Vlinca Beleuchtungstechnologie GmbH
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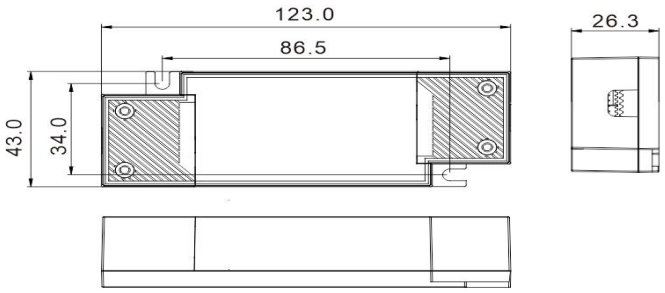
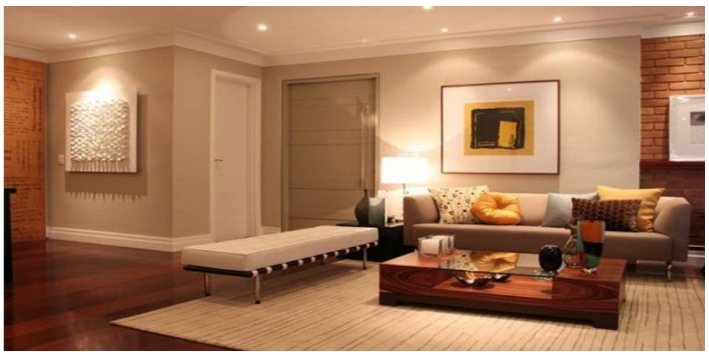
IRISES DIP DRIVER

IP20 SELV





Advantage

- Stylish design
- Up to 90% efficiency
- Nominal Life-time up to 50,000 hours
- 5-year guarantee

Product Description

- Independent LED Driver
- Fixed output current
- For luminaires of protection class II
- Temperature protection as per EN 61347-2-13 C5e
- Max output power 24W
- Output current can be adjusted by the DIP switch

Features

- Casing: polycarbonat, white
- Type of protection IP20

Functions

- Overtemperature protection
- Overload protection
- Short-circuit protection
- No-load protection
- Burst protection voltage 1 kV
- Surge protection voltage 1 kV (L to N)

Typical applications

- For spot light and downlight in retail and hospitality application
- For panel light and area light in office

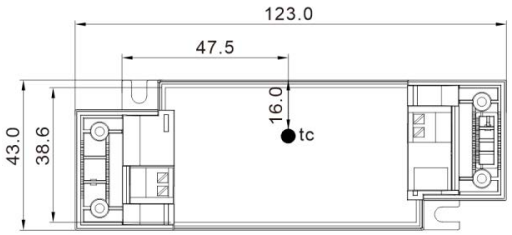
Technical data

	Product type		
	24W		Unit
Rated supply voltage = U-IN on label	220-240		V
Input voltage range, AC	198-264		V
Mains frequency	50/60		Hz
Overvoltage protection(Input side)	320Vac,1h		
Max input current (@220-240V,50/60Hz)= I-IN on label	0.15		A
Max input power (@220-240V,50/60Hz) = P-IN on label	27		W
Typ.power consumption(at 230V .full load)	24		W
Max output power(@220-240V,50/60Hz) = P-OUT on label	24		W
Max. output voltage(V) (no load) = U-OUT from label	50		V
Output current tolerance(+/-%), (at 230 V, 50 Hz, full load)	±7.5		%
Output current tolerance(+/-%), (at 230 V, 50 Hz, min load)	±7.5		%
Output LF Current Ripple (<120Hz)	±5		%
Max. output peak current (at 230 V, 50 Hz, full load)	670		mA
Leakage current（230Vac/50Hz Input, Output full load）	< 450		μA
THD(at 230V,50Hz, full load)	<20		%
THD(at 230V,50Hz, min load)	<25		%
Power factor(at 230V,50Hz, full load)	0.95		
Efficiency(at 230V,50Hz, full load)	90		%
Starting time (at 230V,50Hz,full load)	<0.5		s
Turn off time (at 230V,50Hz,full load)	<0.5		s
Hold-up time at power failure (output)	0		ms
Ambient temperaure ta(°C)	- 20 ⋯+ 45		°C
Ambient temperaure ta(50000 Hrs)	45		°C
Max. casing temperature tc	70		°C
	-20⋯+ 80		°C

Specific Technical Data

Type	Input Voltage	Output Power	Output Voltage	Output Current	Ripple	Tc	Ta	Dimension
IRISES-P24DCA40DIP0.45-0.6A-IDP	220-240Vac	Max. 24W	30-40Vdc	450/500/550/600mA	±5%	70°C	- 20 ···+ 45°C	123*43*26.3mm

Tc position



unit：mm

Ordering data

Article number	Description	Dimension of product	Net Wt/pc	Package/ctn	Dimension of carton
1060800140	IRISES-P24DCA40DIP0.45-0.6A-IDP	123*43*26.3mm	84g	100pcs	290x270x260mm

Adjust current

Output current can be adjusted by the DIP switch.

