

**L05049-601000**

ECOLine LED Driver 40W, 20-60Vdc, 245-1050mA, Dimmable

**L05049-601000-ND**

ECOLine LED Driver 40W, 20-60Vdc, 245-1050mA, Not Dimmable

## Engineered for Best Fixture Performance

Lumotech drivers are all built on core engineering design principles for exceptional standards of performance and reliability in LED systems. Highest-grade critical components together with design features for thermal management ensure excellent reliability. Our low ripple designs create flicker-free lighting and perfectly smooth dimming. Simplicity of specification and installation is a key characteristic of all Lumotech drivers. Hence the wide voltage and current ranges and industry leading low inrush current.



## Feature-rich LED driver with high voltage output and very low inrush current

### Engineered for Performance

- Industry leading efficiency
- Excellent EMC behavior
- Very high power factor

### Engineered for Reliability

- Low inrush current
- Thermal protection (automatic current limiter)
- Short and open circuit protection, overload and overvoltage protection

### Engineered for Simplicity.

- Future-proof flexibility – industry leading voltage and current range enabling seamless support of LED generations and minimizing supply chain complexity

## 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.



### Product features

- Wide output voltage range 20 - 60 Vdc
- Wide range of current settings 245 – 1050 mA
- 1 – 10 V dimming (Only on the L05049-601000)
- Low output current ripple (<15 %) at 100 Hz
- Thermal protection: dimming instead of switch off
- Active open circuit output voltage protection
- Up to 90 % efficiency across a wide range of loads
- Power factor 0.98
- Max inrush current 1.29 A
- ENEC certified
- Engineered and Manufactured in Europe
- SELV

### Certificates and standards

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

### Classifications



## Specific technical data

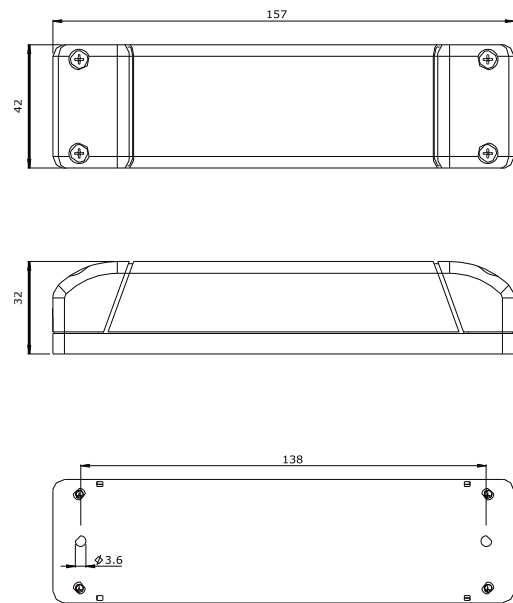
Type	Efficiency at full load	Output current (measured @ 240Vac)	Output voltage range	Open circuit output voltage	Max. output power	Dimming
L05049-601000	90 %	245 – 1050 mA	26 – 60 Vdc	62 Vdc	40W @ 230Vac 32W @ 110Vac	1 - 10 V, potentiometer 100K log b (SELV)
L05049-601000-ND	90 %	245 – 1050 mA	26 – 60 Vdc	62 Vdc	40W @ 230Vac 32W @ 110Vac	No

## Technical data

Rated supply voltage	220-240Vac	
Input voltage	110-240Vac	150-375Vdc*
Mains frequency	50/60 Hz	
System input power	Max 47VA @ 240Vac	Max 37VA @ 110Vac
No load power	240mW	
Dimming method	linear	
Output current @ 240Vac	245mA to 1050mA	
Output current @ 110Vac	220mA to 850mA	
Output current tolerance	-5 % / +2%	
100 Hz ripple current at full load	< 15%	
Power factor at full load	0.98 @ 240Vac	0.99 @ 110Vac
Nominal line current	195mA @ 240Vac	340mA @ 110Vac
Output voltage setting time	1 second	
Output isolation	SELV	
Surge protection (diff. / comm.)	3.5 kV / 6 kV	
IP classification	IP 20	
Circuit lifetime	50.000 hrs at Tc max.	
Case dimensions	157 x 42x 32 mm	

\* External DC fuse is required

## Dimensions



## Inrush current

Mains max. peak inrush at full load	0.277A per driver on phase 60° (average starting angle)*
	0.703A per driver on phase 90° (worst case starting angle)*
	0.319A per driver on phase 60° (average starting angle)**
	1.292A per driver on phase 90° (worst case starting angle)**

\*\* Tested at 240 Vac 1 driver connected, with TTI HA1600A analyzer.

