

Control C350 dim

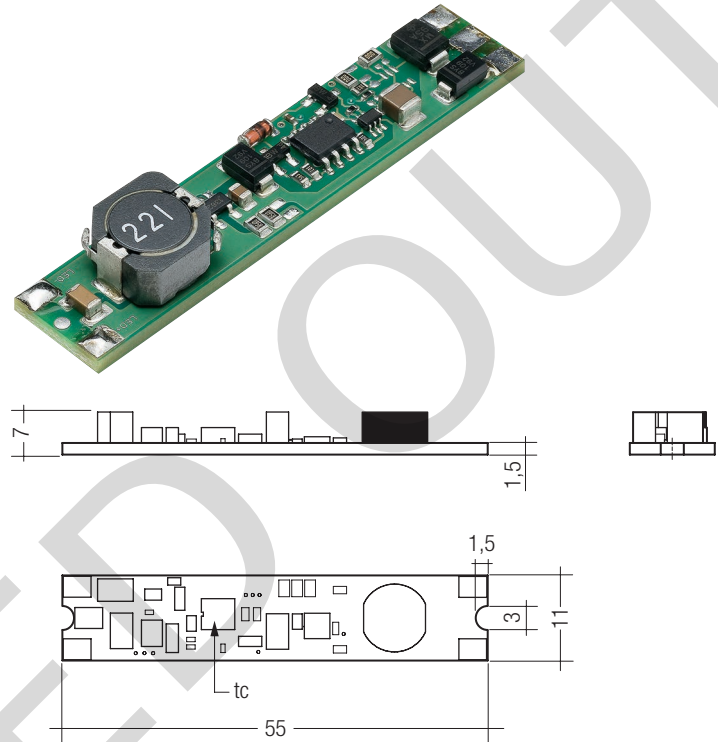
Dimmable

Product description

- Constant current converter 350 mA for Module EOS
- Dimming range 10 to 100 %
- Dimmable via momentary-action switch or potentiometer (designed for a 100 k Ω potentiometer)^④
- Step circuit
- Suitable for centrally supplied LED installations
- Slim compact design
- No-load and short-circuit protection (on the output side)
- Reverse polarity protection
- Connection: solder points
- Attached with premounted thermally conductive adhesive tape
- Suitable for mounting on Tridonic profiles
- No overvoltage protection
- SELV

Technical data

Input voltage, DC ^①	8 – 48 V
Efficiency ^② ^③	> 85 %
Output voltage ($U_{in} < 30 V$) ^②	2.5 V until ($U_{in} - 3 V$)
Output voltage ($U_{in} \geq 30 V$) ^②	5 V until ($U_{in} - 3 V$)
Max. power loss	1.6 W
Output current	350 mA +/- 10%
Ambient temperature t_a	-25 ... +50 °C
Max. casing temperature	85 °C
Dimensions LxWxH	55 x 11 x 7 mm



Ordering data

Type	Article number	Packaging carton	Weight per pc.
LED C350 12-48VDC 16VA dim	28000884	50 pc(s).	0.004 kg

^① Output voltage depends on supply voltage and the number of connected LED modules ($U_{in} - 3 V$).

^② A heat sink must be used for 24 V and higher (e. g. Lumitech Z201-2).

^③ Efficiency depends on the load on control C350. An efficiency of up to 95 % is possible.

^④ In momentary-action switch operation only one control C350 dim per momentary-action switch is permitted.



