

CINCON ELECTRONICS

LED POWER SUPPLY CATALOG 2016



Every day, 365 days a year Cincon makes a difference in people's lives throughout the world.

Design engineers and other power supply specifiers select our AC-DC and DC-DC convertors to power a wide range of products. Cincon power supplies are found in a myriad of applications, from medical equipment used to keep us healthy, to security systems working to keep us safe. Name an electronic device in any equipment category and it's likely you'll find a Cincon power supply inside. The communications, test instrumentation, entertainment, lighting, medical, computer, networking, industrial and transportation industries all use Cincon power supplies.

Cincon gives power supply specifiers what they need, speed and specification. Need a power supply fast? Designers can select from one of our 25,000 plus standard model numbers, many available off the shelf from distributors located around the globe. Give us a little more time and we can modify one of our standard products to your requirement. Need a full custom power supply? We do that also.

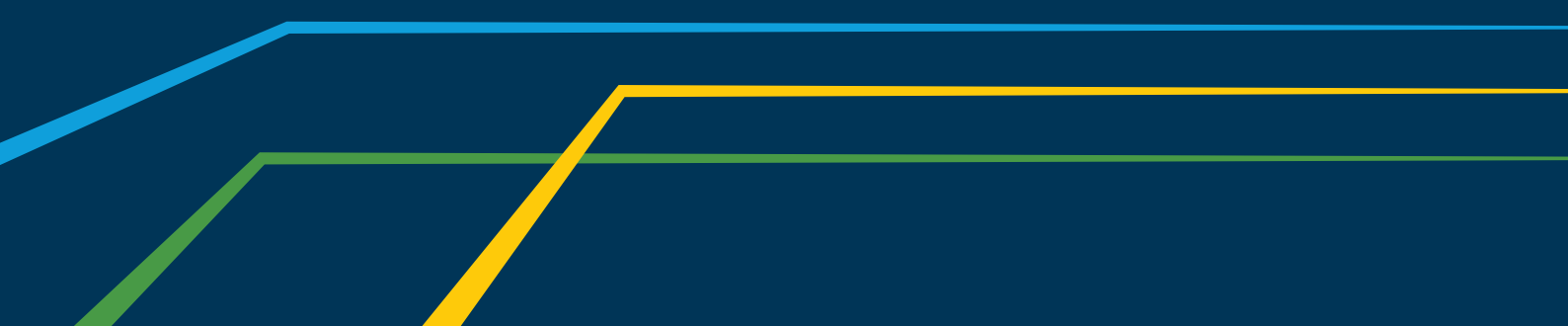
Using state of the art design tools, our power supplies are engineered with proven technology in one of our two Taiwan design laboratories. We focus heavily on reliability

in the early stages of development to ensure a robust final product. Combined with extensive verification testing at the prototype and pilot production stages, Cincon is able to offer power supplies with long operational lives.

Cincon AC-DC and DC-DC power supplies are manufactured in one of our wholly owned, ISO 9001 and ISO 14001 certified, manufacturing facilities in Taiwan and China. Products are built using the latest manufacturing and quality assurance techniques on state of the art equipment; giving our customers not only high quality but also short lead times.

As a global designer and manufacturer of AC-DC and DC-DC power supplies, our products are certified to international safety, efficiency, hazardous substance and EMI standards where required. We also have capability to design and certify to application and country specific standards.

When you require an AC-DC or DC-DC power supply, standard or custom, and have little time, look to us for a solution. Let Cincon power your idea.