\* Tested at 240 Vac 10 drivers parallel connected, with TTI HA1600A analyzer.

## Maximum number of drivers on automatic circuit breakers

Automatic circuit breaker type	C10	C13	C16	C20	B10	B13	B16	B20
L05049-601000(-ND)	44	57	70	87	44	57	70	87

## Thermal specifications

L05049-601000(-ND)	
Ambient temperature range (Ta)	-25 to +55°C*
Maximum case temperature (Tc)	< +72°C
Storage temperature range	-25 to +60°C

\* When mounted on a heat conductive surface of at least 100x100x2 mm,  
Otherwise Ta max = 40°C

## Thermal overload protection

If the maximum output power is exceeded, the LED driver reduces the LED output current. After elimination of the overload the nominal operation is restored automatically.

## Overtemperature protection

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

## Active overcurrent protection

Overcurrent protection to allow hotswapping of LEDs higher than 15 Watt.

## 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.

## No-load operation

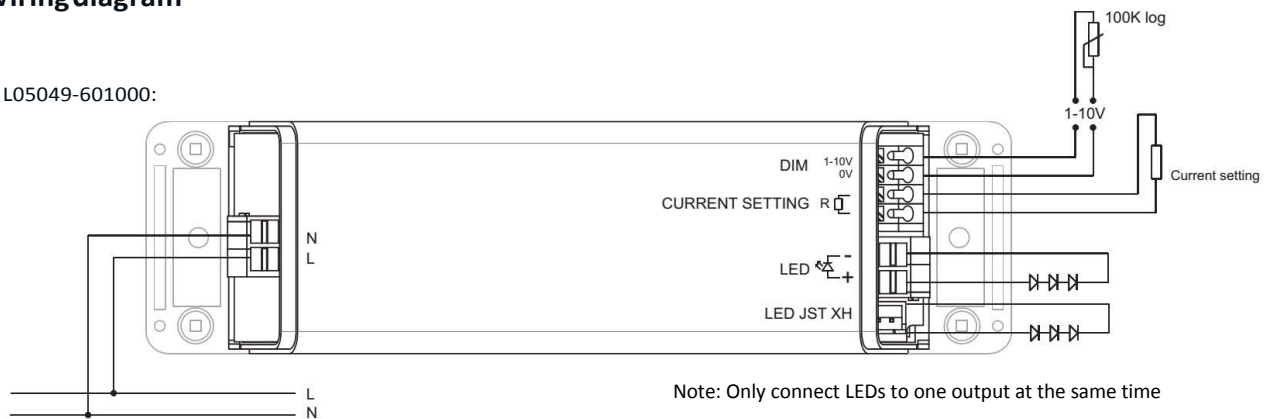
In no-load operation the output voltage will not exceed the specified open circuit output voltage.

## Ambient temperature and cooling

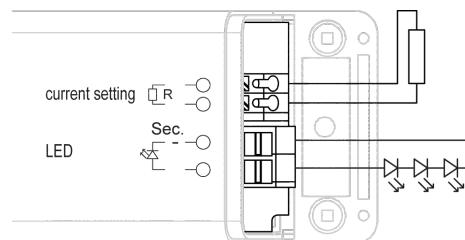
The rated ambient temperature is defined for a driver mounted on a thermally conductive surface of 100x100x2mm per driver. When the driver is not cooled, thermal protection might trigger at a lower temperature and the output power will be reduced. When not mounted on a thermally conductive surface it is recommended to limit the maximum ambient temperature at 40°C.

