LED Solutions 2016

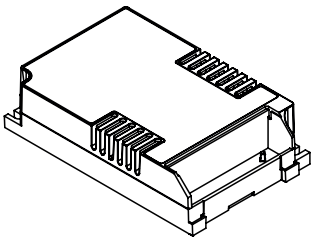
Helvar

HELVAR LED OFFERING

Helvar's extensive LED range of drivers, sensors, modules and accessories can be used as single components or combined into smart energy efficient lighting solutions.

Helvar

freedom in lighting



LED DRIVERS

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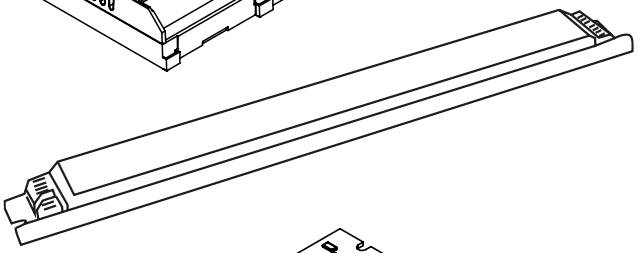

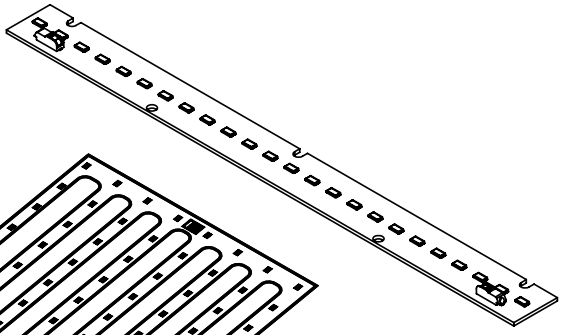

LED MODULES

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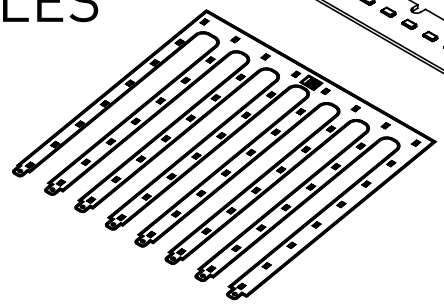

ACCESSORIES

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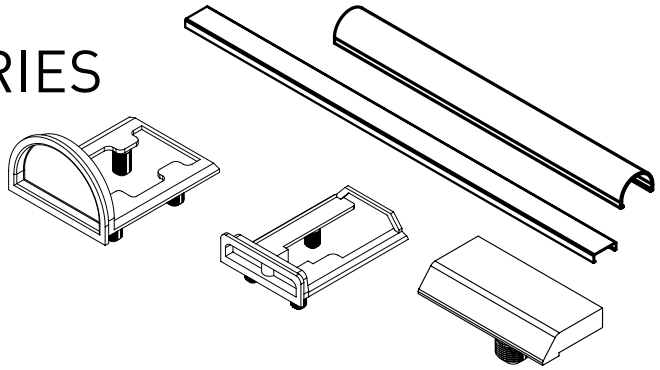

iDim

SMART STANDALONE SOLUTIONS

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SENSORS

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HELVAR INTELLIGENT COLOUR SERIES TUNABLE WHITE

Helvar's iC range introduces easy colour control enabled by DALI Type 8 commands.

WHY DO WE NEED TUNABLE WHITE?

Tunable White products help you mix warm and cool white light and light intensity so that you can mimic outdoor lighting conditions (where morning light has different colour and intensity than midday light). This promotes feelings of well-being and productivity for people who spend big part of their day indoors in artificial light, e.g. office workers, school students, hospital patients, etc.

WHAT BENEFITS DOES DALI COLOUR CONTROL BRING?

DALI's new Colour control standard enables you to pick a scene of colour and intensity in one easy step, vastly decreasing programming time. This new standard only needs one DALI address, which greatly reduces the cost of a DALI lighting system. The DALI type 8 (Dt8) commands enable us to control two or more output channels by one common address.

HELVAR'S IC DALI DRIVERS

The new Helvar iC DALI Drivers have been developed specifically for dimming and tuning the white colour. The drivers are among the first ones available in the market responding to Dt8 commands. The two driver output channels are connected to two modules with different colour temperatures, warm white and cold white which are then controlled by using only one address.

The total power of the drivers can be divided between the two output channels in any proportion. The current output can be set between 350 mA and 700 mA, with a current setting resistor.

Key product information:

- Two independent SELV rated output channels
- DALI type 8 software
- Stepless dimming
- High efficiency, 0.90
- External NTC thermal input
- Switch-Control for intensity and colour control

DALI DRIVER CONFIGURATOR

The DALI Driver Configurator tool allows you to set LED module parameters for iC LED drivers to ensure proper operation during colour and light intensity control.

The tool can also be used to configure other LED driver parameters like output current.

DALI LED Driver for Tunable White

LL35/2-E-DA-iC – 35 W

- Two independent SELV rated output channels
- DALI device type 8 software for tunable white
- 1% – 100% stepless dimming range per channel
- Switch-Control for intensity and colour control
- Helvar DALI Driver Configurator for setting the parameters

Control	DALI, Tunable White
Max output power	35 W
Product category	Adjustable I-OUT
Output current	350 mA (default) – 700 mA
Output protection	SELV < 120 V, isolated, double insulated
Luminaire class	I, II
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL35_2-E-DA-iC

DALI LED Driver for Tunable White

LL60/2-E-DA-iC – 60 W

- Two independent SELV rated output channels
- DALI device type 8 software for tunable white
- 1% – 100% stepless dimming range per channel
- Switch-Control for intensity and colour control
- Helvar DALI Driver Configurator for setting the parameters

Control	DALI, Tunable White
Max output power	60 W
Product category	Adjustable I-OUT
Output current	350 mA (default) – 700 mA
Output protection	SELV < 120 V, isolated, double insulated
Luminaire class	I, II
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL60_2-E-DA-IC

DALI LED driver with preset scenes for Tunable White

LL60/2-E-DA Dynamic - 60 W

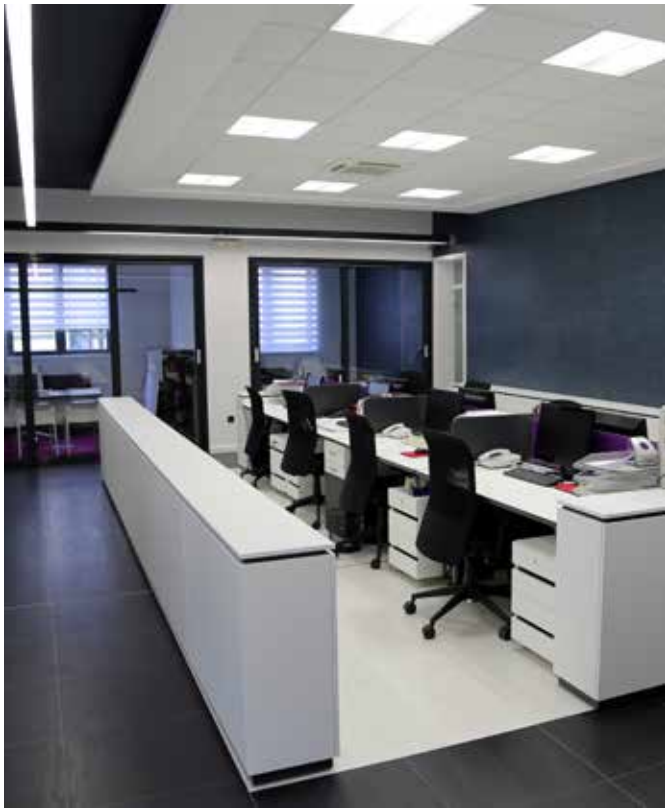
- Four pre-set Tunable White scenes simulating different weather conditions, Dynamic scene as default
- Easy solution for Tunable White control in new build
- No driver or module configuration needed
- Out-of-box dynamic operation without DALI network
- 3% – 100% dimming range per scene
- SELV rated output channels
- High efficiency, 0.90

Control	DALI, Tunable White
Max output power	60 W
Product category	Select the Weather
Output current	350 mA (default) – 700 mA
Output protection	SELV rated output channels
Luminaire class	I, II
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/select-the-weather

SELV 60 V AND 120 V DRIVERS

Helvar offers a range of SELV < 60 V and < 120 V rated drivers for flexible luminaire design.



SELV (Safety Extra Low Voltage) rating ensures that the output voltage remains below the defined voltage value at any time, allowing for a more open and flexible luminaire design.

Helvar's SELV < 60 V drivers are designed for applications, where the led modules in luminaires will not be protected from touching. The touchable part of the luminaires can be left unprotected as long as the driver output and the voltage over the modules will not exceed 60 V. SELV < 120 V products can be used in luminaires where the modules need partial protection of components due to higher secondary side voltage.

The SELV rated drivers cover a power output range from 6W to 70W. The range includes both constant current and dimmable products. In addition, three products in the range feature two independent SELV < 60 V rated output channels.

Dimmable DALI LED driver

LC1x25-DA - 1x25 W

- DALI control input 1% – 100% dimming range (DALI revision 2.0)
- Hybrid dimming technique for high quality light
- Adjustable constant current output with LEDset resistor values
- Overload, open and short circuit protection
- Suitable for use in emergency lighting applications
- Optional strain relief for independent use (LC1x30-SR)
- Internal adaptive thermal protection
- Long lifetime 65 000 h

Control	DALI
Max output power	25 W
Product category	Adjustable I-OUT
Output current	350 mA - 700 mA
Output protection	SELV < 60 V, double isolated, double insulated
Luminaire class	I, II, III
Type	Compact, Indoor

More technical details via QR code or at:
helvar.com/products/LC1x25-DA

Dimmable DALI LED driver
LC1x35-DA - 1x35 W

- DALI control input 1% – 100% dimming range (DALI revision 2.0)
- Hybrid dimming technique for high quality light
- Adjustable constant current output with LEDset resistor values
- Overload, open and short circuit protection
- Suitable for use in emergency lighting applications
- Optional strain relief for independent use (LC1x30-SR)
- Internal adaptive thermal protection
- Long lifetime 60 000 h

Control	DALI
Max output power	35 W
Product category	Adjustable I-OUT
Output current	700 mA – 1050 mA
Output protection	SELV < 60 V, isolated, double insulated
Luminaire class	I, II, III
Type	Compact, indoor

More technical details via QR code or at:
helvar.com/products/LC1x35-DA

Dimmable DALI LED driver
LL1x50-E-DA – 1x50 W

- DALI control input 1% – 100% dimming range (DALI revision 2.0)
- Hybrid dimming technique for high quality light
- Overload, open and short circuit protection
- Suitable for use in emergency lighting applications
- Helvar DALI Driver Configurator support