CONTENTS



LDP15S420	2
LDP25	4
LDP40	6
LDP60	8
CLD50D	10
LDM60S	12
LDM100S	14
LDA100S	16
PMC05S180	18
DLD	20
ALD	22
MLD	24
Ordering Information	26
Symbols and Marks	28

LDP15S420

15 WATT, SINGLE OUTPUT

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Features

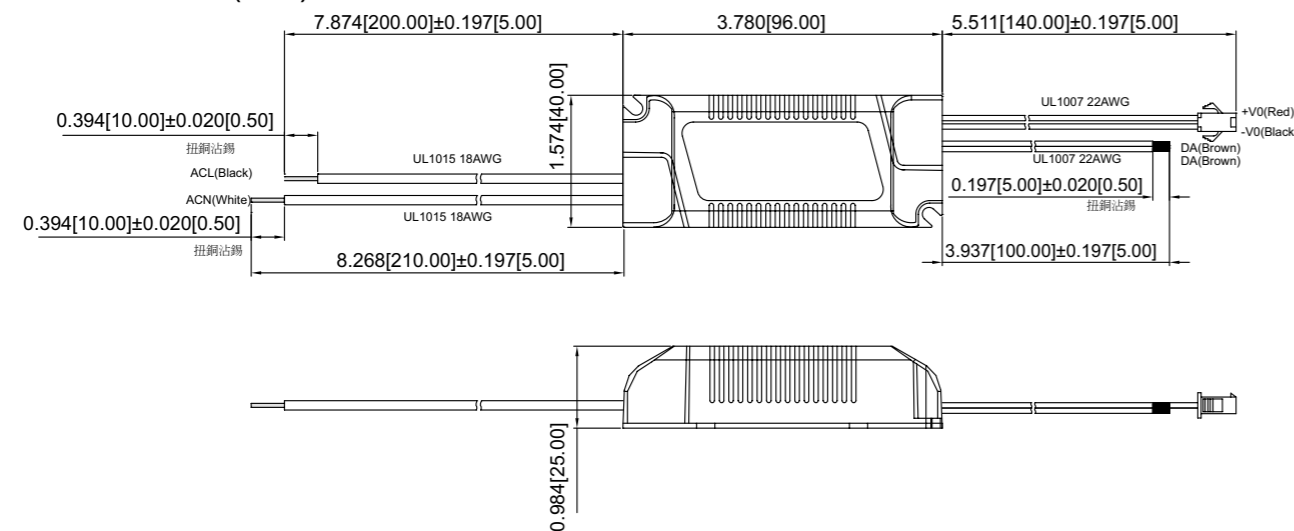
- ◆ Universal AC Input Range 90-264Vac
- ◆ Output Constant Current Design
- ◆ Continuous Short Circuit Protection
- ◆ Over Voltage Protection
- ◆ Suitable for LED Lighting Applications
- ◆ For DALI Systems



Mechanical Dimensions

All Dimensions are in inches (mm)
Tolerance: Inches: X.XXX±0.02
Millimeters: X.XX±0.5

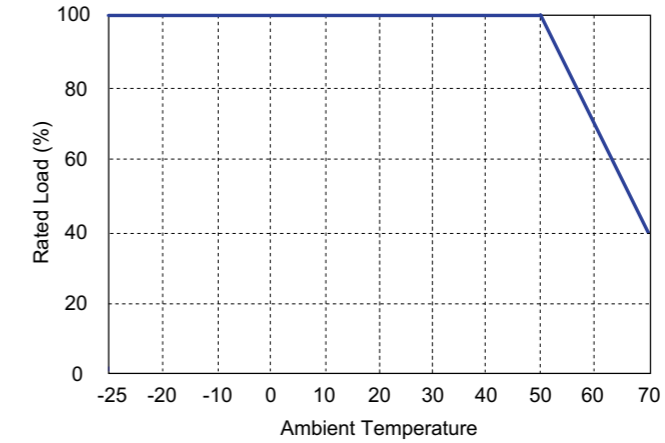
UNIT : inches(mm)



MODEL NUMBER	Input Voltage Range	Output Rated Voltage	Output Rated Current	No Load Output Voltage	Output Rated Power	Ripple and Noise	%EFF. Typ.
LDP15S420	90-264 VAC	18-42 VDC	350 mA	48 VDC	14.7 W	1% Vo	84%

Note :
1. Nominal Input Voltage: 115Vac, 230Vac.
2. Add a 0.1µF ceramic capacitor and a 10µF E.L. capacitor to output for Ripple & Noise measurement @20MHz BW.