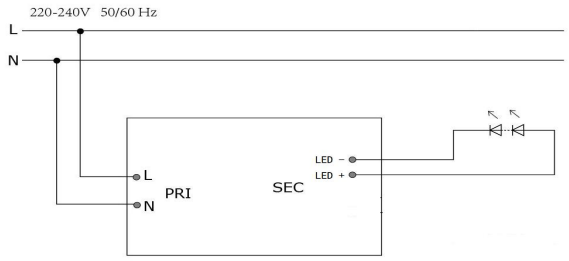
Description	Output current		
IRISES-P24DCA40DIP0.45-0.6A-IDP	Iout	1	2
	600mA	ON	ON
	550mA	-	ON
	500mA	ON	-
	450mA	-	-

1. Standards

EN 55015
EN 61000-3-2
EN 61000-3-3
EN 61347-1
EN 61347-2-13
EN 61547
EN 62384
EN 61643-11

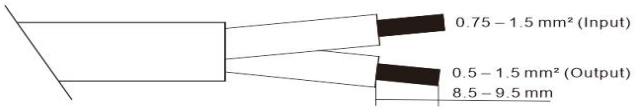
2. Installation and wiring

2.1 Circuit diagram



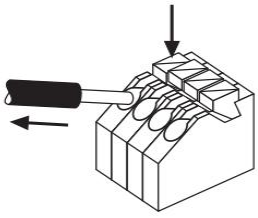
2.2 Wiring type and cross section

The wiring can be in stranded wires with ferrules or solid with a cross section of 0.75–1.5 mm² (mains wires) and 0.5–1.5 mm² (secondary wires, LED moduel). Strip 8.5–9.5 mm of insulation from the cables to ensure perfect operation of the push-wire terminals.



2.3 Release of the wiring

Press down the " push button" and remove the cable from front.



2.4 Wiring guidelines

- All connections must be kept as short as possible to ensure good EMI behaviour.
- Max length of output wires is 80cm.
- Secondary switching is not permitted.
- Incorrect wiring can damage LED modules.
- To avoid the damage of the driver, the wiring must be protected against short circuits to earth (sharp edged metal parts, metal cable, clips. louver. etc..)

2.5 Replace LED module

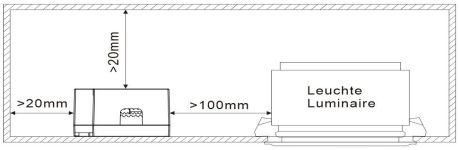
1. Mains off
2. Remove LED module
3. Wait for 10 seconds
4.Connect LED module again

2.6 Installation instructions

The LED module and all contact points within the wiring must be sufficiently insulated against 3 kV surge voltage.
Air and creepage distance must be maintained.

2.7 Fixing conditions when using as independent Driver with Clip-On

Dry, acidfree, oilfree, fatfree. It is not allowed to exceed the maximum ambient temperature (ta) stated on the device. Minimum distances stated below are recommendations and depend on the actual luminaire.
Is not suitable for fixing in corner.



2.8 Mounting of device

Max. torque for fixing: 0.5 Nm/M4

3. Thermal details and life-time

Expected life-time

Typ				
IRISES-P24DCA40DIP0.45-0.6A-IDP	ta	40℃	45℃	50℃
	tc	65℃	70℃	75℃
	Life-time	50000h	50000h	30000h

The LED Drivers are designed for a life-time stated above under reference conditions and with a failure probability of less than 10 %.
Life-time declarations are informative and represent no warranty claim.

4. Maximum loading of automatic circuit breakers in relation to inrush current

Maximum loading of automatic circuit breakers

Automatic circuit	C10	C13	C16	C20	B10	B13	B16	B20	Inrush current I_{max}	Inrush current Time
Installation Ø	1.5mm²	1.5mm²	1.5mm²	1.5mm²	2.5mm²	1.5mm²	1.5mm²	2.5mm²		
IRISES-P24DCA40DIP0.45-0.6A-IDP	48	50	70	80	20	32	41	50	17.9A	200µs

This are max. values calculated out of inrush current! Please consider not to exceed the maximum rated continuous current of the circuit breaker.Calculation uses typical values from ABB series S200 as a reference.
Actual values may differ due to used circuit breaker types and installation environment.

4.1 Harmonic distortion in the mains supply (at 230 V / 50 Hz and full load) in %

	THD	3	5	7	9	11
IRISES-P24DCA40DIP0.45-0.6A-IDP	<20%	<12%	<10%	<7%	<5%	<3%

Acc. to EN61000-3-2. Harmonics < 5 mA or < 0.6 % (whatever is greater) of the input current are not considered for calculation of THD.

