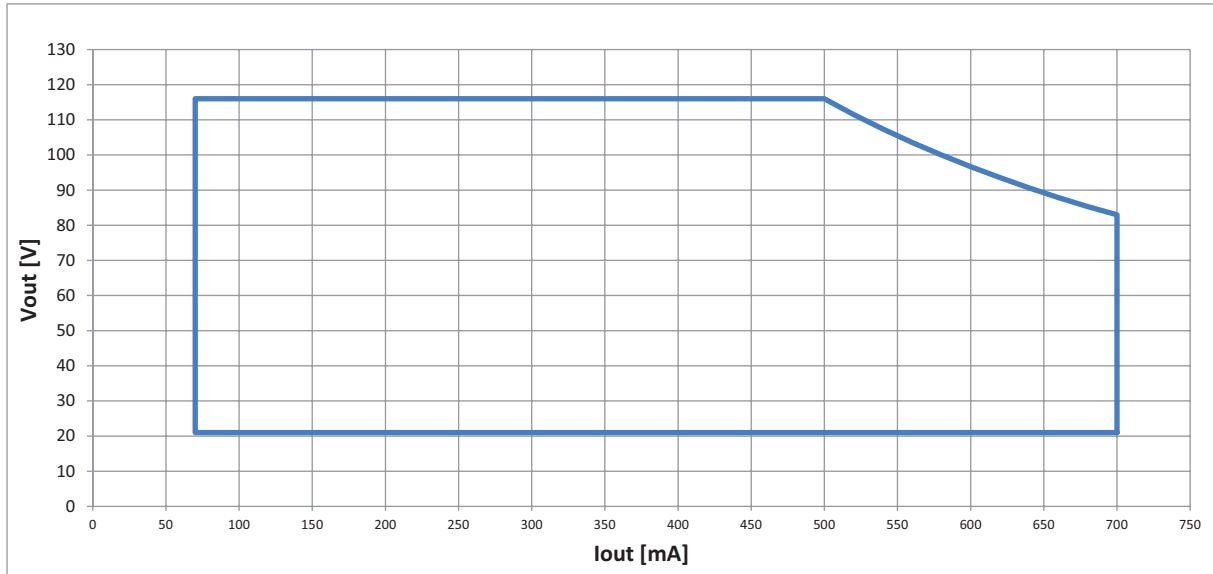
Output parameters

Maximum output power	58 W
Output type	Constant current
Dimmable	✓
Dimming method	Amplitude modulation
Dimming range ⁽⁵⁾	10...100 %
Configurable output current range	70...700 mA
Non-dimmable output current range	70...349 mA
Dimmable output current range	350...700 mA
Output current tolerance	± 5%
Output ripple current (ORC)	< 5 %
Output voltage range ⁽⁶⁾	21...116 Vdc
Maximum output voltage (open load)	150 Vdc