Control	ON/OFF
Max output power	50.4 W
Product category	Adjustable I-OUT
Output current	1050 mA - 1400 mA
Output protection	SELV < 60 V, isolated, double insulated
Luminaire class	I, II
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL1x50-E-DA

Dimmable DALI LED driver

LC1x50-E-DA - 1x50 W

- DALI control input 1% – 100% dimming range (DALI revision 2.0)
- Hybrid dimming technique for high quality light
- Overload, open and short circuit protection
- Optional click-on strain relief (LC1x70-SR) for installation outside of a luminaire
- Suitable for use in emergency lighting applications

Control	DALI
Max output power	50.4 W
Product category	Adjustable I-OUT
Output current	1050 mA (default) – 1400 mA
Output protection	SELV < 60 V, isolated, double insulated
Luminaire class	I, II, III
Type	Compact, Indoor

More technical details via QR code or at:
helvar.com/products/LC1x50-E-DA

Constant Current LED driver

LL6-U-CC – 1x6 W

- Universal mains supply
- Accepts DC on mains input
- Protected up to 4 kV power network fast transient

Control	ON/OFF
Max output power	6 W
Product category	Selectable I-OUT
Output current	350 mA or 700 mA
Output protection	SELV < 60 V, isolated, double insulated
Luminaire class	I, II, III
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL6-U-CC

Constant Current LED driver

LC1x25-CC - 1x25 W

- Adjustable constant current output, with LEDset resistor values
- Duplicated mains connection terminal
- Optional click-on strain relief (LC1x30-SR) for installation outside of a luminaire
- Long lifetime, 65 000 h
- SELV < 60 V output protection

Control	ON/OFF
Max output power	25 W
Product category	Adjustable I-OUT
Output current	350 mA - 700 mA
Output protection	SELV < 60 V, isolated, double insulated
Luminaire class	I, II, III
Type	Compact, indoor

More technical details via QR code or at:
helvar.com/products/LC1x35-CC

Dimmable DALI LED driver

LC1x35-CC - 1x35 W

- Adjustable constant current output, with LEDset resistor values
- Duplicated mains connection terminal
- Additional strain relief for independent use (LC1x30-SR)
- SELV < 60 V output protection
- Long lifetime, 60 000 h

Control	ON/OFF
Max output power	35 W
Product category	Adjustable I-OUT
Output current	700 mA – 1050 mA
Output protection	SELV < 60 V, isolated, double insulated
Luminaire class	I, II, III
Type	Compact, indoor

More technical details via QR code or at:
helvar.com/products/LC1x35-CC

Constant Current LED driver
LL1x50-E-CC-700-1050 - 1x50 W

- Dual output terminals for parallel LED connection
- Overload, open and short circuit protection
- High efficiency 0.90
- Suitable for use in emergency lighting applications

Control	ON/OFF
Max output power	50.4 W
Product category	Adjustable I-OUT
Output current	700 mA (default) – 1050 mA
Output protection	SELV < 60 V, isolated, double insulated
Luminaire class	I, II
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL1x50-E-CC-700-1050

Constant Current LED driver
LC1x50-E-CC-700-1050- 1x50 W

- Dual output terminals for parallel LED connection
- Overload, open and short circuit protection
- High efficiency 0.90
- Suitable for use in emergency lighting applications

Control	ON/OFF
Max output power	50.4 W
Product category	Adjustable I-OUT
Output current	700 mA (default) – 1050 mA
Output protection	SELV < 60 V, double isolated, double insulated
Luminaire class	I, II, III
Type	Compact, indoor

More technical details via QR code or at:
helvar.com/products/LC1x50-E-CC-700-1050

Constant Current LED driver
LL1x50-E-CC – 1x50 W

- Dual output terminals for parallel LED connection
- Overload, open and short circuit protection
- Suitable for use in emergency lighting applications

Control	ON/OFF
Max output power	50 W
Product category	Adjustable I-OUT
Output current	1050 mA (default) – 1400 mA
Output protection	SELV < 60 V, isolated, double insulated
Luminaire class	I, II
Type	Linear, Indoor

More technical details via QR code or at: helvar.com/products/LL1x50-E-CC

Constant Current LED driver
LC1x50-E-CC – 1x50 W

- Overload, open and short circuit protection
- Suitable for use in emergency lighting applications
- High efficiency 0.90
- Optional strain relief for independent use (LC1x70-SR)

Control	ON/OFF
Max output power	50 W
Product category	Adjustable I-OUT
Output current	1050 mA - 1400 mA
Output protection	SELV < 60 V, isolated, double insulated
Luminaire class	I, II, III
Type	Compact, Indoor

More technical details via QR code or at: helvar.com/products/LC1x50-E-CC

Constant Current LED driver

LL2x25-E-CC – 2x25 W

- Two SELV rated output channels
- Overload, open and short circuit protection
- Suitable for use in emergency lighting applications

Control	ON/OFF
Max output power	25 W + 25 W
Product category	Adjustable I-OUT
Output current	350 mA (default) – 700 mA
Output protection	SELV < 60 V, isolated, double insulated
Luminaire class	I, II
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL2x25-E-CC

© Lauri Dammert

Dimmable DALI LED driver
LL1x20-E-DA – 1x20 W

- DALI control input with 1% – 100% dimming range
- Protected up to 4 kV power network fast transients
- Linear enclosure with strain relief for independent use

Control	DALI
Max output power	20 W
Product category	Selectable I-OUT
Output current	350 mA, 500 mA or 700 mA
Output protection	SELV < 120 V, isolated, double insulated
Luminaire class	I, II, III
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL1x20-E-DA

Dimmable DALI LED driver
LC1x30-E-DA – 1x30 W

- Smooth and DALI compatible dimming 1% – 100%
- Reliable lifetime (50 000 h)
- Very low stand-by power (0.3 W)
- Protected up to 4 kV power network fast transients
- Optional click-on strain relief (LC1x30-SR) for installation outside of a luminaire

Control	DALI
Max output power	30 W
Product category	Selectable I-OUT
Output current	350 mA, 500 mA or 700 mA
Output protection	SELV < 120 V, isolated, double insulated
Luminaire class	I, II, III
Type	Compact, Indoor

More technical details via QR code or at:
helvar.com/products/LC1x30-E-DA

Dimmable DALI LED driver
LL1x40-E-DA-350-700 – 1x40 W

- DALI control input 1% – 100% dimming range
- Low standby power consumption 0.3 W
- Protected up to 4 kV power network fast transients
- Optional click-on strain relief (LL1x40-SR) for installation outside of a luminaire

Control	DALI
Max output power	40 W
Product category	Adjustable I-OUT
Output current	350 mA (default) – 700 mA
Output protection	SELV < 120 V, isolated, double insulated
Luminaire class	I, II, III
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL1x40-E-DA-350-700

Dimmable DALI LED driver
LL1x40-E-DA-700-1050 – 1x40 W

- DALI control input 1% – 100% dimming range
- Low standby power consumption 0.3 W
- Protected up to 4 kV power network fast transients
- Optional click-on strain relief (LL1x40-SR) for installation outside of a luminaire

Control	DALI
Max output power	40 W
Product category	Adjustable I-OUT
Output current	700 mA (default) – 1050 mA
Output protection	SELV < 120 V, isolated, double insulated
Luminaire class	I, II, III
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL1x40-E-DA-700-1050

Dimmable DALI LED driver
LC1x70-E-DA – 1x70 W

- DALI control input 1% – 100% dimming range
- Low standby power consumption < 0.5 W
- Protected up to 4 kV power network fast transients
- Overload, open and short circuit protection
- Auxiliary 12 V output for cooling fan
- Optional click-on strain relief (LC1x70-SR) for installation outside of a luminaire

Control	DALI
Max output power	70 W
Product category	Adjustable I-OUT
Output current	700 mA (default) – 1400 mA
Output protection	SELV < 120 V, isolated, double insulated
Luminaire class	I, II, III
Type	Compact, Indoor

More technical details via QR code or at:
helvar.com/products/LC1x70-E-DA

Dimmable DALI LED driver
LL2x35-E-DA – 2x35 W

- Two independent SELV rated output channels
- DALI control input 1% – 100% dimming range
- Low standby power consumption < 0.5 W
- Protected up to 4kV power network fast transients
- Overload, open and short circuit protection

Control	DALI
Max output power	35 W + 35 W
Product category	Adjustable I-OUT
Output current	350 mA (default) - 700 mA
Output protection	SELV < 120 V, isolated, double insulated
Luminaire class	I, II
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL2x35-E-DA

Dimmable 1-10 V LED driver

LC1x30-E-AN – 1x30 W

- Smooth 1-10 V dimming 1% – 100%
- Reliable lifetime (50 000h)
- Accepts DC on mains input
- Protected up to 4 kV power network fast transients
- Optional click-on strain relief (LC1x30-SR) for installation outside of a luminaire

Control	1-10 V
Max output power	30 W
Product category	Selectable I-OUT
Output current	350 mA, 500 mA or 700 mA
Output protection	SELV < 120 V, isolated, double insulated
Luminaire class	I, II, III
Type	Compact, Indoor

More technical details via QR code or at:
helvar.com/products/LC1x30-E-AN

Constant Current LED driver

LL1x20-E-CC – 1x20 W

- Protected up to 4 kV power network fast transients
- Linear enclosure with strain relief for independent use

Control	ON/OFF
Max output power	20 W
Product category	Selectable I-OUT
Output current	350 mA, 500 mA or 700 mA
Output protection	SELV < 120 V, isolated, double insulated
Luminaire class	I, II, III
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL1x20-E-CC

Constant Current LED driver
LC1x30-E-CC – 1x30 W

- Reliable lifetime (50 000 h)
- Accepts DC on mains input
- Protected up to 4 kV power network fast transients
- Optional click-on strain relief (LC1x30-SR) for installation outside of a luminaire

Control	ON/OFF
Max output power	30 W
Product category	Selectable I-OUT
Output current	350 mA, 500 mA or 700 mA
Output protection	SELV < 120 V, isolated, double insulated
Luminaire class	I, II, III
Type	Compact, Indoor

More technical details via QR code or at:
helvar.com/products/LC1x30-E-CC

Constant Current LED driver
LL1x40-E-CC – 1x40 W

- Protected up to 4 kV power network fast transients
- Overload, open and short circuit protection
- Optional click-on strain relief (LL1x40-SR) for installation outside of a luminaire

Control	ON/OFF
Max output power	40 W
Product category	Adjustable I-OUT
Output current	350 mA (default) – 1050 mA
Output protection	SELV < 120 V, isolated, double insulated
Luminaire class	I, II, III
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL1x40-E-CC