Derating Curve



Specifications

All specifications are typical values tested at the condition of nominal line, full load, and 25°C unless otherwise indicated

INPUT SPECIFICATIONS

AC Input Voltage	90-264Vac
Frequency	47 to 63Hz
Inrush Current	240Vac 40A max.
Leakage Current	< 0.5mA max.
No Load Power Consumption	0.5W max.
PF	> 0.5 @230Vac 100% load

OUTPUT SPECIFICATIONS

Voltage Accuracy	±5% max.
Constant Current Accuracy (note 1)	±5% max.
Line Regulation (note 2)	±5% max.
Load Regulation (note 3)	±5% max.
Start Up Time	0.5s max.
Over Voltage Protection, TVS at % Nominal Output	115%-140%
Short Circuit Protection	Hiccup Mode, Auto Recovery

ENVIRONMENTAL CHARACTERISTICS

Operating Ambient Temperature	-25-70°C, 50°C-70°C with -3% /°C
Cooling	natural convection
Storage Temperature, Humidity	-40-85°C, 20%-95%RH
Operating Humidity	20%-95%RH non-condensing.
Operating Altitude	Sea Level to 10000feet
Temperature Coefficient	±0.03%/°C (0-50°C)
Vibration	0-500Hz, 2G 60min./1cycle, period for 3hours, 3 axes

GENERAL SPECIFICATIONS

Efficiency	84% typ.
Isolation Voltage, Input to Output	3.00KVac
Isolation Resistance, Input to Output	10 ⁸ Ω min.
Safety	UL8750, TUV EN61347-1, EN61347-2-13 (Pending)
EMI	EN55022/EN55015 Class B
EMS	EN61000-4-2,3,4,5,6,11
Harmonic Current	EN61000-3-2,3 Class A

MECHANICAL CHARACTERISTICS

Dimensions	3.780 x 1.574 x 0.984 inches (96.0 x 40.0 x 25.0 mm)
Weight	75g

NOTE

- 1: Current accuracy is set at nominal input voltage and full load.
- 2: Line regulation is measured from High Line to Low Line with full load.
- 3: Load regulation is measured from 75% to 100% output rated voltage max.

LDP25 SERIES

25 WATT, SINGLE OUTPUT

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Features

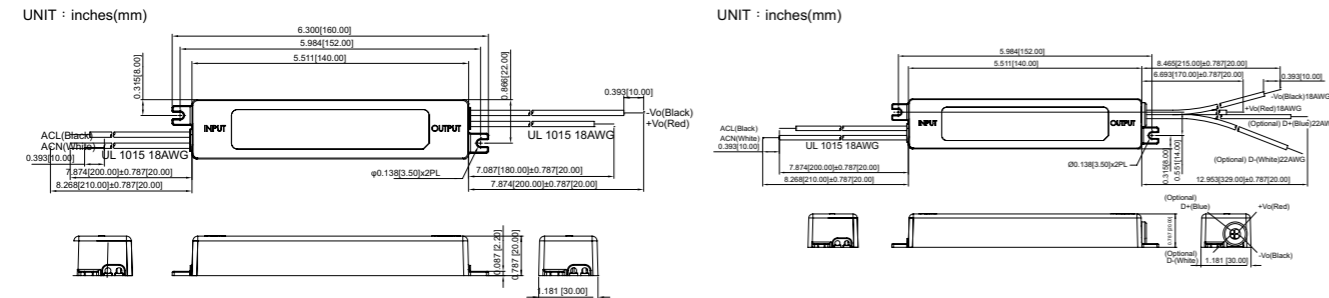
- ◆ Universal AC input range 90–305Vac
- ◆ Constant Current Design
- ◆ Active PFC > 0.9
- ◆ Low inrush current < 5A
- ◆ No load power consumption < 0.5W
- ◆ Low profile with 20mm height and narrow 30mm width
- ◆ Low frequency flicker design
- ◆ Continuous short circuit protection
- ◆ Over temperature protection
- ◆ IP 67 Rated
- ◆ Fully isolated plastic case
- ◆ Dimming function: PWM / 1–10VDC