(5) Minimum output current 70mA

(6) See operating window

Operating window



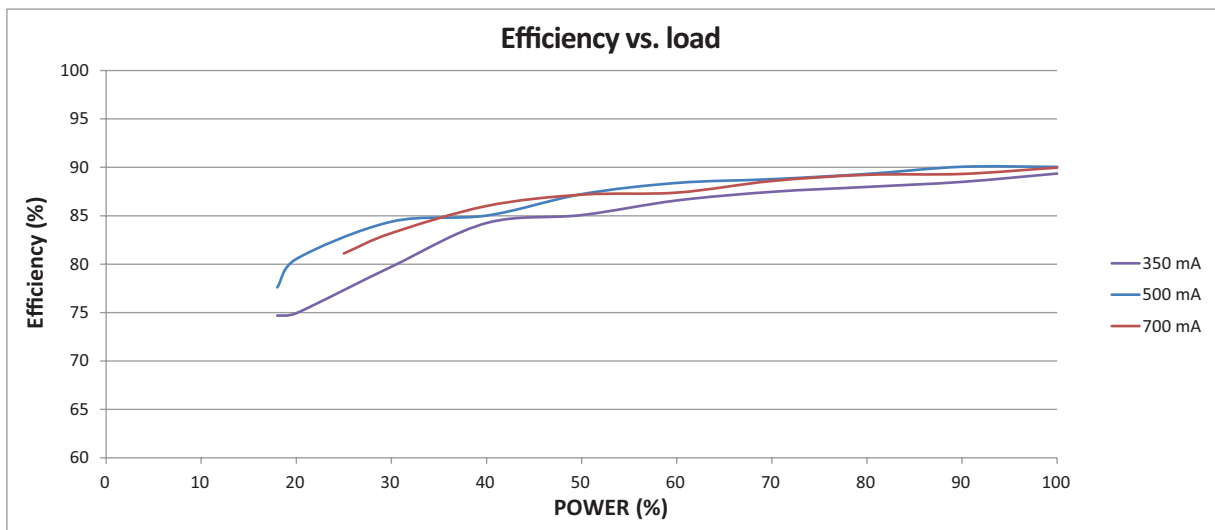
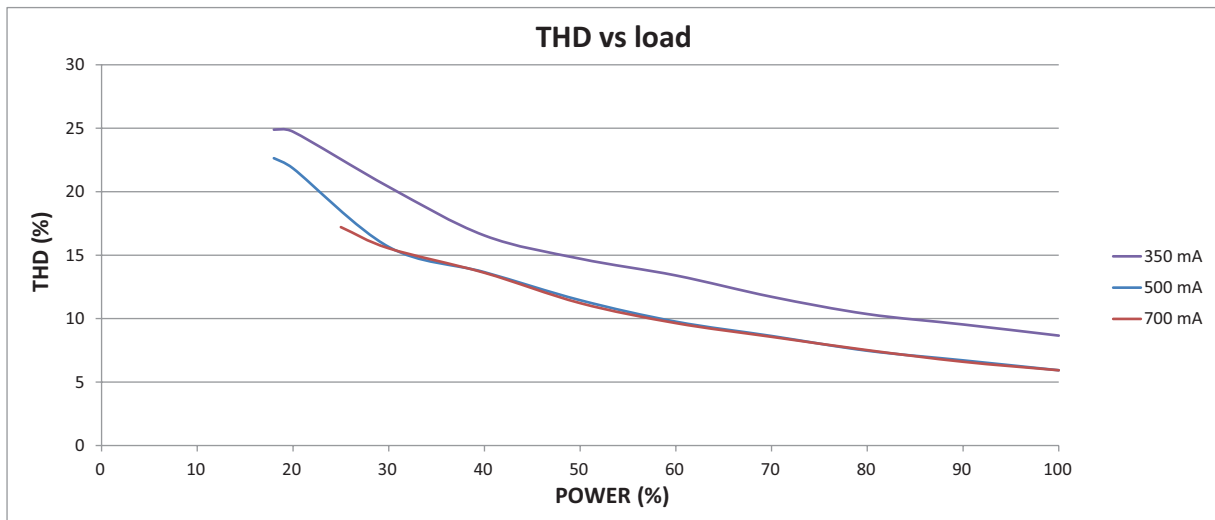
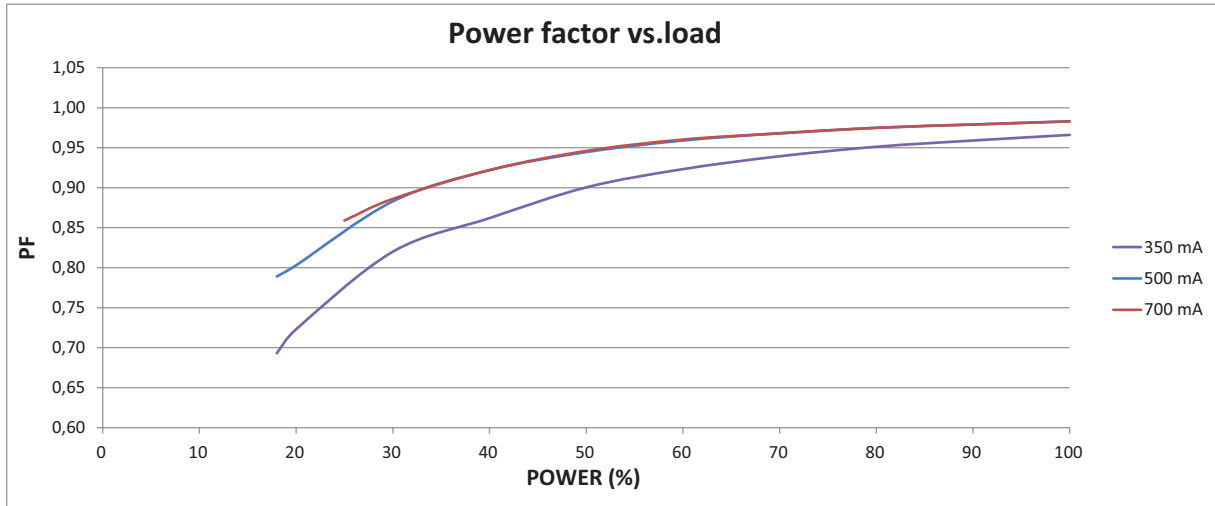
Adjustable output current (AOC)	Regulation	Minimum output voltage	Maximum output voltage	Minimum module power	Maximum module power
mA		V	V	W	W
70...349	ON/OFF	21	116	$\frac{AOC (mA) \times 21}{1000}$	$\frac{AOC (mA) \times 116}{1000}$
350...500	✓	21	116	$\frac{AOC (mA) \times 21}{1000}$	$\frac{AOC (mA) \times 116}{1000}$
501...700	✓	21	$\frac{58 \times 1000}{AOC (mA)}$	$\frac{AOC (mA) \times 21}{1000}$	58