Constant Current LED driver
LC1x70-E-CC – 70 W

- Protected up to 4 kV power network fast transients
- Overload, open and short circuit protection
- Auxiliary 12 V output for cooling fan
- Optional click-on strain relief (LC1x70-SR) for installation outside of a luminaire

Control	ON/OFF
Max output power	70 W
Product category	Adjustable I-OUT
Output current	700 mA (default) - 1400 mA
Output protection	SELV < 120 V, isolated, double insulated
Luminaire class	I, II, III
Type	Compact, Indoor

More technical details via QR code or at:
helvar.com/products/LC1x70-E-CC

Constant Current LED driver
LL2x35-E-CC – 2x35 W

- Two independent SELV rated output channels
- High efficiency ≥ 0.91
- Protected up to 4 kV power network fast transients
- Overload, open and short circuit protection

Control	ON/OFF
Max output power	35 W + 35 W
Product category	Adjustable I-OUT
Output current	350 mA (default) - 700 mA
Output protection	SELV < 120 V, isolated, double insulated
Luminaire class	I, II
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL2x35-E-CC

SMALL SIZE BASIC LED DRIVERS

Constant Current LED driver
LL1x12-E-CC-350 – 1x12 W

- Short circuit protection
- Linear enclosure with strain relief for independent use

Control	ON/OFF
Max output power	12 W
Product category	Single I-OUT
Output current	350 mA
Output protection	SELV < 60 V, isolated, double insulated
Luminaire class	II
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL1x12-E-CC-350

Constant Current LED driver
LL1x12-E-CC-700 – 1x12 W

- Short circuit protection
- Linear enclosure with strain relief for independent use

Control	ON/OFF
Max output power	12 W
Product category	Single I-OUT
Output current	700 mA
Output protection	SELV < 60 V, isolated, double insulated
Luminaire class	I, II, III
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL1x12-E-CC-700

Constant Current LED driver
LL1x15-E-CC-500 – 1x15 W

- Short circuit protection
- Linear enclosure with strain relief for independent use

Control	ON/OFF
Max output power	15 W
Product category	Single I-OUT
Output current	500 mA
Output protection	SELV < 60 V, isolated, double insulated
Luminaire class	I, II, III
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL1x15-E-CC-500

Constant Current LED driver
LL1x20-E-CC-350 – 1x20 W

- Open and short circuit protection
- Linear enclosure with strain relief for independent use

Control	ON/OFF
Max output power	20 W
Product category	Single I-OUT
Output current	350 mA
Output protection	SELV < 60 V, isolated, double insulated
Luminaire class	I, II, III
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL1x20-E-CC-350

Constant Current LED driver
LL1x20-E-CC-500 – 1x20 W

- Open and short circuit protection
- Overvoltage protection
- Over temperature protection
- Linear enclosure with an integrated strain relief for independent use

Control	ON/OFF
Max output power	20 W
Product category	Single I-OUT
Output current	500 mA
Output protection	SELV < 60 V, isolated, double insulated
Luminaire class	I, II, III
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL1x20-E-CC-500

Constant Current LED driver
LL1x20-E-CC-700 – 1x20 W

- Open and short circuit protection
- Linear enclosure with strain relief for independent use

Control	ON/OFF
Max output power	20 W
Product category	Single I-OUT
Output current	700 mA
Output protection	SELV < 60 V, isolated, double insulated
Luminaire class	I, II, III
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL1x20-E-CC-700

Constant Current LED driver
LL1x30-E-CC-700 - 1x30 W

- High power factor 0.95
- High efficiency 0.90
- Open and short circuit protection
- Linear enclosure with strain relief for independent use

Control	ON/OFF
Max output power	30 W
Product category	Single I-OUT
Output current	700 mA
Output protection	SELV < 60 V, isolated, double insulated
Luminaire class	I, II, III
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL1x30-E-CC-700

Constant Current LED driver
LL1x30-E-CC-350 - 1x30 W

- High power factor 0.95
- Open and short circuit protection
- Linear enclosure with strain relief for independent use

Control	ON / OFF
Max output power	30 W
Product category	Single I-OUT
Output current	350 mA
Output protection	SELV <120 V, isolated, double insulated
Luminaire class	I, II, III
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL1x30-E-CC-350

HIGH EFFICIENCY LED DRIVERS

Helvar's efficient drivers are designed for low output current providing high efficiency.

In combination with Helvar's first class design technology, the drivers can provide greater efficiency of 0.93–0.95. The optimised design and component choice contribute to an outstanding lifetime of 60 000 h for the drivers.

LED Driver	Current output
LL1x10-42-E-DA	120 mA – 350 mA
LL1x10-42-E-CC	120 mA – 350 mA
LL1x23-80-E-DA	150 mA – 350 mA
LL1x23-80-E-CC	150 mA – 350 mA
LL1x80-E-DA-350-700	350 mA – 700 mA
LL1x80-E-CC-350-700	350 mA – 700 mA
LL1x110-E-DA	350 mA – 700 mA
LL1x110-E-CC-200-350	200 mA – 350 mA
LL1x110-E-CC-350-700	350 mA – 700 mA
LL1x150-E-CC	350 mA – 700 mA

Dimmable DALI LED driver

LL1x10-42-E-DA – 1x10-42 W

- DALI control input 1% – 100% dimming range (DALI revision 2.0)
- Hybrid dimming technique for high quality light
- Overload, open and short circuit protection
- High efficiency 0.93
- Helvar DALI Driver Configurator support

Control	DALI
Max output power	42 W
Product category	Adjustable I-OUT
Output current	120 mA (default) – 350 mA
Output protection	Non-isolated
Luminaire class	I
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL1x10-42-E-DA

Dimmable DALI LED driver

LL1x23-80-E-DA - 1x23-80 W

- DALI control input 1% – 100% dimming range (DALI revision 2.0)
- Enhanced hybrid dimming, varying PWM frequency
- Current setting by software
- Constant Light Output (CLO)
- Load recognition

Control	DALI
Max output power	80 W
Product category	Adjustable I-OUT
Output current	150 mA - 350 mA
Output protection	Non-isolated
Luminaire class	I
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL1x23-80-E-DA

Dimmable DALI LED driver

LL1x80-DA-350-700 - 1x80 W

- DALI control input 1% – 100% dimming range (DALI revision 2.0)
- Enhanced Hybrid dimming, varying PWM frequency
- Current setting by software
- Constant Light Output (CLO)
- Load recognition
- Very high efficiency up to 0.94

Control	DALI
Max output power	80 W
Product category	Adjustable I-OUT
Output current	350 mA - 700 mA
Output protection	Non-isolated
Luminaire class	I
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL1x80-E-CC-350-700

DALI dimmable LED driver

LL1x110-E-DA

- DALI control input 1% – 100% dimming range (DALI revision 2.0)
- Hybrid dimming technique for high quality light
- Overload, open and short circuit protection
- Low stand-by power < 0.5 W
- High efficiency 0.95

Control	DALI
Max output power	110 W
Product category	Adjustable I-OUT
Output current	350 mA – 700 mA
Output protection	Non-isolated
Luminaire class	I
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL1x110-E-DA

Constant Current LED driver

LL1x10-42-E-CC – 1x10-42 W

- Open and short circuit protection
- High efficiency 0.94
- Protected up to 4 kV network fast transients
- 60 000 h lifetime

Control	ON/OFF
Max output power	42 W
Product category	Adjustable I-OUT
Output current	120 mA (default) – 350 mA
Output protection	Non-isolated
Luminaire class	I
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL1x10-42-E-CC

Constant Current LED driver
LL1x23-80-E-CC – 1x23-80 W

- Open and short circuit protection
- Protected up to 4 kV power network fast transients
- High efficiency 0.95
- 60 000 h lifetime

Control	ON/OFF
Max output power	80 W
Product category	Adjustable I-OUT
Output current	150 mA (default) – 350 mA
Output protection	Non-isolated
Luminaire class	I
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL1x23-80-E-CC

Constant Current LED driver
LL1x80-E-CC-350-700 – 1x80 W

- Open and short circuit protection
- Protected up to 4 kV power network fast transients
- High efficiency 0.94
- 60 000 h lifetime

Control	ON/OFF
Max output power	80 W
Product category	Adjustable I-OUT
Output current	350 mA (default) – 700 mA
Output protection	Non-isolated
Luminaire class	I
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL1x80-E-CC-350-700

Constant Current LED driver

LL1x110-E-CC-200-350 - 1x110 W

- Open and short circuit protection
- Protected up to 4 kV power network fast transients
- High efficiency 0.95

Control	ON/OFF
Max output power	110 W
Product category	Adjustable I-OUT
Output current	200 mA (default) – 350 mA
Output protection	Non-isolated
Luminaire class	I
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL1x110-E-CC-200-350

Constant Current LED driver

LL1x110-E-CC-350-700 – 1x110 W

- Open and short circuit protection
- Protected up to 4 kV power network fast transients
- High efficiency 0.95

Control	ON/OFF
Max output power	110 W
Product category	Adjustable I-OUT
Output current	350 mA (default) - 700 mA
Output protection	Non-isolated
Luminaire class	I
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL1x110-E-CC-350-700

Constant Current LED driver

LL1x150-E-CC

- Open and short circuit protection
- Protected up to 4 kV power network fast transients
- High efficiency 0.96

Control	ON/OFF
Max output power	150 W
Product category	Adjustable I-OUT
Output current	350 mA – 700 mA
Output protection	Non-isolated
Luminaire class	I
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL1x150-E-CC

OTHER LED DRIVERS

Dimmable DALI LED driver

LL1x70-E-DA – 1x70 W

- DALI control input 1% – 100% dimming range
- Low standby power 0.4 W
- Protected up to 4 kV power network fast transients
- Overload, short and open circuit protection
- High efficiency > 0.91

Control	DALI
Max output power	70 W
Product category	Adjustable I-OUT
Output current	350 mA (default) – 700 mA
Output protection	Non-isolated
Luminaire class	I
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL1x70-E-DA

Constant Current LED driver

LL1x38-CC - 1x38 W

- Load output has a basic (galvanic) insulated from the mains
- Protected up to 4 kV power network fast transients

Control	ON/OFF
Max output power	38.5 W
Product category	Selectable I-OUT
Output current	300 mA or 350 mA
Output protection	Basic insulated
Luminaire class	I
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL1x38-CC

Constant current LED driver

LL1x42-E-CC-350 - 1x42 W

- Load output is double insulated from the mains
- Parallel output connection
- Fixed low ripple constant current output

CE

Control	ON/OFF
Max output power	42 W
Product category	Single I-OUT
Output current	350 mA
Output protection	Isolated
Luminaire class	I
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL1x42-E-CC-350

Constant Current LED driver

LL1x70-E-CC – 1x70 W

- Accept DC mains in case of central emergency battery.
- Overload, short and open circuit protection
- High efficiency > 0.91
- Protected up to 4 kV power network fast transients

16 CE DALI

Control	ON/OFF
Max output power	70 W
Product category	Adjustable I-OUT
Output current	350 mA (default) – 700 mA
Output protection	Non-isolated
Luminaire class	I
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL1x70-E-CC

DIMMABLE CONSTANT VOLTAGE SOLUTION FOR DECORATIVE LIGHTING

As part of the DALI product portfolio, Helvar offers Constant Voltage Dimming Solution for indirect and/or decorative lighting.