* Please see page 26 for ordering information

Mechanical Dimensions

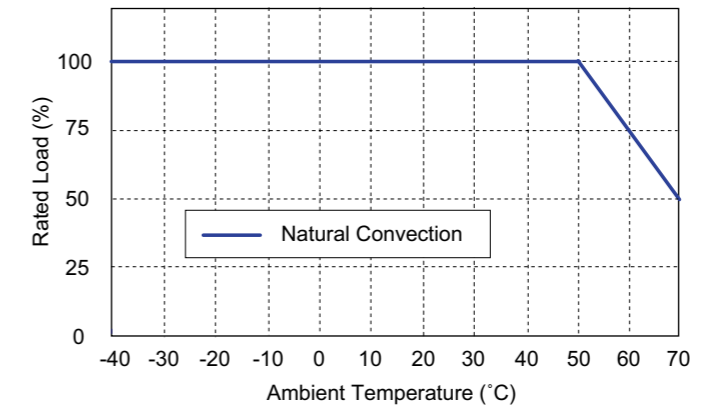
All Dimensions are in inches(mm)
Tolerance:Inches:X.XXX±0.02
Millimeters:X.XX±0.5



MODEL NUMBER	Output Rated Voltage	Constant Current Region	Ripple & Noise (V p-p max.) Note 1	Output Rated Current	No Load Output Voltage (max.)	Output Rated Power	%EFF. (typ.)
LDP25S240-C110BR	24 V	9-24 V	0.24 V	1100 mA	29 V	26.40 W	86%
LDP25S240-C110B	24 V	16-24 V	2.0 V				88%
LDP25S240-C105BR	24 V	9-24 V	0.24 V	1050 mA	29 V	25.20 W	85%
LDP25S240-C105B	24 V	16-24 V	2.0 V				87%
LDP25S240-C070BR	24 V	9-24 V	0.24 V	700 mA	29 V	16.80 W	84%
LDP25S240-C070B	24 V	16-24 V	2.0 V				86%
LDP25S360-C070BR	36 V	9-36 V	0.36 V	700 mA	43 V	25.20 W	86%
LDP25S360-C070B	36 V	24-36 V	2.7 V				88%
LDP25S480-C053BR	48 V	9-48 V	0.48 V	530 mA	56 V	25.44 W	86%
LDP25S480-C053B	48 V	32-48 V	4.8 V				88%
LDP25S480-C035BR	48 V	9-48 V	0.48 V	350 mA	56 V	16.80 W	84%
LDP25S480-C035B	48 V	32-48 V	4.8 V				86%

Note: Ripple and Noise are measured at 20MHz bandwidth with a 0.1µF ceramic capacitor and 10µF aluminum capacitor.

Derating Curve



Specifications

All specifications are typical values tested at the condition of nominal line, full load, and 25°C unless otherwise indicated

INPUT SPECIFICATIONS

AC Input Voltage	90–305Vac
Frequency	47 to 63Hz
Power Factor	PF ≥ 0.9 @ 115Vac/230Vac, 75%–100%Load PF ≥ 0.9 @ 277Vac, 100% Load
Inrush Current	<5A After 100µs @240Vac, 25°C TA Cold Start
Leakage Current	0.5mA max.
Standby power	< 0.5W @D+, D- off (OV, shorted)
No load Power Consumption	< 0.5W
Input Current (Full Load)	0.3A/0.14A typ @115Vac/230Vac.