Standards, page 2

Wiring diagrams and installation examples, page 2, 3

Standards

EN 61347-1
EN 61347-2-13
EN 61547
EN 62384

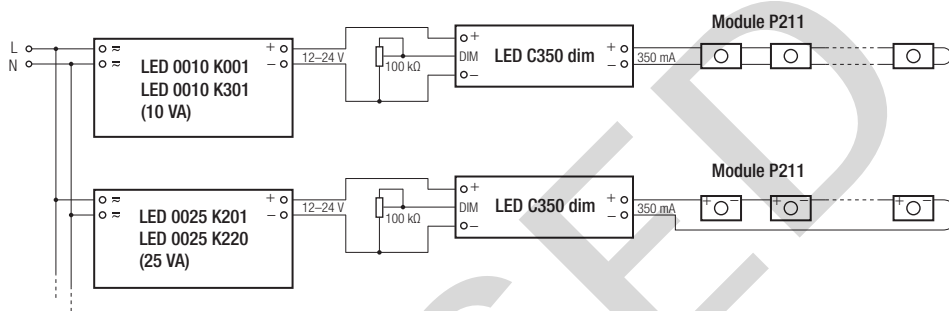
Possible number of Control LED C350 12-48 V_{DC} 16 VA dim connected to Tridonic Converter

Numbers valid for full loaded Control LED C350 dim (16 VA)

Converter	number of Control LED C350 dim
K001 ; 12 V / 24 V 10 VA	1
K301 ; 12 V / 24 V 10 VA	1
K220 ; 12 V / 24 V 25 VA	4 (12 V) / 2 (24 V)
K235 ; 12 V / 24 V 60 VA	11 (12 V) / 6 (24 V)
K240 ; 12 V / 24 V 100 VA	19 (12 V) / 10 (24 V)

Example wiring diagram Control LED C350 dim with modules P211

Dimming with potentiometer (potentiometer mode)



LED modules must be wired in series connection to the constant current source Control C350 dim

The potentiometer mode of the C350 dim is designed for a 100 kΩ potentiometer

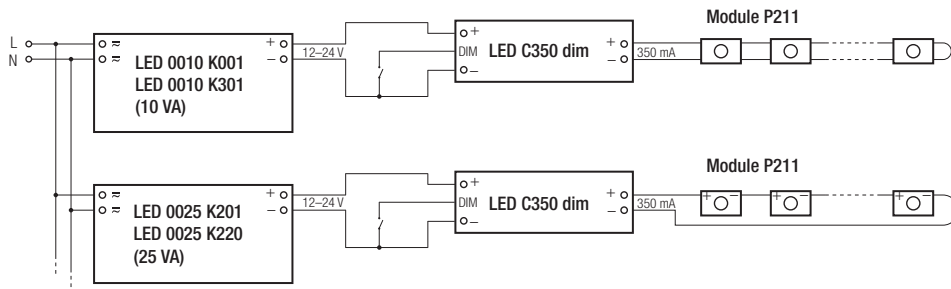
If a potentiometer with a value between approx. 32 and 80 kΩ is attached to the dim input, the controller switches to the potentiometer mode. The potentiometer mode can be disabled by removing the potentiometer and leaving the dim input open. By leaving this mode, the last active mode will be activated (momentary-action switch mode or step circuit).

If a potentiometer with a resistance below 9 kΩ gets connected in switch mode, a close switch will be detected and the controller switches to step circuit after five minutes. The potentiometer mode will be activated as soon as the resistance reaches about 20 kΩ. After removing the potentiometer, the step circuit needs to be disabled to switch back to switch mode.

The use of the several C350 dim in parallel with a single potentiometer leads to a change of the input resistance. In this case the potentiometer value needs to be adapted.

no. of C350 dim in parallel	value
1	100 kΩ
2	50 kΩ
3	33 kΩ
4	25 kΩ

Dimming with momentary-action switch (momentary-action switch mode)



The momentary-action switch mode allows a direct connection of a push to make switch for dimming and switching. Brief push (< 0.6s) switches ballast ON and OFF. The ballasts switch-ON at light level set at switch-OFF.

When the momentary-action switch is held, the Control LED C350 dim is dimmed. After repush the Control LED C350 dim is dimmed in the opposite direction.

The dimming of several Control LED C350 dim with one momentary-action switch is not allowed.



The input voltage of the Control LED C350 dim must be absolutely kept. The operation on 230 V AC is not allowed.

