

ECOLine 100 W dimmable series L05060

Lumotech®

Lumotech technology

Lumotech LED drivers are designed to efficiently power and control LED solutions for general lighting applications. System reliability is enhanced by features that protect the connected LED module, e.g. hot wiring, reduced ripple current and thermal derating. In the coming years LEDs will continue to increase in efficiency, creating new challenges for OEMs. With Lumotech LED drivers, flexibility in luminaire design is assured thanks to adjustable current outputs.



Benefits

- Designed with system reliability in mind:
 - Low inrush current
 - Low output current ripple
 - Short and open circuit protection, overload and over voltage protection
 - Thermal protection (automatic current limiter)
 - Support for hot-swapping LEDs of >15 W
 - Excellent EMC behavior
- Future-proof flexibility - industry leading voltage and current range enabling seamless support of LED generations and minimizing supply chain complexity
- Temperature dependent fan control

Product features

- Wide output voltage range 20 - 60 Vdc
- Wide range of current settings 700 - 2800 mA
- 1-10 V dimming
- NTC temperature sensor input
- 12 Vdc fan power output 200 mA controlled by NTC temperature
- Max inrush current <1.6 A
- Low output current ripple (<10 %) at 100 Hz
- Thermal protection: dimming instead of switch off
- Active output overvoltage protection
- Up to 92 % efficiency across a wide range of loads
- SELV
- Power factor 0.98
- ENEC certified
- Engineered and Manufactured in Europe

5 year warranty

Lumotech takes pride in the quality of its products. We not only develop all products in house, they are also produced in our own manufacturing plants to ensure guaranteed reliability and performance. Lumotech drivers come with the assurance of a 5 year warranty. After all, with typical LED lifetimes of 50,000 hours, it is critical to have a power supply with equal reliability.



Certificates and standards

- ENEC05, CE
- EN55015 / EN61000-3-2 / EN61347-2-13 / EN61347-1 / EN61547 / EN62384 / SELV

Classifications



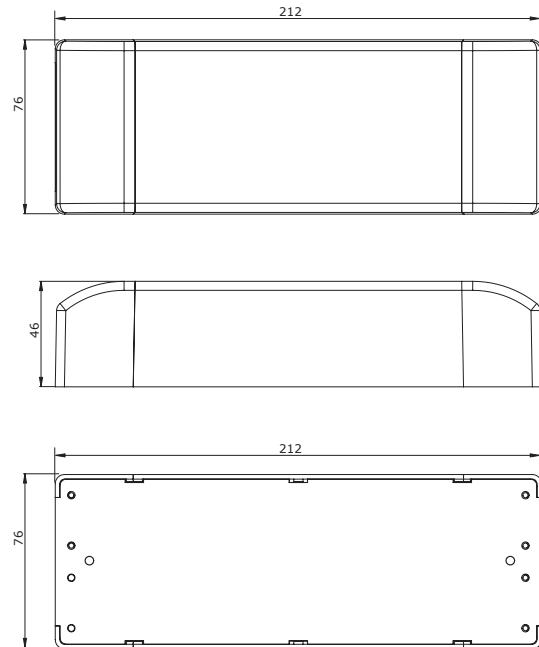
Specific technical data

Type	Efficiency at full load	Output current	Output voltage range	Open circuit output voltage	Max. output power	Dimming
L05060	92 %	700 - 2800 mA	20 - 60 Vdc	65 Vdc	100 W	1-10 V, potmeter 100K log b (SELV)

Technical data

Rated supply voltage	220-240 Vac
Input voltage	110-240 Vac
Mains frequency	50/60 Hz
Output current tolerance	5 %
100 Hz ripple current at full load	<10 %
Power factor at full load	0.98
Nominal line current at 240 Vac	450 mA
Dimming method	linear
Minimum dim level	200-300 mA
Output voltage setting time	1 second
Output isolation	SELV
Surge protection (diff. / comm.)	2 kV / 6 kV
IP classification	IP 20
Circuit lifetime	50,000 hrs at Tc max.
Case dimensions	212 x 76 x 46 mm

Dimensions



Inrush current

Mains max. peak inrush at full load	1.6 A*
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* Tested at 240 Vac, on phase 60° with TTI HA1600A analyzer.