GENERAL SPECIFICATIONS

Efficiency	See Table
Temperature	±0.05%/°C (0–50°C)
Isolation voltage, Input to output	3.75KVac
Isolation resistance, Input to output	10 ⁸ Ω min.
Operating Ambient Temperature	-40°C–70°C (see Derating Curve)
Cooling	natural convection
Storage Temperature	-40–85°C
Operating Humidity	20%–95%RH non-condensing.
Operating Altitude	Sea Level to 3000m
MTBF, MIL-HDBK-217F (25°C Ta)	200K hrs.
Dimensions	5.511 x 1.181 x 0.787 inches (140.00 x 30.00 x 20.00mm)
Weight	100g

OUTPUT SPECIFICATIONS

Maximum Output Voltage	See Table
Constant Current Accuracy (note1)	±5%max.
Current Line Regulation (note 2)	±5%max.
Current Load Regulation (note 3)	±5%max.
Start Up Time	0.5 second max.
Over Voltage Protection	TVS Clamp
Short Circuit Protection	Hiccup Mode, Auto Recovery

NOTE

1. Current accuracy is set at nominal input voltage and full load.
2. Line regulation is measured from High Line to Low Line with full load.
3. Load regulation is measured minimum to maximum of the constant current region.
4. Nominal Input Voltage at 230Vac.
5. The input/output wires accessibility shall be evaluated during final system assembly.

SAFETY AND EMISSIONS

Safety	UL8750, IEC61347-1 IEC61347-2-13
EMI	FCC part 18/EN55015 Class B
EMS	EN61547, EN61000-4-2,3,4,5,6,8,11 EN61000-3-2 Harmonic Class C, EN61000-3-3

LDP40 SERIES

40 WATT, SINGLE OUTPUT

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Features

- ◆ Universal AC input range 90–305Vac
- ◆ Constant Current Design
- ◆ Active PFC > 0.9
- ◆ Low inrush current < 5A
- ◆ No load power consumption < 0.5W
- ◆ Low profile with 25.2mm height and narrow 40mm width
- ◆ Low frequency flicker design
- ◆ Continuous short circuit protection
- ◆ Over temperature protection
- ◆ Fully isolated plastic case
- ◆ Dimming function:
DALI / PWM / 1–10VDC / Potentiometer

