

LEDLight 20 W Wide voltage series

L05012 / L05013 / L05013-48350 / L05013-1050 /
L05013-1200 / L05013-40500

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 output currents.



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 of LEDs >3 W
 - Excellent EMC behavior
- Future-proof flexibility - industry leading voltage and current range enabling seamless support of LED generations and minimizing supply chain complexity
- Wide voltage range enabling many applications with just one driver product

Product features

- Wide output voltage range 3- 40 Vdc
- Wide range of current settings
- Max inrush current 1.25 A
- Low output current ripple (<1 %) at 100 Hz
- Thermal protection: dimming instead of switch off
- Open circuit output voltage protection
- Up to 90 % efficiency across a wide range of loads
- Power factor >0.9
- ENEC certified
- Engineered and Manufactured in Europe
- SELV

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 (pending), CE
- EN55015 / EN61000-3-2 / EN61347-2-13 / EN61347-1 / EN61547 / EN62384 / SELV

Classifications



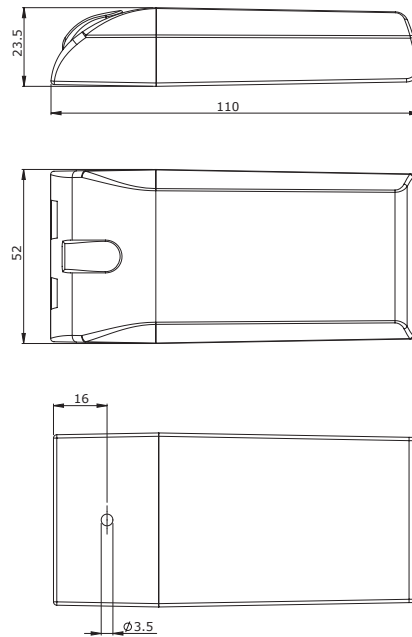
Specific technical data

Type	Efficiency at full load	Output current	Output voltage range	Open circuit output voltage	Max. output power	Dimming
L05012	85 %	350 -1400 mA	3 - 33 Vdc	33 Vdc	20 W	No
L05013	85 %	700 mA	3 - 33 Vdc	33 Vdc	20 W	No
L05013-48350	86 %	350 mA	3 - 48 Vdc	50 Vdc	20 W	No
L05013-1050	90 %	1050 mA	3 - 24 Vdc	24 Vdc	20 W	No
L05013-1200	90 %	1200 mA	3 - 24 Vdc	24 Vdc	20 W	No
L05013-40500	87 %	500 mA	3 - 40 Vdc	43 Vdc	20 W	No

Technical data

Rated supply voltage	115-240 Vac
Input voltage	115-240 Vac
Mains frequency	50/60 Hz
Output current tolerance	5 %
100 Hz ripple current at full load	<1 %
Power factor at full load	0.9
Nominal line current at 240 Vac	110 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	110 x 52 x 23,5 mm

Dimensions



Inrush current

Mains max. peak inrush at full load	1.25 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
L05012, L05013 series	53	68	84	105	40	49	60	75

Thermal specifications

Ambient temperature range (Ta)	-20 to 45°C
Maximum case temperature (Tc)	< 85°C
Storage temperature range	-20 to 50°C

Ordering data

Part	Part number	Packaging carton	Multibox carton	Weight per piece
LEDlight 20W 350mA-1400mA	L05012	20 pieces	240 pieces	100 g
LEDlight 20W 700mA	L05013	20 pieces	240 pieces	100 g
LEDlight 20W 350mA 48V	L05013-48350	20 pieces	240 pieces	100 g
LEDlight 20W 500mA	L05013-500	20 pieces	240 pieces	100 g
LEDlight 20W 1050mA	L05013-1050	20 pieces	240 pieces	100 g
LEDlight 20W 1200mA	L05013-1200	20 pieces	240 pieces	100 g
LEDlight 20W 500mA 40V	L05013-40500	20 pieces	240 pieces	100 g

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.

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.