The solution can be used with constant voltage LED strips, which brings flexibility to lighting design. The LED strips can be folded, and the length of the strip can be chosen suitable for the environment. Several LED strips can be installed in the solution in parallel with up to the maximum current of 5000 mA. The products are a small linear design enabling easy installation.

The extremely wide DALI dimming range (0.1% – 100%) combined with higher PWM frequency (1 kHz) to reduce flickering light, offer superior dimming quality of the solution.

The products in this solution have system standby power amongst the lowest on the market, as well as the high voltage (24 V) power supply that helps greatly to reduce power loss over the LED strips, making the solution very energy efficient.

The solution has added safety, as the DALI input of LL1-CV-DA products are mains rated and double isolated from the power input and load. The solution is suitable for class I, II and SELV < 60 V rated luminaires.

The products you need for the solution:

- Constant Voltage power supply, such as OL1x30-E-CV24, OL1x75-E-CV24, LL1x30-E-CV24, and LL1x75-E-CV24
- DALI Extension Unit for dimming the Constant Voltage, such as LL1-CV-DA
- One or several constant voltage LED strips

Dimmable constant voltage DALI LED driver extension

LL1-CV-DA – 12-24 V

- DALI extension unit for constant voltage LED driver
- DALI control input, 0.1% – 100% dimming range
- 1 kHz PWM dimming frequency
- Stand-by power < 0.1 W
- Duplicate terminals for parallel connection

Control	DALI
Max output power	120 W
Product category	Constant Voltage
Output current	Max 5 A
Output protection	Depends on CV power supply
Luminaire class	Depends on CV power supply
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL1-CV-DA

Constant Voltage LED driver

OL1x30-E-CV24 – 1x30 W

- Open and short circuit protection
- 24 V constant voltage output
- Suitable for outdoor use IP67

Control	ON/OFF
Max output power	30 W
Product category	Constant Voltage
Output current	Max 1.25 A
Output protection	SELV < 60 V, isolated, double insulated
Luminaire class	I, II, III
Type	Linear, Outdoor

More technical details via QR code or at:
helvar.com/products/OL1x30-E-CV24

Constant Voltage LED driver

OL1x75-E-CV24 – 1x75W

- Open and short circuit protection
- Suitable for outdoor use IP67
- Double insulated enclosure
- 24 V constant voltage output

Control	ON/OFF
Max output power	75 W
Product category	Constant Voltage
Output current	Max 3.125 A
Output protection	SELV < 60 V, isolated, double insulated
Luminaire class	I, II, III
Type	Linear, Outdoor

More technical details via QR code or at:
helvar.com/products/OL1x75-E-CV24

Constant Voltage LED driver

LL1x30-E-CV24 - 1x30 W

- Open and short circuit protection
- Over voltage protection
- 24 V constant voltage output

Control	ON/OFF
Max output power	30 W
Product category	Constant voltage
Output current	Max 1.25 A
Output protection	SELV < 60 V, isolated, double insulated
Luminaire class	I, II, III
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL1x30-E-CV24

Constant Voltage LED driver

LL1x75-E-CV24 - 1x75W

- Open and short circuit protection
- Over voltage protection
- 24 V constant voltage output

Control	ON/OFF
Max output power	75 W
Product category	Constant Voltage
Output current	Max 3.125 A
Output protection	SELV < 60 V, isolated, double insulated
Luminaire class	I, II, III
Type	Linear, Indoor

More technical details via QR code or at:
helvar.com/products/LL1x30-E-CV24

OUTDOOR DRIVERS

Helvar's range of IP65 and IP67 rated drivers offer flexibility for outdoor luminaire design. Our drivers have maximum power from 60 W to 100 W and lifetime of 50.000 hours. The output current can be selected between 350 mA (60 W), 700 mA (60 W and 100 W), 1050 mA (100 W), 1400 mA (60 W and 100 W), and 2100 mA (100 W).

Constant Current LED driver

OL1x60-E-CC – 1x60 W

- Lifetime 50 000 h
- IP65 for outdoor use
- Protected up to 4 kV power network fast transient

SELV

Control	ON/OFF
Max output power	60 W
Product category	Selectable I-OUT
Output current	350 mA, 700 mA or 1400 mA
Output protection	SELV < 120 V, isolated, double insulated
Luminaire class	I, IIs
Type	Linear, Outdoor

More technical details via QR code or at:
helvar.com/products/OL1x60-E-CC

Constant Current LED driver
OL1x100-E-CC2 – 1x100 W

- Lifetime 50 000 h
- IP65 for outdoor use
- Protected up to 4 kV power network fast transient

SELV

Control	ON/OFF
Max output power	100 W
Product category	Selectable I-OUT
Output current	1400 mA or 2100 mA
Output protection	Isolated, double insulated
Luminaire class	I, II
Type	Linear, Outdoor

More technical details via QR code or at:
helvar.com/products/OL1x100-E-CC2

Constant Current LED driver
OL1x100-E-CC1 – 1x100 W

- Lifetime 50 000h
- IP65 for outdoor use
- Protected up to 4 kV power network fast transient

SELV

Control	ON/OFF
Max output power	100 W
Product category	Selectable I-OUT
Output current	700 mA or 1050 mA
Output protection	Isolated, double insulated
Luminaire class	I, II, III
Type	Linear, Outdoor

More technical details via QR code or at:
helvar.com/products/OL1x100-E-CC

LED MODULES

LS Series

Helvar's second generation modular LS series LED modules allows flexibility within luminaire design. The linear LS series LED module family offers superior colour consistency, lifetime and high uniformity of light.

The range has been designed to match Zhaga 24 mm dimensions with three available lengths: 140 mm, 280 mm and 560 mm. By offering identical distance between LED chips on the modules, you can build linear luminaires with various lengths, starting from 140 mm up to many meters in 140 mm interval just by assembling the modules in line.

LS series is available in 3000 K and 4000 K colour temperatures. It has been designed to match with Helvar's low-current LED driver platform in series connection.

Module	LS142-8xx-006A	LS282-8xx-011A	LS562-8xx-025A
Dimensions	140x24x6 mm	280x24x6 mm	560x24x6 mm
Nominal Current	350 mA	350 mA	350 mA
Forward voltage	11.8 V	23.7 V	47.2 V
Luminous flux	630 lm	1260 lm	2520 lm
Efficacy up to	155 lm/W	155 lm/W	155 lm/W
Colour variants	3000 K (830) 4000 K (840)	3000 K (830) 4000 K (840)	3000 K (830) 4000 K (840)

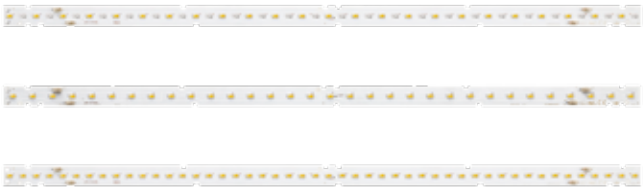
M Series

With its linear mechanics, easy to use connections and best colour consistency, the Linear modules are the perfect solution for creating linear shaped LED luminaires.

Module Benefits

- Accurate LED binning for colour consistency and high uniformity
- Helvar LED driver offering (CC and DALI) for smooth dimming and compatibility
- Helvar complementary Lighting Controls for maximum energy efficiency

M-series



Multiplex Series

The high-efficacy Multiplex LED modules provide a cost effective solution whilst delivering a uniform light output, offering a competitive solution for creating square shaped LED luminaires (like 600 x 600 ceiling panels).

Module Benefits

- Easy to design-in for flexibility in luminaire design
- Value-add optical technology (LAM-type) enabling slimmer luminaire designs
- Good thermal performance providing greater durability and long lifetime
- Choice of square and rectangular design for flexibility in design

Multiplex 64

Multiplex 30

Chip on Board Modules

The range of Chip on Board modules (COB) are the ideal components for creating circular spot lights and down lights fittings. Its range of luminous flux and colour temperature give design flexibility and choice to the luminaire manufacturer.

Module Benefits

- 3-Step MacAdam binning for colour consistency
- High luminous efficacy for maximum energy efficiency
- Range of power versions and colour temperatures from 2700 K to 5000 K CCT for design freedom
- Available both CRI > 80 and CRI > 90 for superior light quality
- Compatible Helvar LED drivers (CC and DALI)
- Compatible holder and optics solutions available

COB 26 W series

COB 40 W series

COATED LED DRIVERS FOR OUTDOOR LUMINAIRES

Coated drivers by Helvar offer enhanced operation in outdoor luminaires.

Helvar's popular LED drivers are now available as an optional version with an additional coating which provides robustness in challenging climate conditions.

A very thin layer of lacquer coated onto the circuit board provides added protection against humidity, in case accidental condensation appears in the luminaire. These coated drivers are suitable for extremely cold environments due to the extended temperature range starting from -40 °C. Performance and other features as with respective non-coated drivers.

There are drivers available for both switching and controllable use:

Product	Max Power	Product Range
LL1x20-E-DA Coated	20 W	DALI Controllable
LL1x20-E-CC Coated	20 W	Constant Current
LC1x30-E-DA Coated	30 W	DALI Controllable
LC1x30-E-CC Coated	30 W	Constant Current
LC1x30-E-AN Coated	30 W	Selectable I-OUT
LC1x50-E-DA Coated	50.4 W	Adjustable I-OUT
LC1x50-E-CC Coated	50 W	Constant Current
LC1x70-E-DA Coated	70 W	DALI Controllable
LC1x70-E-CC Coated	70 W	Constant Current
nightDim drivers	various	nightDim

ACCESSORIES

Click-on strain relief

This easy to assemble click-on strain relief can be used together with a LED driver when the driver needs to be safely installed outside of a luminaire (independent use).