## Wiring diagram

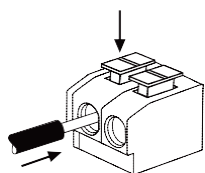
L05049-601000:



L05049-601000-ND:

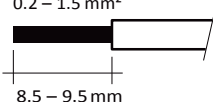


## Wiring of device



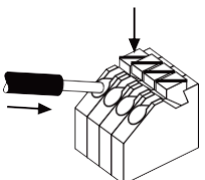
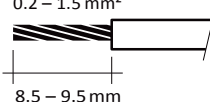
### Solid

wire preparation:  
0.2 – 1.5 mm<sup>2</sup>

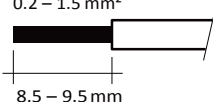


### Stranded

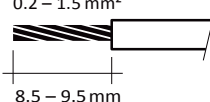
wire preparation:  
0.2 – 1.5 mm<sup>2</sup>



wire preparation:  
0.2 – 1.5 mm<sup>2</sup>

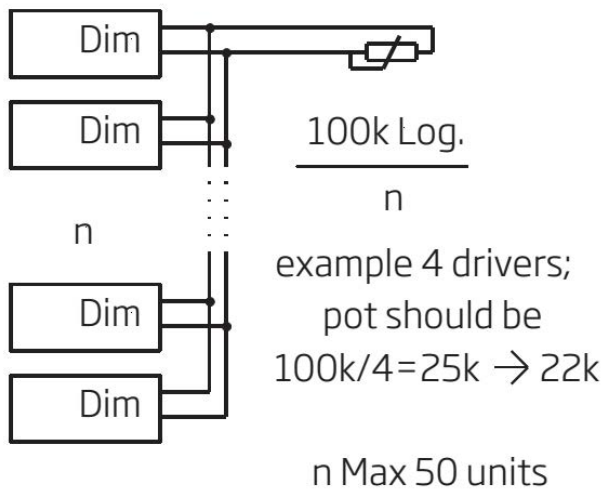


wire preparation:  
0.2 – 1.5 mm<sup>2</sup>



## Dimming

In case of multiple drivers on one dimmer make sure  
That the wires are fixed according to polarity