5. Functions

5.1 Short-circuit behaviour

In case of a short circuit on the secondary side (LED) the LED Driver switches off. After elimination of the short circuit the nominal operation is restored automatically.

5.2 No-load operation

The LED Driver works in burst working mode to provide a constant output voltage regulation which allows the application to be able to work safely when LED string opens due to a failure.

5.3 Overload protection

If the output voltage range is exceeded the LED Driver will protect itself by reducing the LED output current.
After elimination of the overload, the nominal operation is restored automatically.

6. Miscellaneous

6.1 Insulation and electric strength testing of luminaires

Electronic devices can be damaged by high voltage. This has to be considered during the routine testing of the luminaires in production.
According to IEC 60598-1 Annex Q (informative only!) ,each luminaire should be submitted to an insulation test with 500V DC for1 second. This test voltage should be connected between the interconnected phase and neutral terminals and the earth terminal.
The insulation resistance must be at least 2MΩ.
As an alternative, IEC 60598-1 Annex Q describes a test of the electrical strength with 1500V AC (or 1.414 x 1500V DC).
To avoid damage to the electronic devices this test must not be conducted.

6.2 Conditions of use and storage

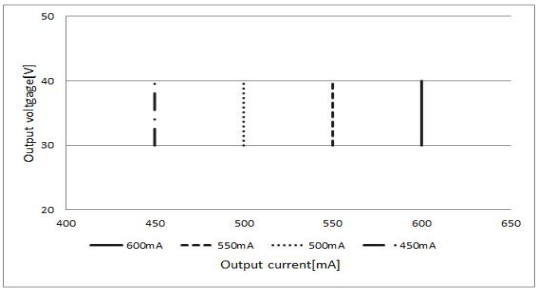
Humidity: 5 % up to max. 85 %,
not condensed
(40 days/year at 85 %)
Storage temperature: -20 °C up to max. +80 °C
The devices have to be within the specified temperature range (ta) before they can be operated.

6.3 Maximum number of switching cycles

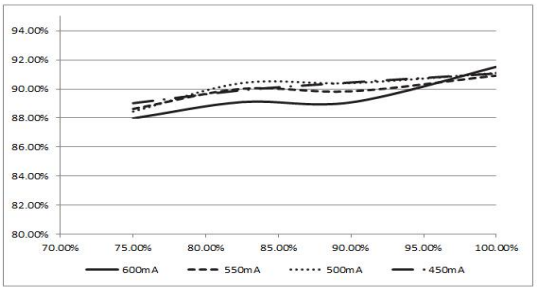
All LED Driver are tested with 50,000 switching cycles.
The actually achieved number of switching cycles is significantly higher.

7. Electrical values

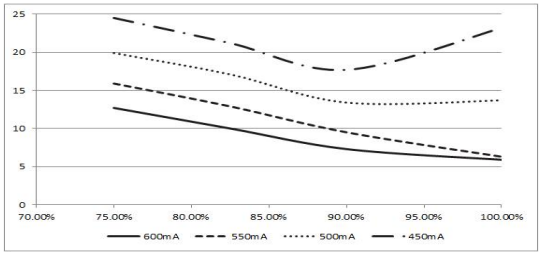
7.1 Operating window



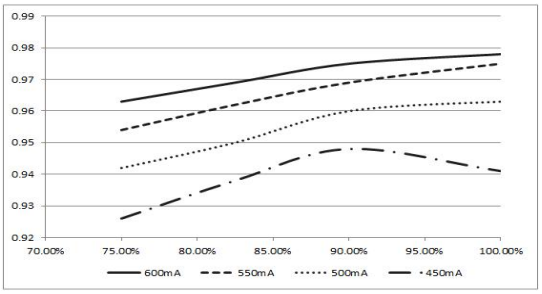
7.2 Efficiency vs load (@230VAC 50HZ)



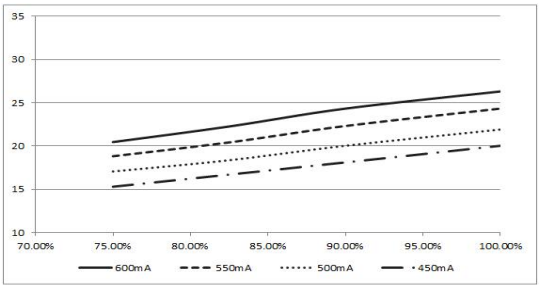
7.3 THD vs load (@230VAC 50HZ)



7.4 Power factor vs load (@230VAC 50HZ)



7.5 Input power vs load (@230VAC 50HZ)



7.6 Input current vs load (@230VAC 50HZ)