LC1x30-SR

- The LC1x30-SR strain relief is compatible with the LC1x30 range
- Fully adjustable cable tightening
- Robust and easy construction

SELV

LC1x70-SR

- Easy to assemble click-on strain relief for the LC1x50 and LC1x70 series
- Allows independent driver usage
- Screws for internal cable clamps included
- Cable clamps allowing different cable thicknesses

SELV

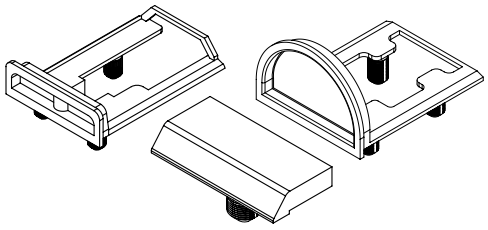
LL1x40-SR

- Easy to assemble click-on strain relief for LL1x40 series
- Allows independent driver usage
- Screws for internal cable clamps included
- Cable clamps allowing different cable thicknesses
- Each pack includes 2 x strain reliefs

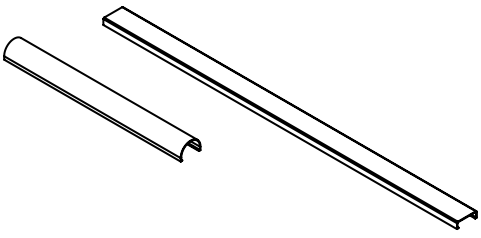
SELV

Diffusers & Holders

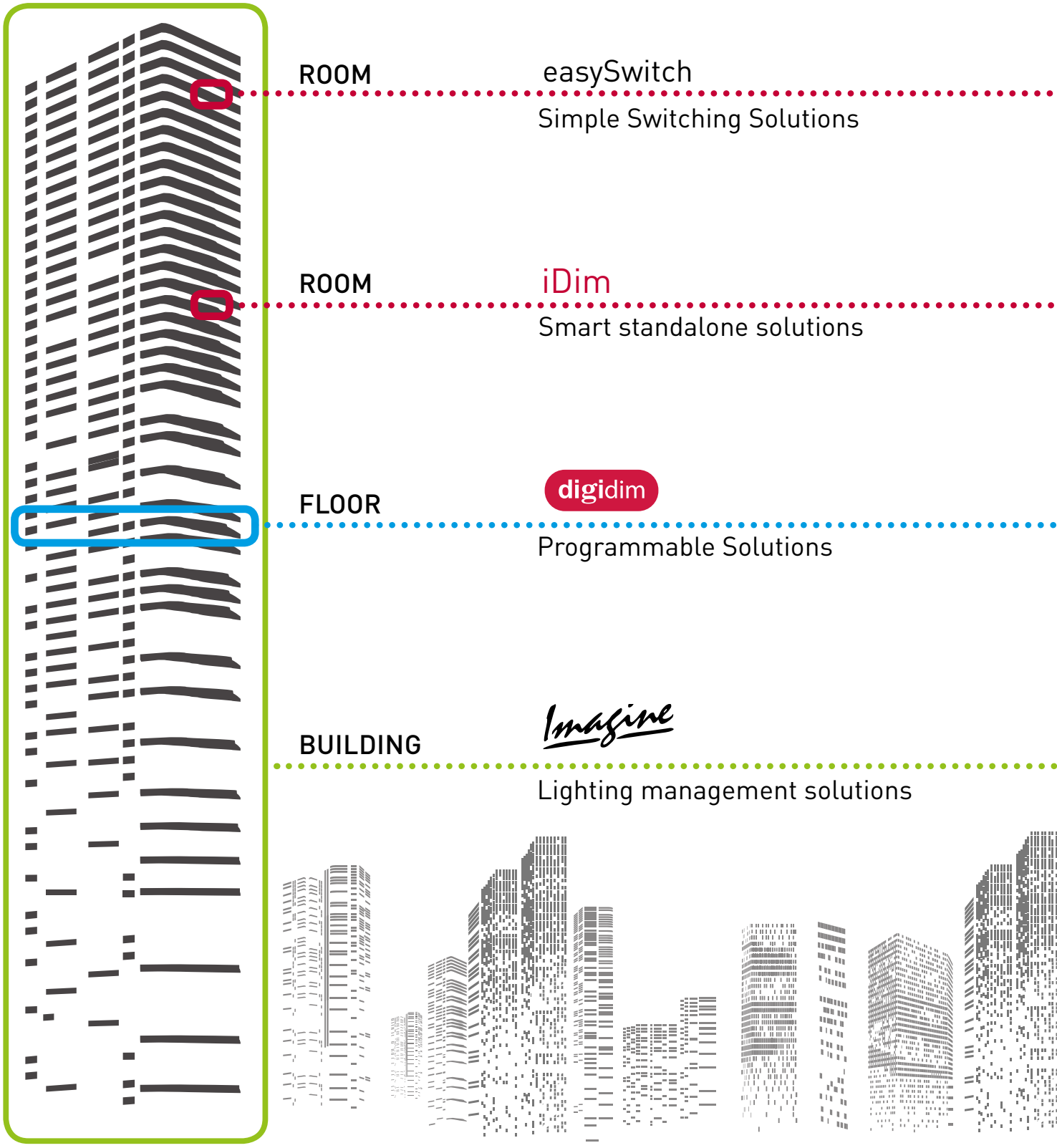
Holders for modules and diffusers:
Helvar's module holders are multipurpose accessories, not only with the capability to connect modules to each other, but as well to use the holders as wire clips and to mount diffusers over the modules



Diffusers:
The new diffusers are developed for smoothing and shaping of the light. When mounted with Helvar's module holders it is possible to cover non-isolated modules so that they cannot be touched without tools.



LIGHTING CONTROL SOLUTIONS



easySwitch

- Simple on/off
- Standalone
- Mains switching
- Easy to install and set-up
- Low cost with fast payback

iDim

- Various smart and simple control solutions
- Either ceiling or luminaire mounted
- Easy installation with minimal or no configuration on site
- High level of automation and energy saving
- Smart solutions for refurbishment

DIGIDIM

- Smart programmable area control
- Scalable from small to large rooms or areas
- Provides energy efficiency whilst maximising user wellbeing
- Freedom for user to control via a wide range of user control panels
- Integration to audiovisual system

Imagine

- Maximal freedom in lighting design
- Flexible and scalable, from single room to large buildings or multi building campus
- Live energy monitoring and lighting control via various user interface options
- Possibility to create lighting scenes and transitions for automated control
- Simple but unique colour / colour temperature control
- Integration to other types of building automation systems

Helvar offers solutions from simple switching solutions and standalone solutions to building/several buildings wide networks. Helvar components can be used on all levels. Driver based smart standalone solutions (iDim) are introduced on next pages.

For larger lighting control solutions, please refer Helvar Lighting Control brochure.

iDim
SELECT THE WEATHER

Select the Weather (STW) is a simple Human Centric Lighting solution with value added functionality. With this solution it is possible to simulate different scenes of the natural outdoor lighting environment by changing the colour temperature and intensity of the lighting. The solution is easy and quick to install without any configuration needed on site.

EASY SOLUTION FOR HUMAN CENTRIC LIGHTING

For a fully functioning solution, you need only
Helvar Select the Weather panel
- Helvar Dynamic LED Drivers in the luminaires
- Helvar iDim Solo DALI power
- Helvar Ceiling Motion Detector (optional)

The solution is easy and quick to install without any configuration needed on the site.

More technical details via QR code or at:
helvar.com/products/select-the-weather

Icon	Effect	When to Use	Colour Temperature	Light Output
	Calm down	High stress perioid	Warm	80%
	Energise	Early morning	Cool	100%
	Concentrate	Thinking process & Presentations	Intermediate	50%
	Stay alert	Normal daily work	Changing naturally	90%

Select the Weather Panel
135 STW

The 135 STW 'Select-the-Weather' panels are a DALI-compatible range of user interfaces that allow control of the lighting system. Each panel is fitted with indicator LEDs and an infrared receiver for remote operation.

The panel lets you select your desired illuminance and colour temperature scene from four preprogrammed scenes.

DALI LED driver with preset scenes for Tunable White
LL60/2-E-DA Dynamic - 60 W

- Four pre-set Tunable White scenes simulating different weather conditions, Dynamic scene as default
- Easy solution for Tunable White control in new build
- No driver or module configuration needed
- Out-of-box dynamic operation without DALI network
- 3% – 100% dimming range per scene
- SELV rated output channels

Control	DALI, Tunable White
Max output power	60 W
Product category	Select the Weather
Output current	350 mA - 700 mA
Output protection	SELV rated output channels
Type	Linear, Indoor

iDim Solo
403 (used as DALI power supply)

- Compact interface module
- Easy and quick wiring
- DALI power supply, 96 mA (total)

Ceiling Motion Detector
311

- Compact, flush-mounted ceiling unit
- PIR motion detection
- Up to 7 m diameter coverage area
- Small physical size

iDim

ACTIVE+

SELF-LEARNING LIGHTING

Helvar's Active+ is an out-of-the-box standalone solution consisting of an LED driver and "our smallest sensor" yet built into the luminaire.

SIMPLE INSTALLATION:

Luminaire fitted with Active+ is as easy to install as a simple switched luminaire. No control wiring, programming or configuration is needed.

SELF-LEARNING:

Active+ uses 60-100 hours to learn about its environment - external daylight conditions, and other luminaires around it.

SMART ENERGY SAVINGS:

Compared to a simple switched luminaire, Active+ brings added features - presence detection, daylight harvesting and seamless and comfortable dimming.

ACTIVE+ LED DRIVER

The Active+ LED drivers (e.g. LL1x10-42 Active+) have an inbuilt smart learning functionality. With no need for programming, configuration or external control wiring, the LED driver is optimised for presence detection and daylight harvesting. The driver has an inbuilt power supply that provides power for the Active+ Sense.

ACTIVE+ SENSOR

The Active+ Sense combines motion and light sensing all packaged up in a very compact unit. The device is mounted inside the luminaire and is connected directly to the Active+ LED driver with no need for an additional power supply unit.

FITTING IN A LUMINAIRE

The Active+ driver and sensor are designed to fit flexibly into a luminaire, which then can be installed as easily as a basic switching luminaire, having no physical or electrical connection to any other external lighting components such as control panels, dimmers or common sensors. Luminaires fitted with Active+ solution are ideal for refurbishment projects, as well as for new offices, corridors, open plan areas and storage areas.

OPTIONAL ACTIVE+ MOBILE APP

With an optional Active+ Mobile app, the end user can easily change the light levels of individual luminaires if the automatic setup needs fine-tuning.