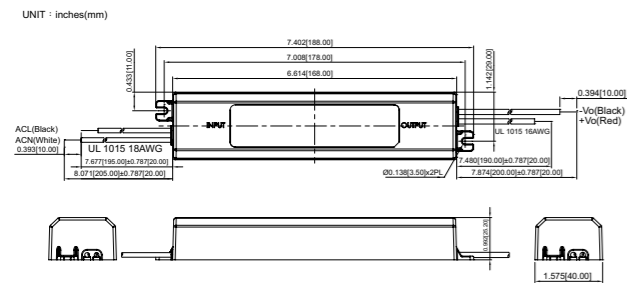


* Please see Page 26 for more detailed descriptions

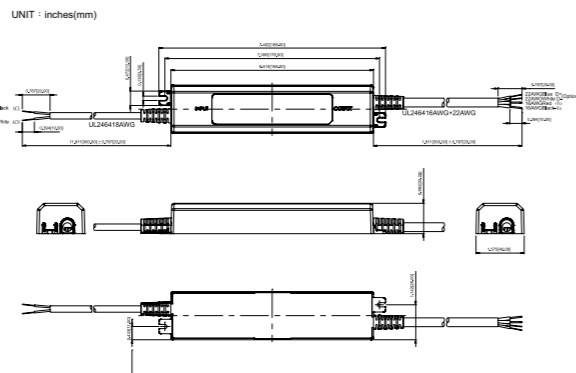
Mechanical Dimensions

All Dimensions in Inches (mm)
Tolerance Inches: X.XXX±0.02
Millimeters: X.XX±0.5

Standard Cable for LDP40Sxxx-CxxxBx



Standard Cable for LDP40Sxxx-DxxxBR, LDP40Sxxx-PxxxBR, LDP40Axxx-xxxxBR

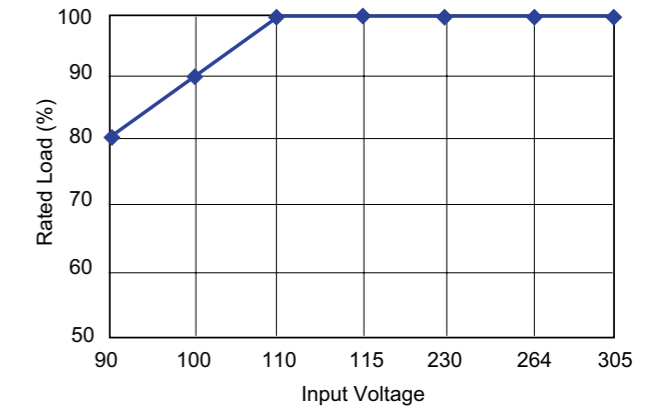
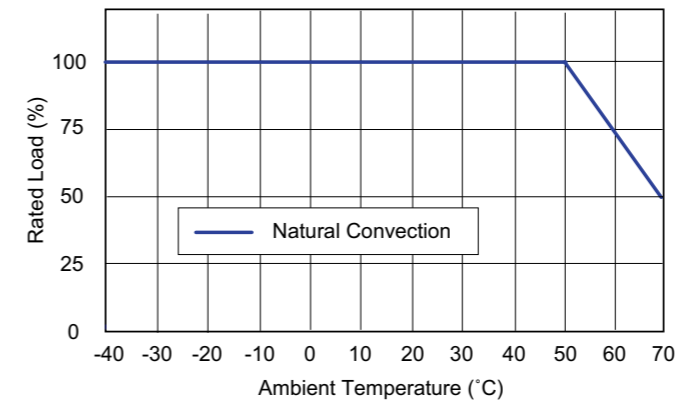


COLOR	WIRE CONNECTION		
	NO DIMMING	PWM DIMMING	DALI DIMMING
BLUE	(N.A.)	D+	DA
WHITE	(N.A.)	D-	DA
RED	+VO	+VO	+VO
BLACK	-VO	-VO	-VO

MODEL NUMBER	Output Rated Voltage	Constant Current Region	Ripple & Noise (V p-p max.) Note 1	Output Rated Current	No Load Output Voltage (max.)	Output Rated Power	%EFF. (typ.)
LDP40S240-C170BR	24 V	9-24 VDC	0.24 V	1700 mA	29 VDC	40.80 W	86%
LDP40S240-C170B	24 V	16-24 VDC	2.0 V				89%
LDP40S240-C140BR	24 V	9-24 VDC	0.24 V	1400 mA	29 VDC	33.60 W	85%
LDP40S240-C140B	24 V	16-24 VDC	2.0 V				88%
LDP40S360-C111BR	36 V	9-36 VDC	0.36 V	1110 mA	43 VDC	40.00 W	86%
LDP40S360-C111B	36 V	24-36 VDC	2.7 V				89%
LDP40S360-C105BR	36 V	9-36 VDC	0.36 V	1050 mA	43 VDC	37.80 W	85%
LDP40S360-C105B	36 V	24-36 VDC	2.7 V				88%
LDP40S480-C084BR	48 V	9-48 VDC	0.48 V	840 mA	56 VDC	40.32 W	88%
LDP40S480-C084B	48 V	32-48 VDC	4.8 V				90%
LDP40S480-C070BR	48 V	9-48 VDC	0.48 V	700 mA	56 VDC	33.60 W	86%
LDP40S480-C070B	48 V	32-48 VDC	4.8 V				88%

Note: Ripple and Noise are measured at 20MHz bandwidth with a 0.1µF ceramic capacitor and 10µF aluminum capacitor.