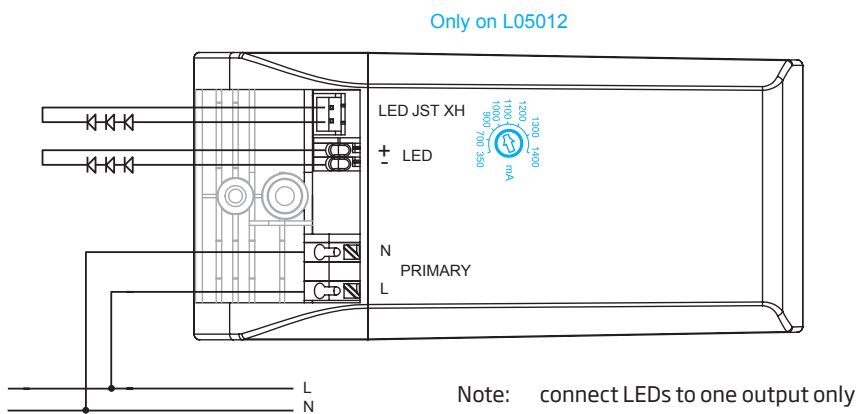
No-load operation

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

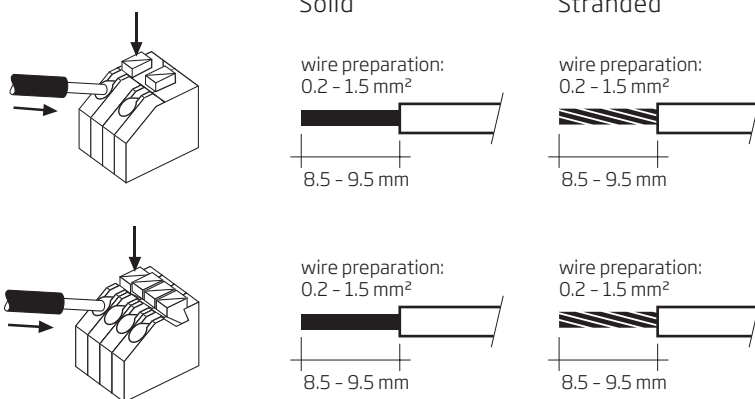
Overcurrent protection

Overcurrent protection to allow hotswapping of LEDs higher than 3 Watt.