More technical details via QR code or at:
helvar.com/products/active

Dimmable LED drivers with Active+ functionality

- Fully automatic standalone setup with smart learning functionality
- Optimised presence detection, daylight harvesting and Constant Light Output (CLO) operation
- Inbuilt power supply for sensor use
- Overwriting option for sensor parameters
- Hybrid dimming technique for high quality light
- No programming, configuration, external control wires

	LL1x10-42 Active+	LC1x50 Active+	LL1x50 Active+	LL1x110 Active+
Control	Active+ automatic	Active+ automatic	Active+ automatic	Active+ automatic
Max output power	42 W	50 W	50 W	110 W
Product category	Adjustable I-OUT	Adjustable I-OUT	Adjustable I-OUT	Adjustable I-OUT
Output current	120 mA – 350 mA	1050 mA – 1400 mA	1050 mA – 1400 mA	350 mA – 700 mA
Output protection	Non-isolated	SELV < 60 V	SELV < 60 V	Non-isolated,
Luminaire class	I	I, II	I, II	I
Type	Linear, Indoor	Compact, Indoor	Linear, Indoor	Linear, Indoor
Efficiency at max. load	0.93	0.87	0.88	0.95

Active+ Sense

T3020

- Directly fitted into the luminaire
- No need for additional wiring to luminaire
- Powered by Active+ driver
- Plugs directly into the Active+ driver
- Flexibility for luminaire installation
- Combines motion and light sensing
- Compact unit (32.4 mm x 15.5 mm x 9.4 mm)

Mobile app for Active+

Active+ Mobile

The Active+ Mobile is an app for adjusting settings in the new Helvar Active+ solution. To use this app you must have an approved smart phone for the application running Android version 4.0 equipped with an LED flash (list of tested and approved phones can be found on the app store description), a luminaire fitted with an Active+ LED driver and the Active+ Sense.

iDim

NIGHTDIM

EASY NIGHT TIME SAVINGS

NightDim is an innovative and unique standalone solution for easy and affordable nightlight dimming for outdoor spaces which are not in regular use on midnight hours.

The nDim LED drivers have an enhanced protection against humidity, improving the suitability of the drivers for outdoor luminaire use.

EASY MIDNIGHT DIMMING

EASY SCENE SET

Changing scenes is done easily by a simple mains switch. No programming is needed in installation or maintenance phases.

PERFECT FOR REFURBISHMENT

The product uses your existing wiring for both scene setting and operation. No new wiring is needed.

Energy Efficient LED Driver for nightDim

LL1x20-E-DA-nDim - 1x20 W

- Scene recall over the mains
- Perfect for refurbishment
- Constant Light Output (CLO) operation optional
- Protected up to 4 kV power network fast transients

Control	DALI, nightDim functionality
Max output power	20 W
Product category	nightDim
Output current	350 mA, 500 mA or 700 mA
Type	Linear, Coated *

More technical details via QR code or at:
helvar.com/products/nightDim

** Please see Coated LED drivers for outdoor luminaires on page 40*

Energy Efficient LED Driver for nightDim

LC1x30-E-DA-nDim - 1x30 W

- Scene recall over the mains
- Perfect for refurbishment
- Constant Light Output (CLO) operation optional
- Low stand-by power 0.3 W
- Protected up to 4 kV power network fast transients

Control	DALI, nightDim functionality
Max output power	30 W
Product category	nightDim
Output current	350 mA, 500 mA or 700 mA
Type	Compact, Coated *

More technical details via QR code or at:
helvar.com/products/nightDim

Energy Efficient LED Driver for nightDim

LC1x70-E-DA-nDim - 1x70 W

- Scene recall over mains
- Perfect for refurbishment
- Constant Light Output (CLO) operation optional
- Protected up to 4 kV power network fast transients
- Overload, open and short circuit protection

Control	DALI, nightDim functionality
Max output power	70 W
Product category	nightDim
Output current	700 mA (default) – 1400 mA
Type	Compact, Coated *

More technical details via QR code or at:
helvar.com/products/nightDim

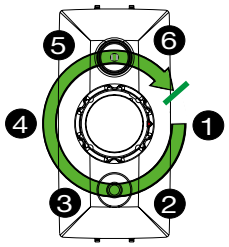
* *Please see Coated LED drivers for outdoor luminaires on page 40*

iDim

IDIM BASIC

The luminaire based iDim concept provides 6 out-of-box application modes that are easy to select just by rotating the Mode Selector on the iDim Sense. The modes are designed to fulfil the needs for easy-to-use, energy saving lighting control. The basic functions are pre-programmed and are fully adjustable to meet all requirements.

1) Classroom
2) Single office
3) Open plan office
4) Corridor link
5) Corridor hold
6) Meeting room



Please refer iDim user guide for detailed description of the iDim modes.

iDim Sense (316)

- Compact DALI sensor for standalone use
- Works with all iDim ballasts and drivers
- Used with iDim Solo, provide 2-channel control
- PIR motion sensor, Constant Light with offset, and Infrared Receiver
- Simple rotating selector provides 6 pre-programmed modes
- Easy click-mounting from outside luminaire
- Clip-on PIR restrictor

Note: Not compatible with DIGIDIM Toolbox and Helvar 905/910/920 Router systems

iDim Solo (403)

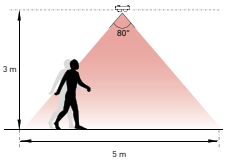
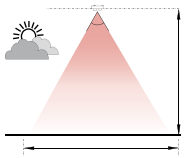
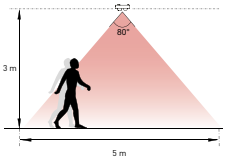
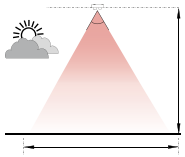
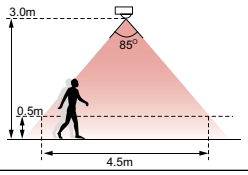
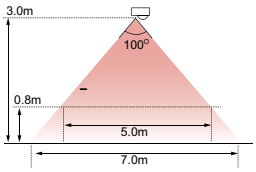
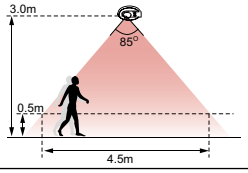
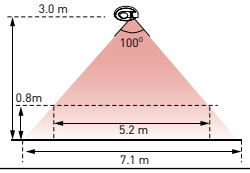
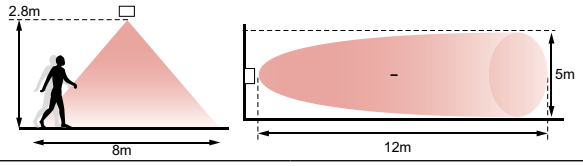
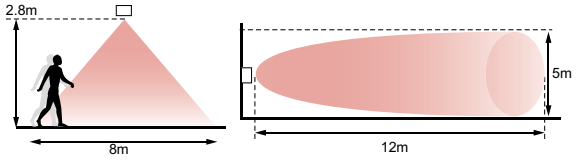
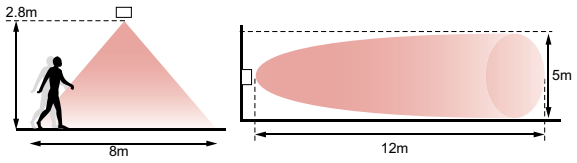
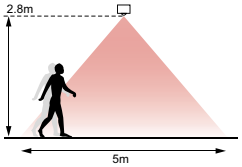
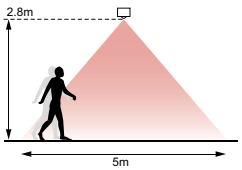
- Compact and versatile interface module
- Can be used inside or outside the luminaire
- Easy and quick wiring for both alternatives; iDim standalone and networked lighting systems
- DALI power supply, 96 mA (total)
- 2 × switch control inputs and mains connection input
- 2 × DALI outputs

iDim Remote (304)

- For controlling or modifying the iDim applications
- Configuration of target light levels
- Advanced programming (upload settings via PC + 'zap function') with iDim Studio software
- Graphical PC user interface

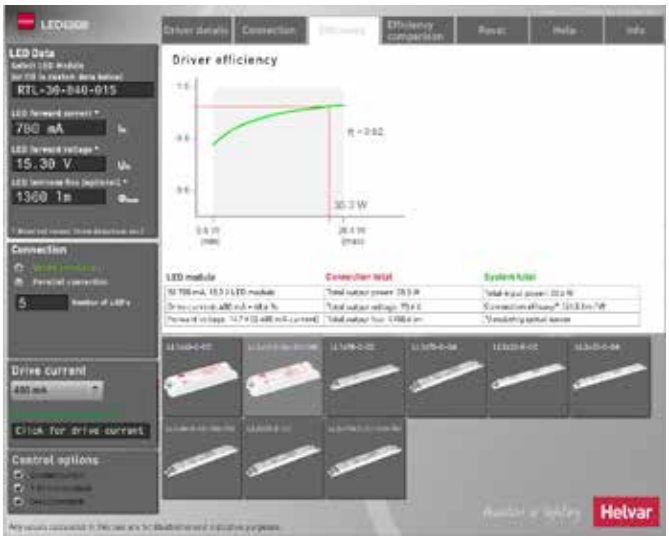
More technical details via QR code or at:
helvar.com/products/idim

Luminaire Based **Sensors** (standalone)

	STANDALONE SENSORS	Control interface	Functionality		Motion detection area	Constant light reception area
			Motion Detector	Constant Light		
	**Active+ Sense**	N/A	PIR	●		
	**freeDim Sense**	N/A	PIR	●		
	**Minisensor3**	DALI	PIR	●		
	**iDim Sense 316**	DALI	PIR	●		
	**µDim SL-MW-DA**	DALI	Microwave	●		
	**µDim SL-MW-AN**	1 - 10 V	Microwave	●		
	**µDim SL-MW-SW**	Switching	Microwave	-		
	**µDim SL-PIR-AN**	1 - 10 V	PIR	●		-
	**µDim SL-PIR-SW**	Switching	PIR	-		-

LEDesign 2.7

LEDesign from Helvar has been designed to help lighting specialists select the compatible control gear for any given LED light source and compare the energy efficiency of the LED solutions.



Using LED module's main input data, the LEDesign tool automates the selection process for compatible LED modules and LED drivers from Helvar's wide range. LEDesign shows the key electrical and photometrical parameters for the selected combination and indicates whether the LEDs are under or overdriven. What's more, the tool can also be programmed to display an efficiency graph of the selected LED load, showing how well it will perform. Additionally, the tool allows for very simple energy comparison against traditional light sources.

The version 2.7 update includes the latest Helvar LED drivers and offers many improvements. LEDesign is downloadable direct from the Helvar website (helvar.com/ledesign) and is compatible with Windows PC (Android and iOS versions will be made available soon), making it quick and easy to use on site, if required. LEDesign is constantly being developed to reflect the latest LED products, hence a version number will help indicate the latest version available.

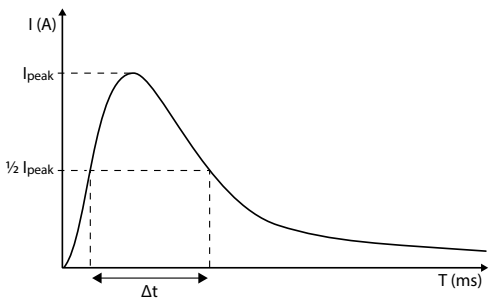
Check back cover to see more of LEDesign.