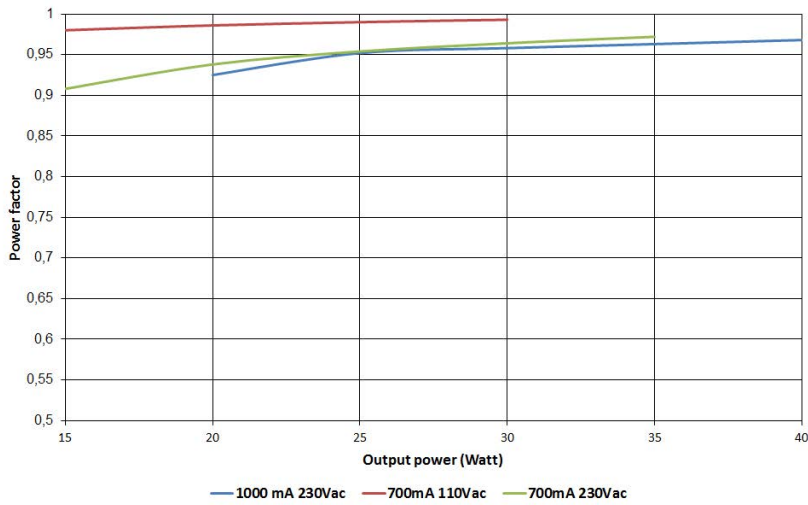
## Output current resistor setting\*

### L05049-601000(-ND)

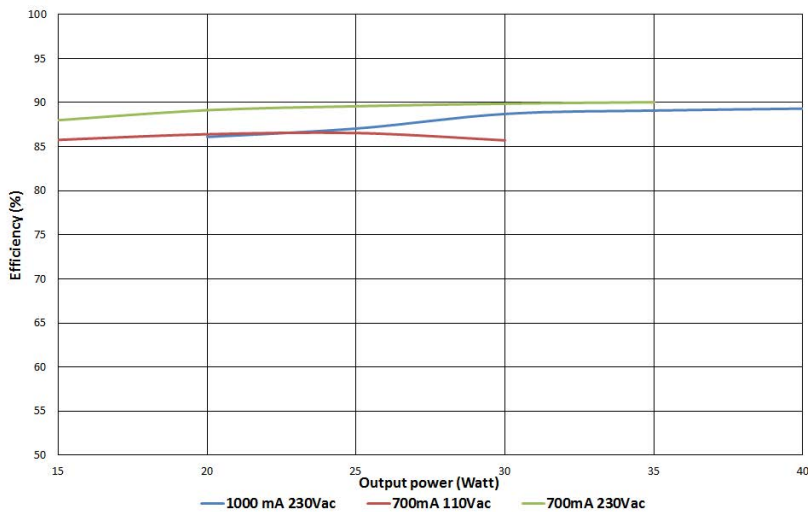
Resistor value	Output current (+/- 5%)
$\infty$ (no resistor placed)	1050 mA
180K $\Omega$	986 mA
160 K $\Omega$	970 mA
120 K $\Omega$	926 mA
100 K $\Omega$	913 mA
82 K $\Omega$	897 mA
68 K $\Omega$	876 mA
56 K $\Omega$	880 mA
47 K $\Omega$	843 mA
39 K $\Omega$	821 mA
33 K $\Omega$	799 mA
27 K $\Omega$	773 mA
22 K $\Omega$	741 mA
18 K $\Omega$	706 mA
15 K $\Omega$	673 mA
12 K $\Omega$	631 mA
10 K $\Omega$	596 mA
8.2 K $\Omega$	558 mA
6.2 K $\Omega$	524 mA
5.6 K $\Omega$	487 mA
4.7 K $\Omega$	457 mA
3.9 K $\Omega$	426 mA
3.3 K $\Omega$	402 mA
2.7 K $\Omega$	373 mA
2.2 K $\Omega$	348 mA
1.8 K $\Omega$	327 mA
1.5 K $\Omega$	338 mA
1.2 K $\Omega$	310 mA
1 K $\Omega$	280 mA
820 $\Omega$	267 mA
0 $\Omega$ (short)	245 mA

\* Measured @ 240Vac

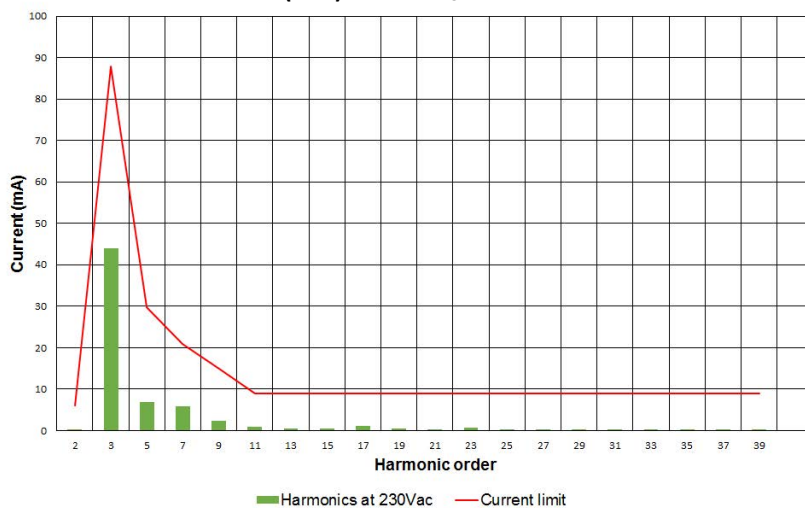
## Power factor L05049-601000(-ND)



## Efficiency L05049-601000(-ND)



## Harmonics L05049-601000(-ND) (limit according to IEC 61000-3-2 table 2)



## Ordering data

Part	Part number	Packaging carton	Multibox carton	Weight per piece
L05049-601000 LED Driver 40W, 26-60 Vdc, 245-1050 mA	L05049-601000	50 pieces	150 pieces	188 g
L05049-601000-ND LED Driver 40W, 26-60 Vdc, 245-1050 mA	L05049-601000-ND	50 pieces	150 pieces	188 g

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**THE POWER INSIDE.**

Datasheet L05049-601000(ND)