Electrical insulation

	Mains	1-10V	Functional earth	LED module	Accessible parts
Mains	X	Basic	Double	Double	Double
1-10V	Basic	X	Double	Double	Double
Functional earth	Double	Double	X	Double	Double
LED module	Double	Double	Double	X	Double
Accessible parts	Double	Double	Double	Double	X

According to EN 61347-1 and EN 61347-2-13

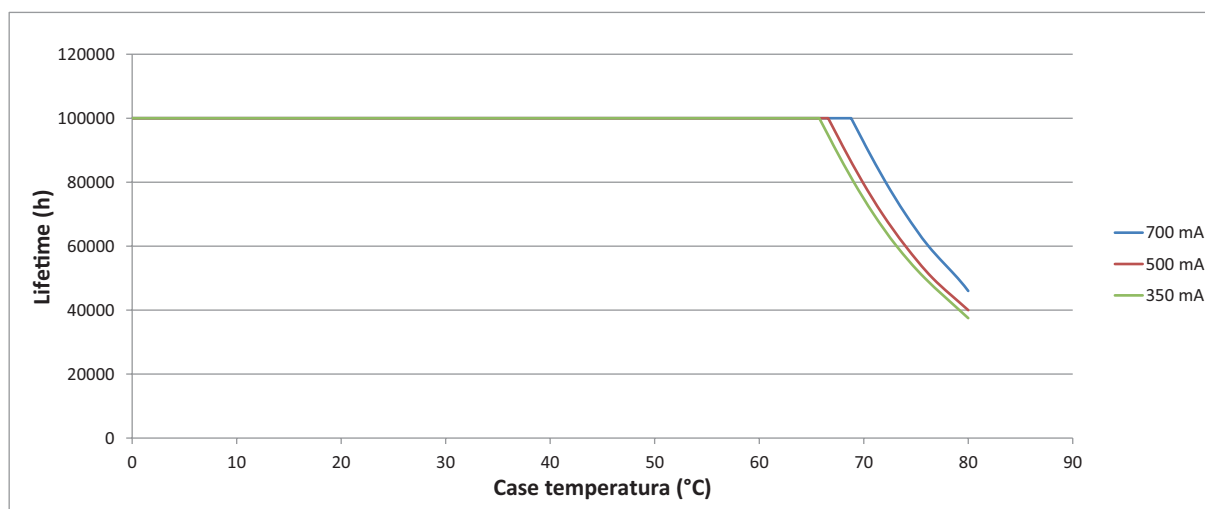
Graphs



Typical values measured for a representative sample of standard manufacturing with a stabilised supply source at 230V/50Hz. These values are not intended to be a specification.