Maximum number of drivers on automatic circuit breakers

Automatic circuit breaker type	C10	C13	C16	C20	B10	B13	B16	B20
L05060	18	23	28	35	18	23	28	35

Thermal specifications

Ambient temperature range (Ta)	-20 to 50°C
Maximum case temperature (Tc)	< 65°C
Storage temperature range	-20 to 50°C

Ordering data

Part	Part number	Packaging carton	Multibox carton	Weight per piece
Ecoline 100W dimmable 700 - 2800 mA	L05060	10 pieces	-	500 g

Active overload protection

If the maximum output power is exceeded, the LED driver reduces the LED output to a current level within the specification of the driver. This prevents overload at all times.

Short-circuit protection

In case of a short circuit the LED driver switches to protection mode. After the removal of the short-circuit the LED driver will recover automatically.

Overtemperature protection

The LED driver is protected against thermal overload. If the temperature limit is exceeded, the output current is reduced.

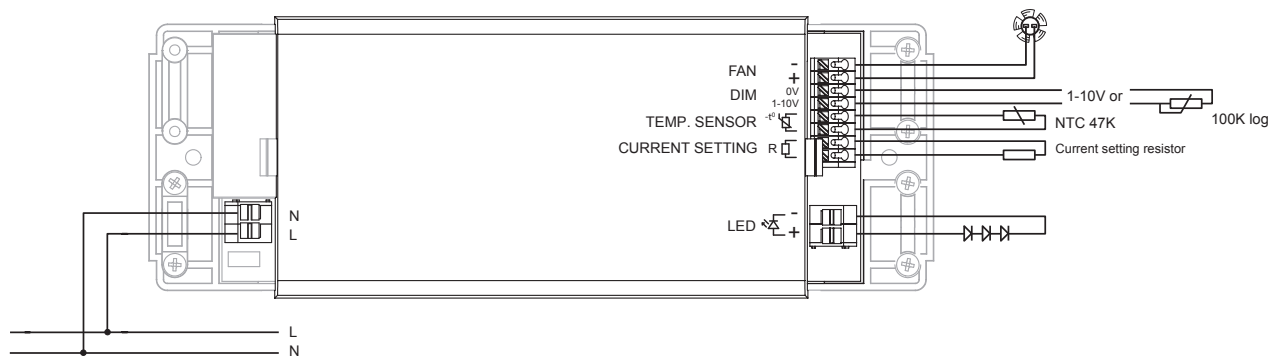
No-load operation

In no-load operation the output voltage will not exceed the specified open circuit output voltage.

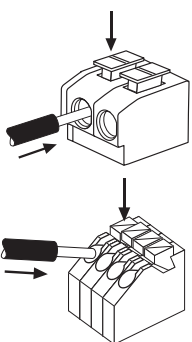
Active overcurrent protection

Active overcurrent protection to allow hotswapping of LEDs higher than 15 Watt.

Wiring diagram



Wiring of device



Solid

wire preparation:
0.2 - 1.5 mm²
9.0 - 10.0 mm

Stranded (2 A max)

wire preparation:
0.2 - 0.5 mm²
9.0 - 10.0 mm

Stranded (6 A max)

wire preparation:
0.75 - 1.5 mm²
9.0 - 10.0 mm

wire preparation:
0.2 - 1.5 mm²
8.5 - 9.5 mm

wire preparation:
0.2 - 1.5 mm²
8.5 - 9.5 mm

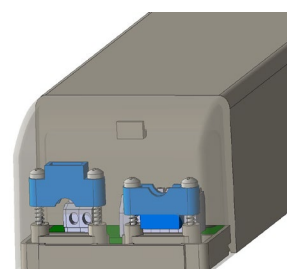
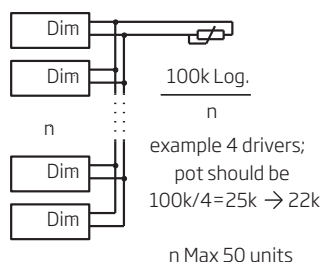
Strain relief

The strain relief inserts can be reversed to accommodate various types of wiring.