TECHNICAL INFORMATION

Quantity of control gear for miniature circuit breakers (MCB's)

Type C MCB's are strongly recommended to use with LED lighting.
- Other types can prove unsuitable due to their tripping properties.
- Practical quantities will depend strongly on the reactance of the actual circuit.

Conversion table for other types of Miniature Circuit Breaker	
MCB type	**Relative quantity of LED drivers**
B 10 A	37 %
B 16 A	60 %
B 20 A	75 %
C 10 A	62 %
C 16 A	100 % (see tables)
C 20 A	125 %



Quantity of LED control gear for miniature circuit breakers (MCB's)

	Quantity of drivers per miniature circuit breaker 16 A Type		Typical inrush current	1/2 value time	Calculated energy
	Based on I_{Cont}	Based on I_{peak}	I_{peak} (A)	Δt (µs)	$I_{peak}^2 \Delta t$ (A^2s)
LL6-U-CC	250	2192	3	45	0,0003
LC1x25-CC	80	80	7	24	0,00086
LC1x25-DA	86	86	24	115	0,048
LC1x30-E-AN	73	183	7	27	0,0011
LC1x30-E-CC	74	211	7	25	0,0009
LC1x30-E-DA	73	160	7	26	0,0011
LC1x30-E-DA-nDim	73	160	7	26	0,0011
LC1x35-CC	59	59	6	28	0,00068
LC1x35-DA	53	86	25	177	0,08
LC1x50-E-CC	43	57	29	156	0,1041
LC1x50-E-CC-700-1050	46	56	30	150	0,1083
LC1x50-E-DA	43	61	29	146	0,0967
LC1x70-E-CC	32	41	32	185	0,1536
LC1x70-E-DA	32	46	34	165	0,1541
LC1x70-E-DA-nDim	32	46	34	165	0,1541
LL1-CV-DA	N/A	N/A	N/A	N/A	N/A
LL1x10-42 Active+	53	56	25	177	0,0797
LL1x10-42-E-CC	57	62	23	176	0,0672
LL1x10-42-E-DA	53	56	25	177	0,0797
LL1x110-E-CC-200-350	22	24	41	236	0,301
LL1x110-E-CC-350-700	22	25	41	221	0,273
LL1x110-E-DA	22	21	46	240	0,3457
LL1x12-E-CC-350	162	172	16	83	0,0159
LL1x12-E-CC-700	172	159	19	78	0,0203
LL1x150-E-CC	17	15	51	286	0,4428
LL1x15-E-CC-500	145	94	22	119	0,041
LL1x20-E-CC	98	224	6	36	0,0007
LL1x20-E-CC-350	108	94	22	117	0,0417
LL1x20-E-CC-500	115	83	16	182	0,0291
LL1x20-E-CC-700	108	93	22	119	0,0424
LL1x20-E-DA	98	224	6	36	0,0007
LL1x20-E-DA-nDim	98	224	6	36	0,0007
LL1x23-80-E-CC	30	36	40	173	0,1978
LL1x23-80-E-DA	31	31	41	187	0,24
LL1x30-E-CC-350	78	67	19	190	0,0478
LL1x30-E-CC-700	79	74	19	175	0,0459
LL1x30-E-CV24	70	72	19	184	0,0443
LL1x38-CC	56	95	8	28	0,0012
LL1x40-E-CC	51	160	9	23	0,0014
LL1x40-E-DA-350-700	53	172	9	22	0,0014
LL1x40-E-DA-700-1050	51	116	9	22	0,0014
LL1x42-E-CC-350	53	75	18	180	0,0412
LL1x50-E-CC	43	62	29	143	0,0889
LL1x50-E-CC-700-1050	45	60	29	148	0,0901
LL1x50-E-DA	41	60	29	144	0,093
LL1x70-E-CC	32	52	32	152	0,1158
LL1x70-E-DA	31	53	33	148	0,1465
LL1x75-E-CV24	30	37	29	220	0,1346
LL1x80-E-CC-350-700	26	39	39	166	0,1885
LL1x80-E-DA-350-700	30	30	42	186	0,24
LL2x25-E-CC	43	53	30	162	0,104
LL2x35-E-CC	30	32	40	186	0,2198
LL2x35-E-DA	31	30	42	189	0,2381
LL35/2-E-DA-iC	38	30	42	189	0,2381
LL60/2-E-DA	38	30	42	189	0,2381
LL60/2-E-DA Dynamic	38	30	42	189	0,2381
LL60/2-E-DA-iC	38	30	42	189	0,2381
OL1x100-E-CC1	20	13	26	610	0,2924
OL1x100-E-CC2	19	12	25	690	0,2889
OL1x110-E-350	22	24	41	236	0,301
OL1x110-E-700	22	25	41	221	0,273
OL1x150-E-700	17	15	51	286	0,4428
OL1x30-E-CV24	72	68	16	208	0,0386
OL1x50-E-1050	43	62	29	143	0,0889
OL1x50-E-1400	43	62	29	143	0,0889
OL1x60-E-CC	39	17	50	270	0,3736
OL1x75-E-CV24	29	37	29	218	0,1344
LC1x50 Active+	43	61	29	146	0,0967
LL1x50 Active+	41	60	29	144	0,093
LL1x110 Active+	22	21	46	240	0,3457

Model	Control	IP rating	Max. output power [W]	Output type	Output Current (mA)
LL35/2-E-DA-iC	DALI, DT8, switch control	20	35	Adjustable I-OUT	350–700
LL60/2-E-DA-iC	DALI, DT8, switch control	20	60	Adjustable I-OUT	350–700
LL60/2-E-DA Dynamic	DALI, DT8	20	60	Adjustable I-OUT	350–700
LC1x25-DA	DALI, switch control	20	25	Adjustable I-OUT	350–700
LC1x30-E-DA	DALI	20 (option: coated) *	30	Selectable I-OUT	350 / 500 / 700
LC1x35-DA	DALI, switch control	20	35	Adjustable I-OUT	700–1050
LC1x50-E-DA	DALI	20 (option: coated) *	50.4	Adjustable I-OUT	1050–1400
LC1x70-E-DA	DALI, switch control	20 (option: coated) *	70	Adjustable I-OUT	700–1400
LL1x10-42-E-DA	DALI, switch control	20	42	Adjustable I-OUT	120–350
LL1x110-E-DA	DALI, switch control	20	110	Adjustable I-OUT	350–700
LL1x20-E-DA	DALI, switch control	20 (option: coated)	20	Selectable I-OUT	350 / 500 / 700
LL1x23-80-E-DA	DALI	20	80	Adjustable I-OUT	150–350
LL1x40-E-DA-350-700	DALI, switch control	20	40	Adjustable I-OUT	350–700
LL1x40-E-DA-700-1050	DALI, switch control	20	40	Adjustable I-OUT	700–1050
LL1x50-E-DA	DALI	20	50	Adjustable I-OUT	1050–1400
LL1x70-E-DA	DALI, switch control	20	70	Adjustable I-OUT	350–700
LL1x80-E-DA-350-700	DALI	20	80	Adjustable I-OUT	350–700
LL2x35-E-DA	DALI, switch control	20	2x35	Adjustable I-OUT	350–700
LC1x25-CC	ON/OFF	20	25	Adjustable I-OUT	350–700
LC1x30-E-CC	ON/OFF	20 (option: coated) *	30	Selectable I-OUT	350 / 500 / 700
LC1x35-CC	ON/OFF	20	35	Adjustable I-OUT	700–1050
LC1x50-E-CC	ON/OFF	20 (option: coated) *	50.4	Adjustable I-OUT	1050–1400
LC1x50-E-CC-700-1050	ON/OFF	20	50.4	Adjustable I-OUT	700–1050
LC1x70-E-CC	ON/OFF	20 (option: coated) *	70	Adjustable I-OUT	700–1400
LL1x10-42-E-CC	ON/OFF	20	42	Adjustable I-OUT	120–350
LL1x110-E-CC-200-350	ON/OFF	20	110	Adjustable I-OUT	200–350
LL1x110-E-CC-350-700	ON/OFF	20	110	Adjustable I-OUT	350–700
LL1x12-E-CC-350	ON/OFF	20	12	Single I-OUT	350
LL1x12-E-CC-700	ON/OFF	20	12	Single I-OUT	700
LL1x150-E-CC	ON/OFF	20	150	Adjustable I-OUT	350–700
LL1x15-E-CC-500	ON/OFF	20	15	Single I-OUT	500
LL1x20-E-CC	ON/OFF	20 (option: coated) *	20	Selectable I-OUT	350 / 500 / 700
LL1x20-E-CC-350	ON/OFF	20	20	Single I-OUT	350
LL1x20-E-CC-500	ON/OFF	20	20	Single I-OUT	500
LL1x20-E-CC-700	ON/OFF	20	20	Single I-OUT	700
LL1x23-80-E-CC	ON/OFF	20	80	Adjustable I-OUT	150–350
LL1x30-E-CC-350	ON/OFF	20	30	Single I-OUT	350
LL1x30-E-CC-700	ON/OFF	20	30	Single I-OUT	700
LL1x38-CC	ON/OFF	20	38.5	Selectable I-OUT	300 / 350
LL1x40-E-CC	ON/OFF	20	40	Adjustable I-OUT	350–1050
LL1x42-E-CC-350	ON/OFF	20	42	Single I-OUT	350
LL1x50-E-CC	ON/OFF	20	50.4	Adjustable I-OUT	1050–1400
LL1x50-E-CC-700-1050	ON/OFF	20	50.4	Adjustable I-OUT	700–1050
LL1x70-E-CC	ON/OFF	20	70	Adjustable I-OUT	350–700
LL1x80-E-CC-350-700	ON/OFF	20	80	Adjustable I-OUT	350–700
LL2x25-E-CC	ON/OFF	20	2x25.2	Adjustable I-OUT	350–700
LL2x35-E-CC	ON/OFF	20	2x35	Adjustable I-OUT	350–700
LL6-U-CC	ON/OFF	20	7	Selectable I-OUT	350 / 700
OL1x100-E-CC1	ON/OFF	65	105	Selectable I-OUT	700 / 1050
OL1x100-E-CC2	ON/OFF	65	105	Selectable I-OUT	1400 / 2100
OL1x110-E-350	ON/OFF	67	110	Single I-OUT	350
OL1x110-E-700	ON/OFF	67	110	Single I-OUT	700
OL1x150-E-700	ON/OFF	67	150	Single I-OUT	700
OL1x50-E-1050	ON/OFF	67	50.4	Single I-OUT	1050
OL1x50-E-1400	ON/OFF	67	50.4	Single I-OUT	1400
OL1x60-E-CC	ON/OFF	65	63	Selectable I-OUT	350 / 700 / 1400
LL1x30-E-CV24	ON/OFF (DALI with LL1-CV-DA)	67	30	Constant voltage	0–1250
LL1x75-E-CV24	ON/OFF (DALI with LL1-CV-DA)	67	70	Constant voltage	0–3125
OL1x30-E-CV24	ON/OFF (DALI with LL1-CV-DA)	67	30	Constant voltage	0–1250
OL1x75-E-CV24	ON/OFF (DALI with LL1-CV-DA)	67	75	Constant voltage	0–3125
LC1x30-E-AN	1-10 V	20 (option: coated) *	30	Selectable I-OUT	350 / 500 / 700
LC1x50 Active+	Active+ functionality	20	50	Adjustable I-OUT	1050–1400
LL1x10-42 Active+	Active+ functionality	20	42	Adjustable I-OUT	120–350
LL1x110 Active+	Active+ functionality	20	110	Adjustable I-OUT	350–700
LL1x50 Active+	Active+ functionality	20	50	Adjustable I-OUT	1050–1400
LC1x30-E-DA-nDim	nDim functionality	20 (coated) *	30	Selectable I-OUT	350 / 500 / 700
LC1x70-E-DA-nDim	nDim functionality	20 (coated) *	70	Adjustable I-OUT	700–1400
LL1x20-E-DA-nDim	nDim functionality	20 (coated) *	20	Selectable I-OUT	350 / 500 / 700