THERMAL AND LIFETIME DATA

Maximum case temperature at tc point (tc max)	80 °C
Lifetime case temperature (tc)	See table
Minimum ambient temperature (ta min)	-20 °C
Maximum ambient temperature (ta max)	See table
Maximum case temperature (under failure conditions)	100 °C



		50.000h	60.000h	70.000h	80.000h	90.000h	100.000h
350mA	tc (°C)	75,00	73,00	71,00	69,00	67,00	65,00
	ta (°C)	63,00	61,00	59,00	57,00	55,00	53,00
500mA	tc (°C)	76,00	73,00	71,00	69,00	67,00	66,00
	ta (°C)	59,00	56,00	54,00	52,00	50,00	49,00
700mA	tc (°C)	78,00	75,00	73,00	71,00	70,00	69,00
	ta (°C)	58,00	55,00	53,00	51,00	49,00	48,00

PROTECTIONS

Short circuit	✓
Open circuit	✓
Overload	✓
Low load	✓
Thermal	✓
Mains voltage out of range	✓
Surge	✓
Hot wiring	✗

Control gear response to failure conditions

Failure condition	Control gear response	Recovering
Short circuit ⁽⁸⁾	Hiccup	Automatic recovering
Open circuit	Hiccup	Automatic recovering
Overload		
$< V_{out\ max} + 5\%$	Normal operation with overtemperature	
$\geq V_{out\ max} + 5\%$ $< V_{out\ max} + 15\%$	Normal operation during 70s before entering constant power output mode (Dimming is not permitted)	Automatic recovering
$\geq V_{out\ max} + 15\%$ $< V_{out\ max} + 20\%$	Normal operation during 10s before entering constant power output mode (Dimming is not permitted)	Automatic recovering
$\geq V_{out\ max} + 20\%$	Constant power output mode (Dimming is not permitted)	Automatic recovering
$V_{out\ max} \geq 150V$	Hiccup	Automatic recovering
Low load		
$V_{out} < 21V$	Minimum output current (70mA)	Automatic recovering
Overtemperature ⁽⁹⁾		
$t_c\ max + 6\ ^\circ C$	Power output reduction to 75%	Automatic recovering at $t_c\ max - 6\ ^\circ C$
$t_c\ max + 8\ ^\circ C$	Power output reduction to 10%	Automatic recovering at $t_c\ max - 6\ ^\circ C$
Mains voltage out of range		
$< 198V$ $> \text{Brown out}$	Normal operation with over temperature	Automatic recovering
$< \text{Brown out}$	Switch off	Switch on at mains voltage $> \text{brown in}$
$> 264\ Vac$	Operation under stress ⁽¹¹⁾ Risk of failure	Automatic recovering
Surge protection ⁽¹⁰⁾	6kV/3kA differential mode (L-N) 8kV common mode (L/N-Earth)	
Hot wiring	Not allowed Risk of failure	

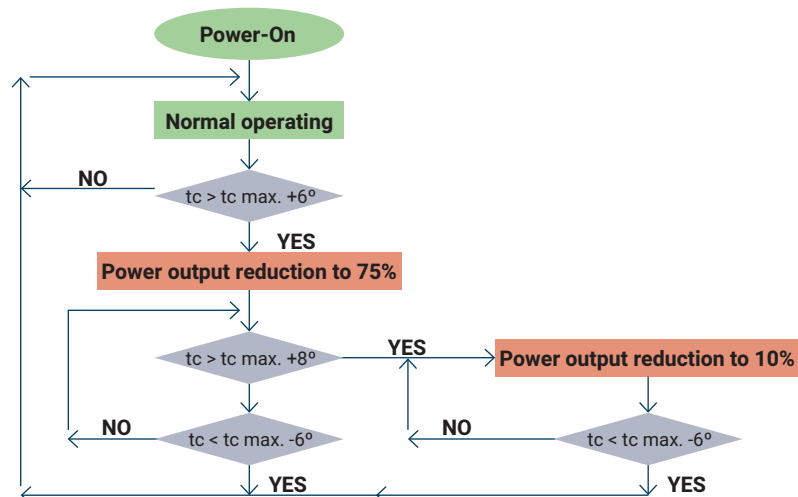
Hiccup: power on attempts.