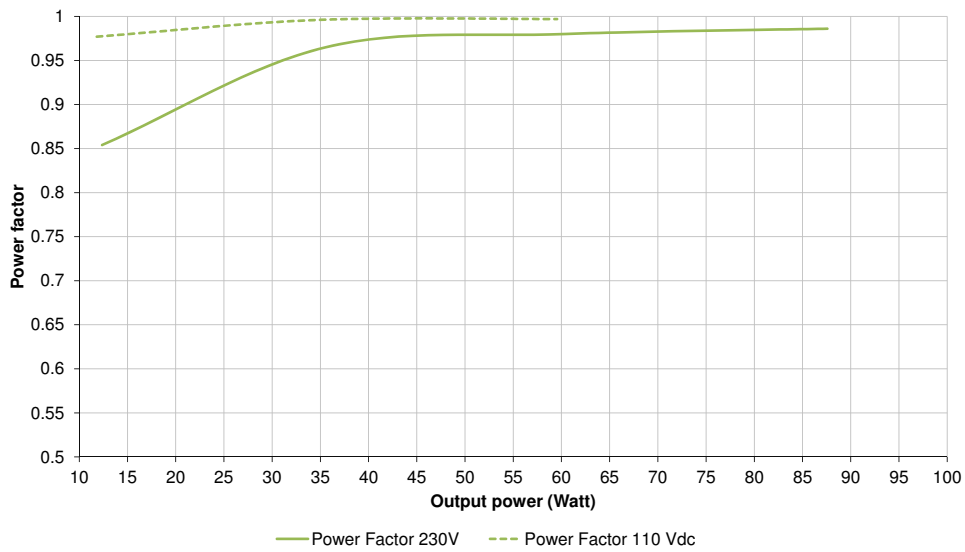
Dimming

1 - 10 V dimming

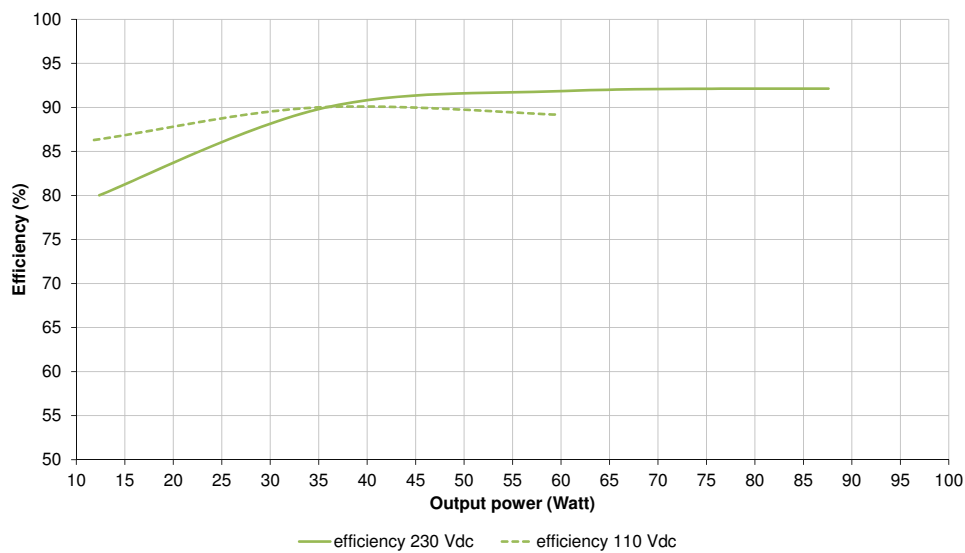
In case of multiple drivers on one dimmer make sure that the wires are connected according to polarity.