**) Coated for challenging climate conditions, see more on page 40*

Output Voltage [V]	Output protection	Luminaire Class	Power factor at max. load	Efficiencyy at max load	Dimensions L x W x H [mm]
25–100 (350 mA), 25–50 (700 mA)	SELV < 120 V	I, II	0.98	0.90	380 x 35 x 21
25–100 (350 mA), 25–85 (700 mA)	SELV < 120 V	I, II	0.98	0.90	380 x 35 x 21
25–100 (350 mA), 25–85 (700 mA)	SELV < 120 V	I, II	0.98	0.90	380 x 35 x 21
20-45 (350 mA), 20 -36 (700 mA)	SELV < 60 V	I, II, III	0.97	0.89	106 x 67 x 28
10–60 (350 mA), 10–60 (500 mA) ,10–43 (700 mA)	SELV < 120 V	I, II, III	0.96	0.87	106 x 67 x 28
20–48 (700 mA), 20–34 (1050 mA)	SELV < 60 V	I, II, III	0.97	0.89	106 x 67 x 28
20–48 (1050 mA), 20–36 (1400 mA)	SELV < 60 V	I, II, III	0.98	0.88	125 x 81 x 30
30–100 (700 mA), 30–50 (1400 mA)	SELV < 120 V	I, II, III	0.98	0.91	143.6 x 71.3 x 30
80–350 (120 mA), 50–120 (350 mA)	Non-isolated	I	0.96	0.93	280 x 30 x 21
120–314 (350 mA), 50–157 (700 mA)	Non-isolated	I	0.98	0.95	280 x 30 x 21
10–57 (350 mA), 10–40 (500 mA), 10–28 (700 mA)	SELV < 120 V	I, II, III	0.90c	0.88	184 x 40 x 25.2
150–350 (150 mA), 64–228 (350 mA)	Non-isolated	I	0.98	0.94	280 x 30 x 21
20–80 (350 mA), 20–80 (500 mA), 20–57 (700 mA)	SELV < 120 V	I, II, III	0.96	0.90	184 x 46.5 x 28
20–57 (700 mA), 20–44 (900 mA), 20–38 (1050 mA)	SELV < 120 V	I, II, III	0.96	0.89	184 x 46.5 x 28
20-48 (1050 mA), 20-36 (1400 mA)	SELV < 60 V	I, II	0.98	0.88	360 x 30 x 21
50–200 (350 mA), 50–100 (700 mA)	Non-isolated	I	0.98	0.91	280 x 30 x 21
71–228 (350 mA), 35–114 (700 mA)	Non-isolated	I	0.98	0.92	280 x 30 x 21
25–100 (350 mA), 25–50 (700 mA)	SELV < 120 V	I, II	0.98	0.90	380 x 35 x 21
20–45 (350 mA), 20–36 (700 mA)	SELV < 60 V	I, II, III	0.97	0.89	106 x 67 x 28
10–60 (350 mA), 10–60 (500 mA), 10–43 (700 mA)	SELV < 120 V	I, II, III	0.96	0.88	106 x 67 x 28
20–48 (700 mA), 20–34 (1050 mA)	SELV < 60 V	I, II, III	0.97	0.90	106 x 67 x 28
20–48 (1050 mA), 20–36 (1400 mA)	SELV < 60 V	I, II, III	0.98	0.90	125 x 81 x 30
30–48 (700 mA), 20–48 (1050 mA)	SELV < 60 V	I, II	0.95	0.90	123 x 79 x 28
30–100 (700 mA), 30–50 (1400 mA)	SELV < 120 V	I, II, III	0.98	0.91	143.6 x 71.3 x 30
80–350 (120 mA), 80–300 (140 mA), 30–120 (350 mA)	Non-isolated	I	0.98	0.94	190 x 30 x 21
120–350 (200 mA), 120–314 (350 mA)	Non-isolated	I	0.98	0.95	230 x 30 x 21
120–314 (350 mA), 50–157 (700 mA)	Non-isolated	I	0.98	0.95	280 x 30 x 21
8.4–36	SELV < 60 V	I, II, III	0.50c	0.83	123 x 45 x 19
3.5–17	SELV < 60 V	I, II, III	0.50c	0.83	123 x 45 x 19
257–350 (350 mA), 128–214 (700 mA)	Non-isolated	I	0.98	0.96	280 x 30 x 21
8–30	SELV < 60 V	I, II, III	0.50c	0.85	123 x 45 x 19
10–57 (350 mA), 10–40 (500 mA), 10–28 (700 mA)	SELV < 120 V	I, II, III	0.90c	0.89	184 x 40 x 25.2
16–57	SELV < 60 V	I, II, III	0.50c	0.85	123 x 45 x 19
14–40	SELV < 60 V	I, II, III	0.50c	0.88	123 x 45 x 19
8–29	SELV < 60 V	I, II, III	0.50c	0.87	123 x 45 x 19
150–350 (150 mA), 120–350 (200 mA), 120–228 (350 mA)	Non-isolated	I	0.98	0.95	230 x 30 x 21
57–86	SELV < 120 V	I, II, III	0.95	0.90	153 x 41 x 32
28–43	SELV < 60 V	I, II, III	0.95	0.90	153 x 41 x 32
70–110 (300 mA), 70–110 (350 mA)	Basic isolated	I, II, III	0.98	0.89	230 x 30 x 21
20–80 (350 mA), 20–57 (700 mA), 20–38 (1050 mA)	SELV < 120 V	I, II, III	0.95	0.90	184 x 46.5 x 28
80–120	Double-isolated	I	0.98	0.88	280 x 30 x 21
20–48 (1050 mA), 20–36 (1050 mA)	SELV < 60 V	I, II	0.98	0.90	280 x 30 x 21
30–48 (700 mA), 20–48 (1050 mA)	SELV < 60 V	I, II	0.95	0.90	280 x 30 x 21
50–200 (350 mA), 50–100 (700 mA)	Non-isolated	I	0.98	0.91	280 x 30 x 21
120–228 (350 mA), 50–114 (700 mA)	Non-isolated	I	0.98	0.94	280 x 30 x 21
20–50 (350 mA), 20–36 (700 mA)	SELV < 60 V	I, II	0.98	0.87	360 x 30 x 21
25–100 (350 mA), 25–50 (700 mA)	SELV < 120 V	I, II	0.98	0.91	380 x 35 x 21
7–16 (350 mA), 7–10 (700 mA)	SELV < 60 V	I, II, III	0.85	0.80	118 x 40 x 21.2
70–120 (700 mA), 70–100 (1050 mA)	Double-isolated	I, II	0.98	0.91	234 x 53 x 35
30–72 (1400 mA), 30–48 (2100 mA)	Double-isolated	I, II	0.98	0.91	234 x 53 x 35
120–314	Non-isolated	I	0.98	0.95	250 x 40 x 23
50–157	Non-isolated	I	0.98	0.95	300 x 40 x 23
128–214	Non-isolated	I	0.98	0.95	274 x 40 x 23
20–48	SELV < 60 V	I, II, III	0.98	0.89	300 x 40 x 23
20–36	SELV < 60 V	I, II, III	0.98	0.89	300 x 40 x 23
60–90 (350 mA), 35–90 (700 mA), 35–42 (1400 mA)	SELV < 120 V	I	0.97	0.90	149 x 53 x 35
24 (0–1250 mA)	SELV < 60 V	I, II, III	0.95	0.88	153 x 41 x 32
24 (0–3125 mA)	SELV < 60 V	I, II, III	0.95	0.88	180 x 52 x 30
24 (0–1250 mA)	SELV < 60 V	I, II, III	0.95	0.88	131 x 42 x 34
24 (0–3125 mA)	SELV < 60 V	I, II, III	0.95	0.89	155 x 50 x 32
10–60 (350 mA), 10–60 (500 mA) ,10–43 (700 mA)	SELV < 120 V	I, II, III	0.96	0.87	106 x 67 x 28
20-40 (1050 mA), 20-36 (1400 mA)	SELV < 60 V	I, II, III	0.98	0.88	125 x 81 x 30
80–350 (120 mA), 50–120 (350 mA)	Non-isolated	I	0.96	0.93	280 x 30 x 21
120–314 (350 mA), 50–157 (700 mA)	Non-isolated	I	0.98	0.95	280 x 30 x 21
20-48 (1050 mA), 20-36 (1400 mA)	SELV < 60 V	I, II	0.98	0.88	360 x 30 x 21
10–60 (350 mA), 10–60 (500 mA), 10–43 (700 mA)	SELV < 120 V	I, II, III	0.96	0.87	106 x 67 x 28
30–100 (700 mA), 30–50 (1400 mA)	SELV < 120 V	I, II, III	0.98	0.91	143.6 x 71.3 x 30
10–57 (350 mA), 10–40 (500 mA), 10–28 (700 mA)	SELV < 120 V	I, II, III	0.90c	0.88	184 x 40 x 25.2

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Guide to good LEDesign™

1 DEFINE LED APPLICATION
- Luminaire
- System functionality

2 SELECT SUITABLE LED MODULE
- Helvar datasheets
- Design-in guide

3 SELECT SUITABLE LED DRIVER
- Helvar LEDesign™
- Helvar datasheets

4 SELECT LED CONTROLS
- Luminaire based / building wide
- BMS integration requirements

5 PLAN SUPPORT REQUIREMENTS
- Helvar support offering

LEDesign™ is a calculating tool to assist LED specialists in selecting the appropriate LED driver and modules. To download the Helvar LEDesign calculator go to

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