Wiring diagram

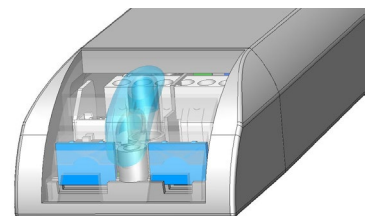


Wiring of device

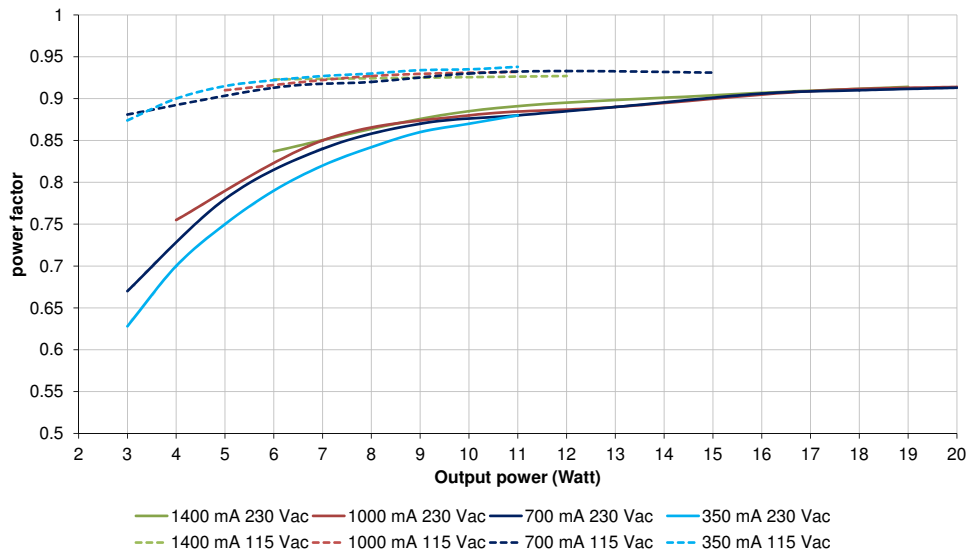


Strain relief

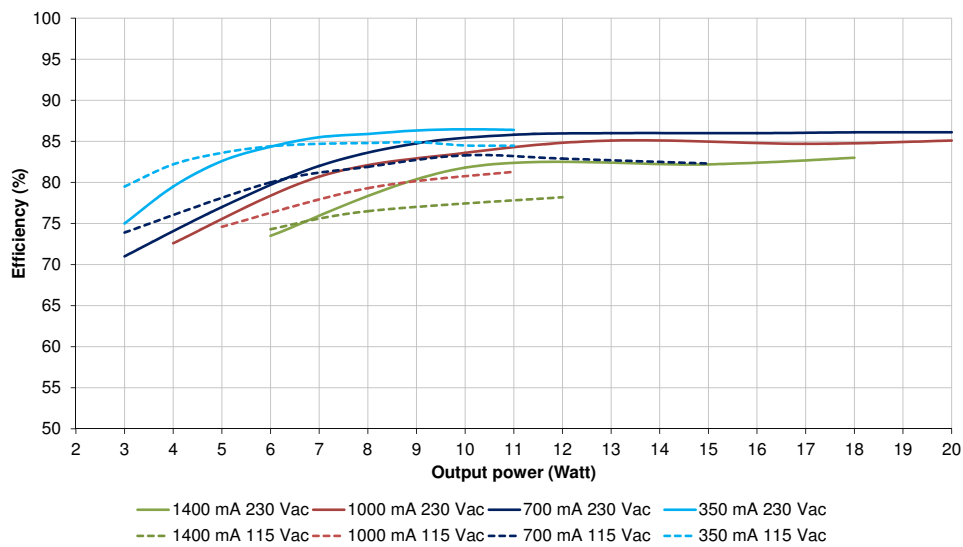
The strain relief inserts can be removed to accommodate wiring of larger diameters.