(8) Live shortcircuit not supported. Risk of failure

(9) See chart below

(10) According to EN 61547

(11) Withstands 380V up to 2 hours



FUNCTIONALITIES

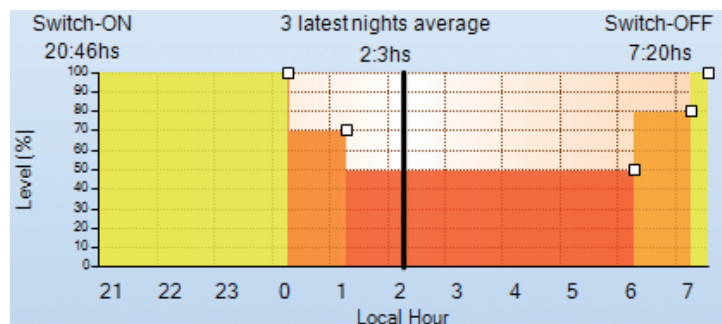
	Available	Factory default configuration
Adjustable output current (AOC)	✓	700 mA
Module thermal protection (MTP)	✗	-
Constant lumen output (CLO)	✓	Disabled
End-of-life module alarm (EOL)	✗	-
Programmable start-up (PST)	✗	-
Monitoring parameters	✗	-

REGULATION METHODS

	Available	Factory default configuration
ON/OFF	✓	Disabled
DALI	✗	-
1-10V	✓	Disabled
0-10V	✗	-
ActiDIM	✓	Enabled
ActiDIM with tourist mode	✗	-
Parking mode (Corridor mode)	✗	-
ActiDIM with Parking mode (Corridor mode)	✗	-
LineSwitch	✗	-
MainsDIM	✗	-
Compatible version with STELARIA™ Remote wireless management system	✗	-

ActiDIM default configuration

Time periods	Module power
Switch-ON	100%
2 hours before the middle of the night	70%
1 hour before the middle of the night	50%
4 hours after the middle of the night	80%
5 hours after the middle of the night	100%
Daylight saving time	Enabled

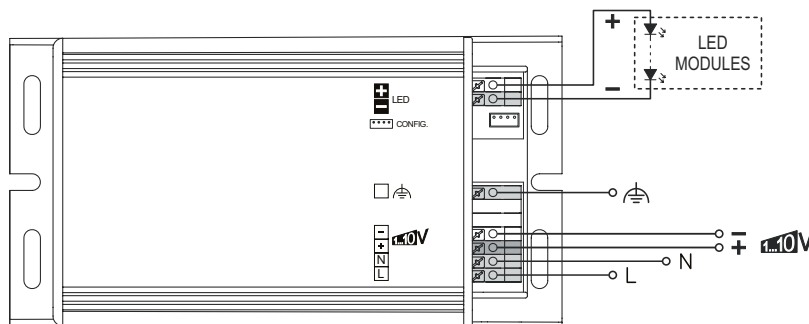


Please refer to the iLC PRO user guide for further information about ActiDIM technology

CONNECTIONS AND WIRING

Mains wire cross-section	
1-10V wire cross-section	0,2...1,5 mm ²
Functional earth wire cross-section	
LED wire cross-section	
Wire stripping length	10 mm
Maximum cable length to LED module	2 m

Please, refer to the user guide for further information about control gear installation



PROTECTIVE SWITCHES

Inrush current and MCBs

Inrush current peak	27 A
Inrush current width	195 us
Control gears / MCB 16A type B	20
Control gears / MCB 10A type B	11

Measured values according to a 240VAC reference power grid as defined under NEMA 410 standard, with a line impedance of 450mΩ / 100uH.