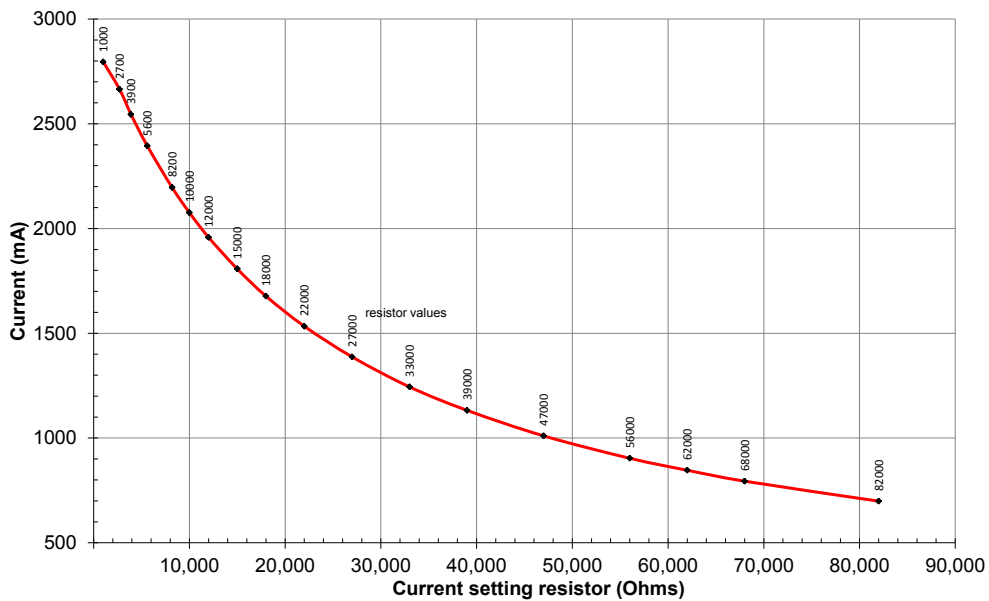
Power factor



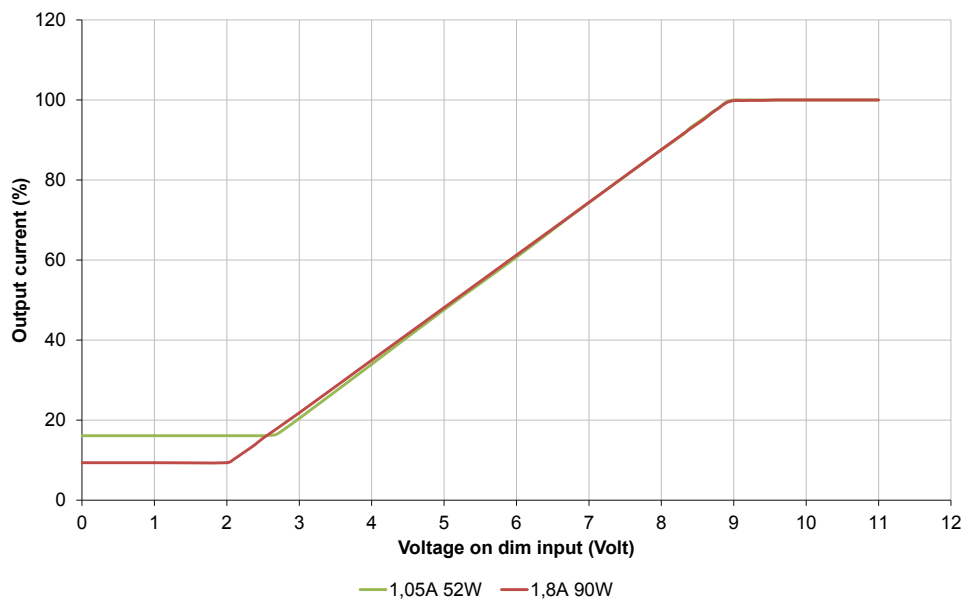
Efficiency



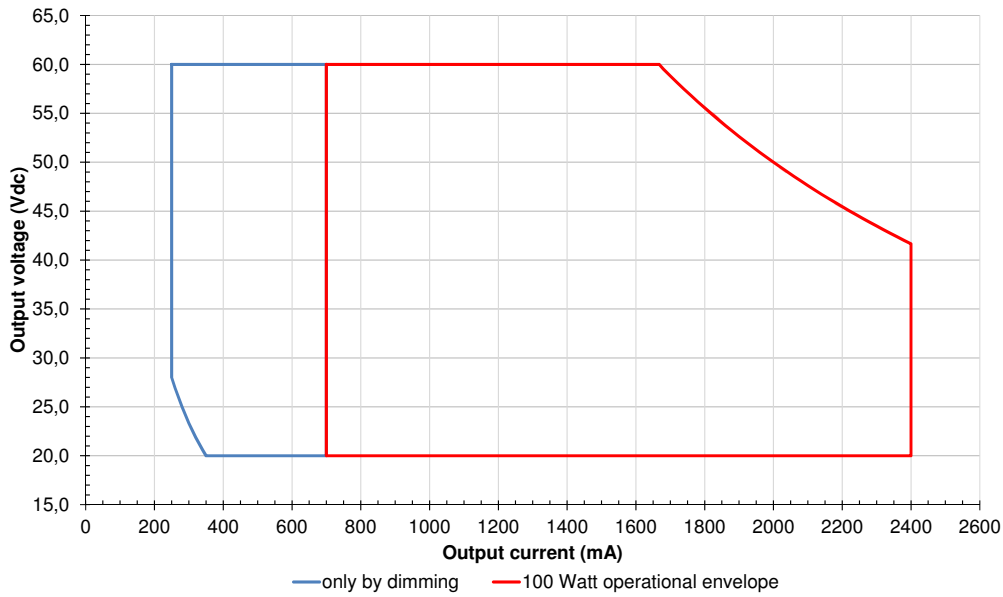
Output current vs resistance



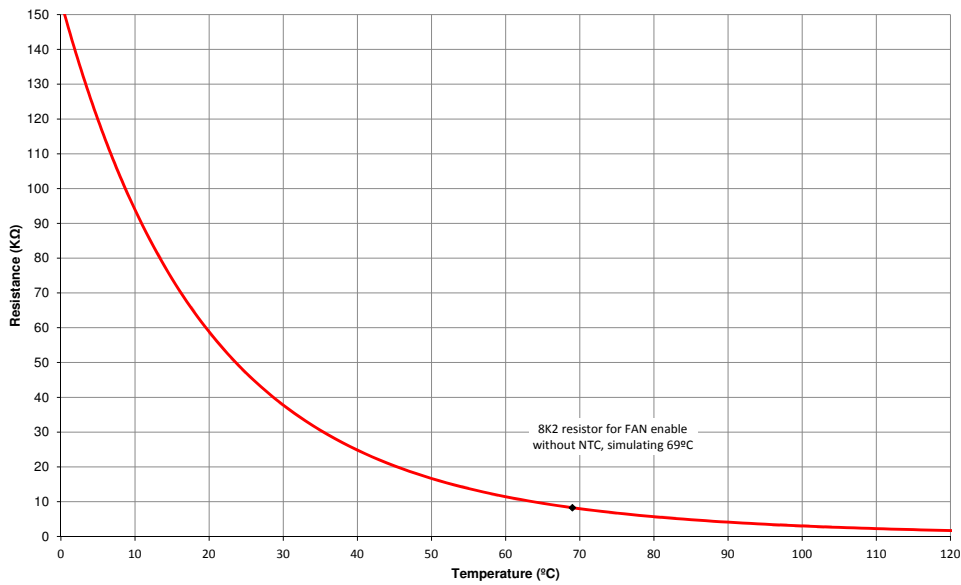
Dimming characteristic



Output chart (for 230 Vac input voltage)



NTC 47K chart



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Harmonics (limit according to IEC 61000-3-2 table 2)



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