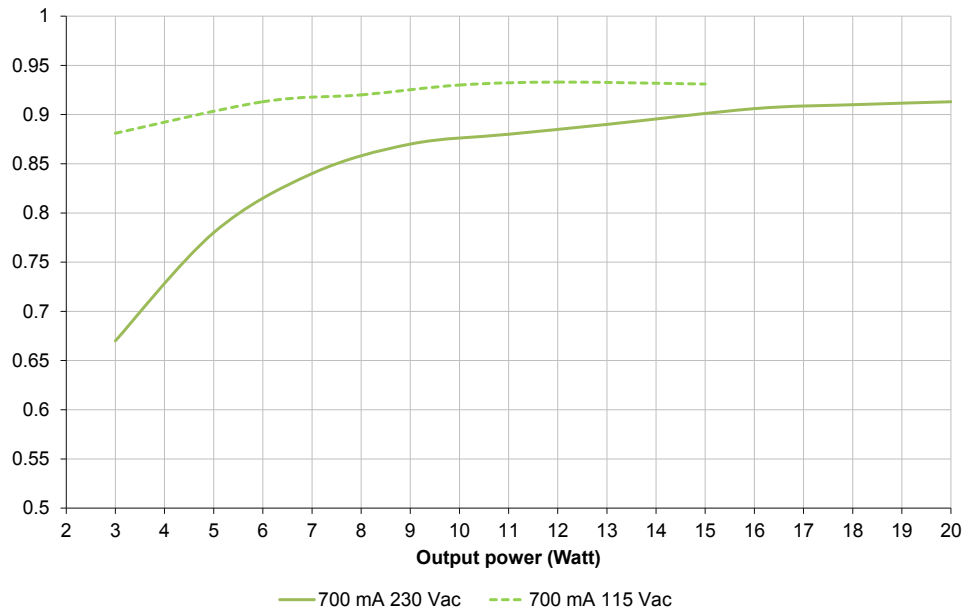
Power factor L05012



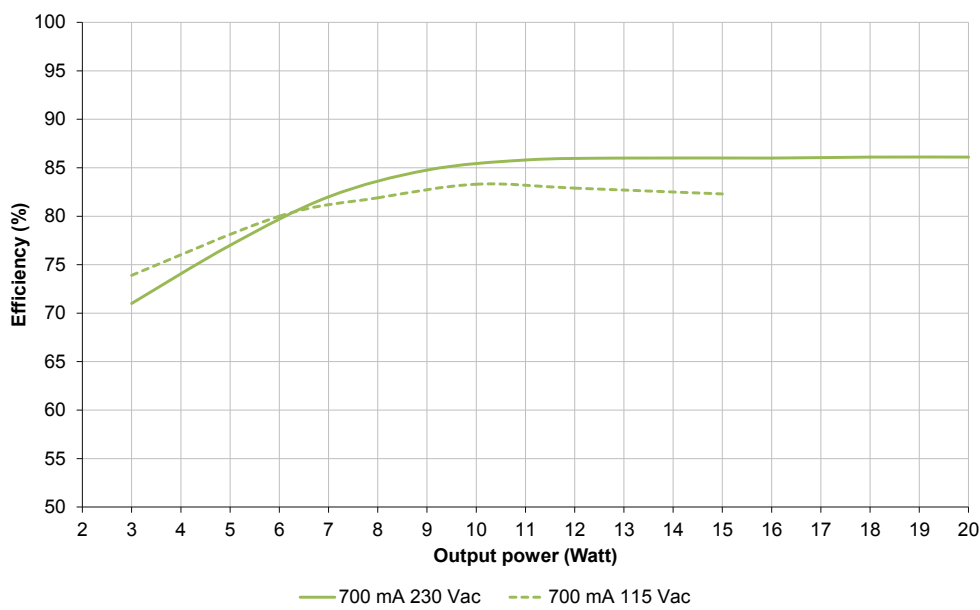
Efficiency L05012



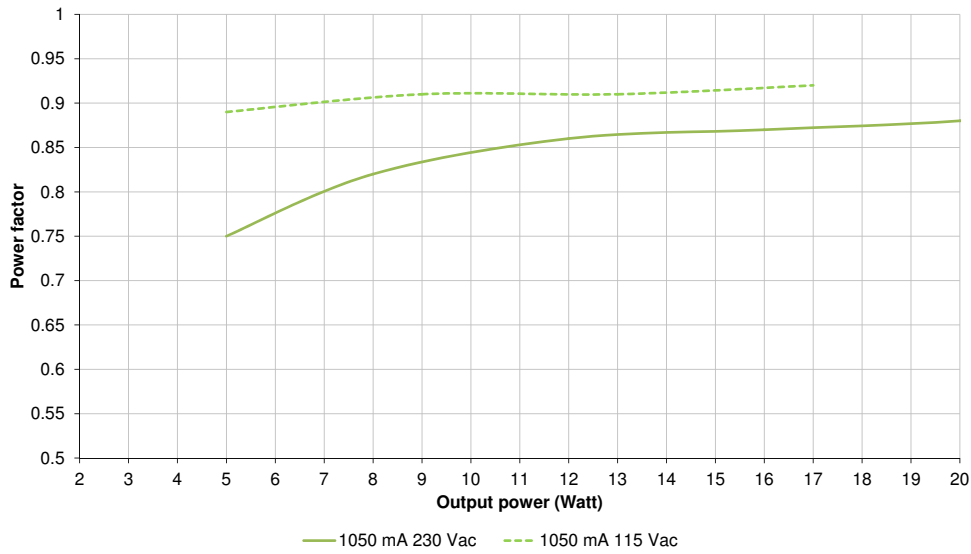
Power factor L05013



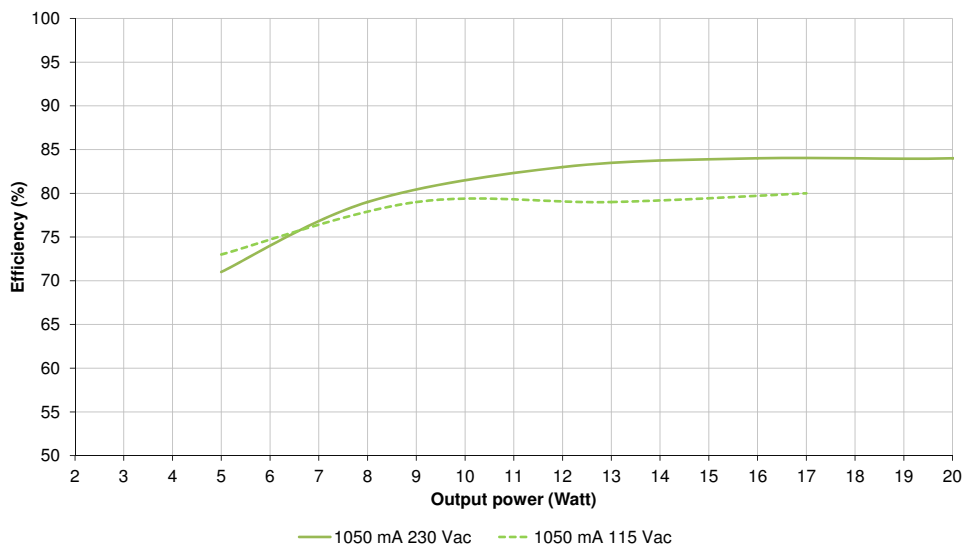
Efficiency L05013



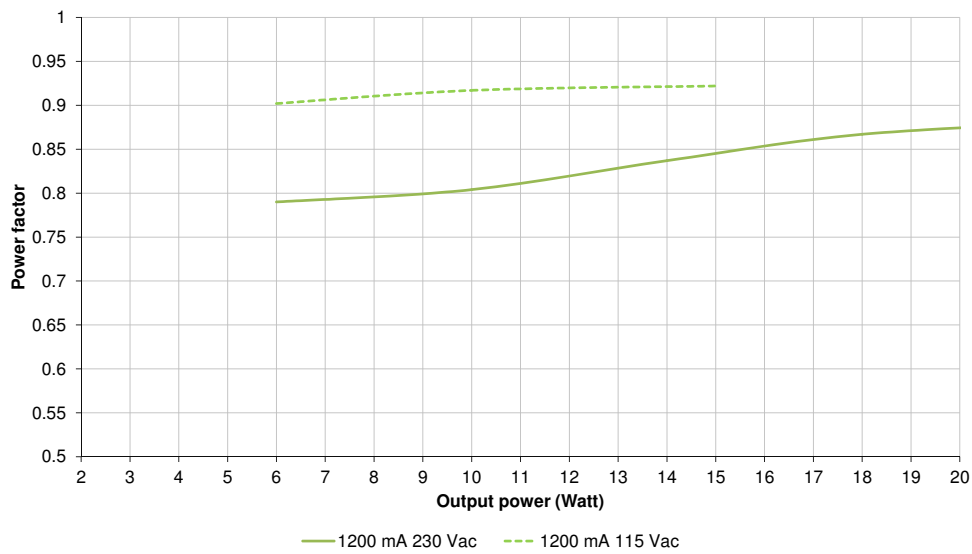