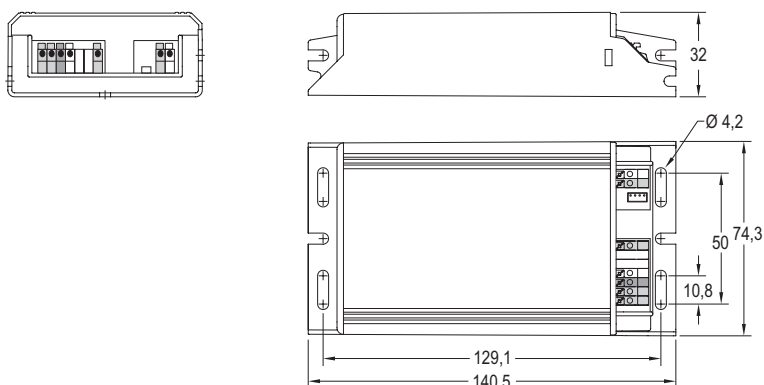
The inrush current values and the number of control gears to be connected to a circuit breaker depend on the mains voltage and mains impedance. It is highly recommended to check it for each installation.

Leakage current and RCDs

Typical touch current	< 0,2 mA peak
Typical earth conductor current	< 0,5 mA rms
Typical control gears / RCD 30mA	35

Typical values for the control gears according to EN 61347-1, not including other components contribution.

MECHANICAL FEATURES



Length	140,5 mm
Width	74,3 mm
Height	32 mm
Distance between fixings (lengthwise)	129,1 mm
Distance between fixings (widthwise)	28,4...50 mm
Fixing hole diameter	4,2 mm
Design	Compact
Material	Plastic
Weight	427 g
Ingress Protection	IP20 (suitable for luminaires with IP>54)

LOGISTICAL DATA

Ref. No.	9916176
Model	iLC 58C/350...700-XR

Packaging

Units per package	8 units
Package dimensions	170 x 300 x 75 mm
Package weight	3,5 kg
Units per pallet	960 units
Pallet dimensions	750 x 1000 mm

ACCORDING TO

- EN 61347-1
- EN 61347-2-13
- EN 62384
- EN 62493
- EN 61000-3-2
- EN 61000-3-3
- EN 55015
- EN 61547

Please, contact us by email (elt@elt.es), telephone +34 976 573 660 or via our sales network to consult the versions of the above standards under which the certificates have been issue.

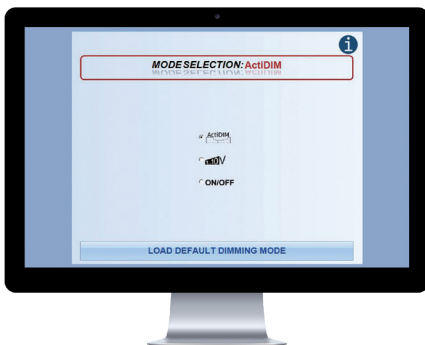
APPROVALS

CB / ENEC / CE



ACCESSORIES

iSOFT: configuration software

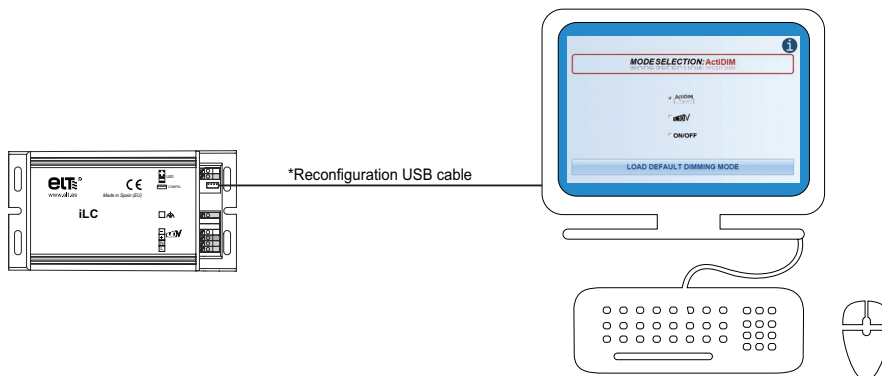


Follow this link for free download:
www.elt.es/en/download-isoft-software

Reconfiguration USB cable



Ref. No. 9411908



* It is not necessary to power on the device to reconfigure

ADDITIONAL INFORMATION

The following information is available to check at www.elt.es/en

- Control gear catalogue sheet
- iSOFT manual
- iSOFT software
- LED catalogue

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