Step circuit

Instead of a momentary-action switch or potentiometer a switch can be used (e.g. motion sensor, time switch, switch)

The step circuit can be activated by applying a short circuit at the dim input for five minutes. If five short pushes are detected, (50 – 600 ms, time in between maximum 1s) step circuit is deactivated and switch mode is active.

Due to no DALI communication is available, the step circuit has a fixed setting.

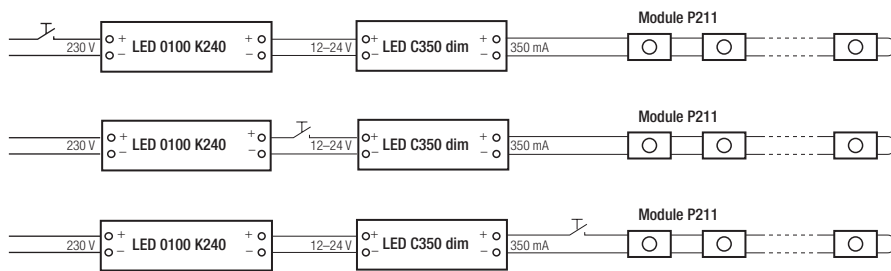
The step circuit is configured as follows:

Switch closed	= 100 %
Switch open	= 10 %
Fade time 100 % – 10 %	= 32 s
Fade time 10 % – 100 %	= 170 ms

After a power-down there will be a restart with the last activated mode. On the first power-up it will be the momentary-action switch mode.

last mode (before power-down)	connected resistor	mode after power-up
momentary-action switch mode (first power-up)	< 9 kΩ	momentary-action switch mode
	32 – 80 kΩ	potentiometer mode
	> 900 kΩ	momentary-action switch mode
step circuit	< 9 kΩ	step circuit
	32 – 80 kΩ	potentiometer mode
	> 900 kΩ	step circuit
potentiometer mode	< 9 kΩ	potentiometer mode
	32 – 80 kΩ	potentiometer mode
	> 900 kΩ	momentary-action switch mode

Connection of an on/off momentary-action switch for the Control LED C350 12-48 V 16 VA dim



! Load switch allowed under any operating condition.

Connection technology

The wiring can be in stranded wires (without ferules) or solid with a cross section of 0.25 to 0.75 mm². The wire cables have to be soldered onto the dedicated solder pads.

Soldering information

Soldering has to be done under voltage-free conditions. The soldering temperature shall be chosen between 270 and 320 °C.

Mounting instructions

The Control LED C350 dim has to be glued onto a plain carrier by using the pre-mounted adhesive tape on the back side of the module. The protective foil therefore has to be removed from the adhesive tape. The carrier area has to be properly cleaned with appropriate methods.

Carrier material

The mounting onto metal carrier is allowed.



Dirt and humidity

The Control LED C350 dim has no dedicated protection against contamination or humidity. Protection against contamination and humidity is within the responsibility of the OEM manufacturer.



EOS/ESD safety guidelines

The device / module contains components that are sensitive to electrostatic discharge and may only be installed in the factory and on site if appropriate EOS/ESD protection measures have been taken. No special measures need be taken for devices/modules with enclosed casings (contact with the pc board not possible), just normal installation practice. Please note the requirements set out in the document EOS / ESD guidelines (Guideline_EOS_ESD.pdf) at: <http://www.tridonic.com/com/en/technical-docs.asp>



Safety switch off and SELV

Safety switch off and SELV have to be provided by the supplying LED control gear unit. The use of Converter from Tridonic in combination with Control LED C350 dim ensures the required protection functionality.

Protection class

Suitable for use in protection class SK I and SK II luminaires.

Temperature ratings

The ambient operating temperature shall not exceed 50 °C. The rated max. temperature tc must not exceed 85°C under any operating conditions.

For an output voltage of more than 24 V a heat sink is required.