Power factor L05013-1050



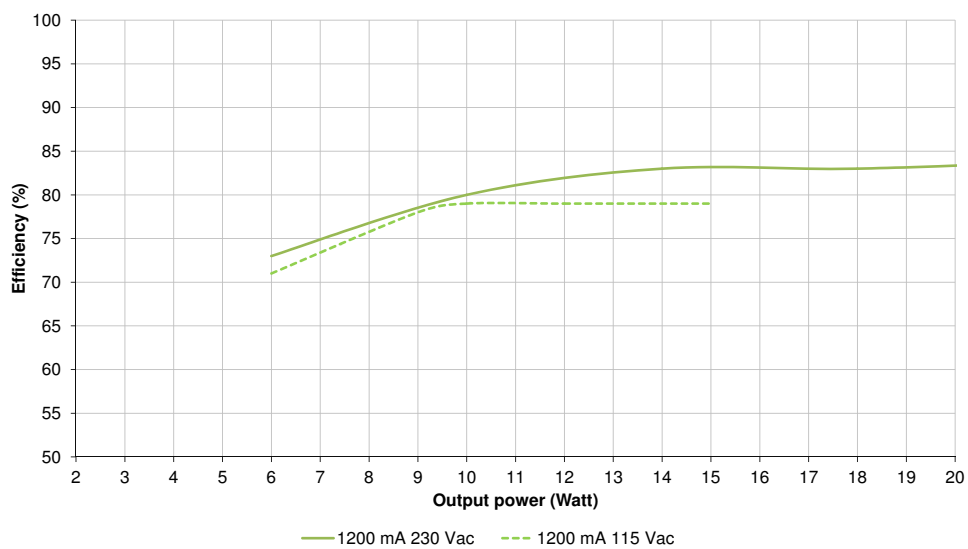
Efficiency L05013-1050



Power factor L05013-1200



Efficiency L05013-1200



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



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