Derating Curve



Specifications

All specifications are typical values tested at the condition of nominal line, full load, and 25°C unless otherwise indicated

INPUT SPECIFICATIONS

AC Input Voltage	90–305Vac
Frequency	50/60Hz
Power Factor	PF ≥ 0.9 @ 115Vac/230Vac, 75%–100%Load
Inrush Current	< 5A After 100µs @240Vac, Cold Start @25°C
Leakage Current	0.75mA max
Standby Power	< 0.5W @ DALI off, D+, D- off (0V, shorted)
No Load Power Consumption	< 0.5W (No Dimming)
Input Current (Full Load) @ 115Vac/230Vac.	0.45A/0.22A typ

OUTPUT SPECIFICATIONS

Maximum Output Voltage	See Table
Constant Current Accuracy (note 1)	±5%max.
Current Line Regulation (note 2)	±5%max.
Current Load Regulation (note 3)	±5%max.
Start Up Time	0.5 second max.
Over Voltage Protection	TVS Clamp
Short Circuit Protection	Hiccup Mode, Auto Recovery
Over Temperature Protection	105°C typ.

SAFETY AND EMISSIONS

Safety	UL8750, IEC61347-1, IEC61347-2-13
EMI	FCC part 15/EN55015 Class B
EMS	EN61547, EN61000-4-2,3,4,5, 6,8,11, EN61000-3-2 Harmonic Class C, EN61000-3-3

GENERAL SPECIFICATIONS

Efficiency	See Table
Temperature Coefficient	±0.05%/°C (0–50°C)
Isolation Voltage, Input to Output	3.75KVac
Isolation Resistance, Input to Output	10 ⁸ Ω min.
Operating Ambient Temperature	-40–70°C (see Derating Curve)
Cooling	natural convection
Storage Temperature	-40–85°C
Operating Humidity	20%–95%RH non-condensing.
Operating Altitude	Sea Level to 3000m
MTBF, MIL-HDBK-217F(25°C Ta)	200K hrs.
Dimensions	6.61 4 x 1.575 x 0.992 inches (168.00 x 40.00 x 25.20 mm)
Weight	350g

NOTE

1. Current accuracy is set at nominal input voltage and full load.
2. Line regulation is measured from High Line to Low Line with full load.
3. Load regulation is measured minimum to maximum of the constant current region.
4. Nominal Input Voltage at 230Vac.
5. The input/output wires accessibility shall be evaluated during final system assembly.

LDP60 SERIES

60 WATT, SINGLE / DUAL OUTPUTS

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Features

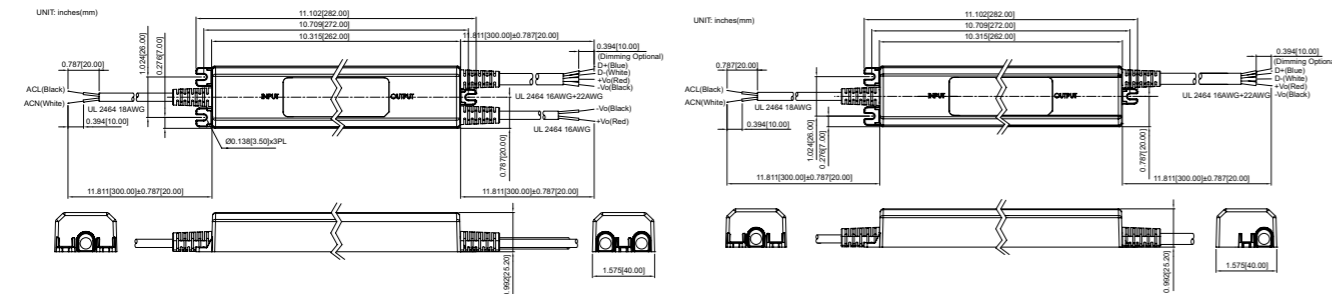
- ◆ Universal AC input range 90-305Vac
- ◆ Constant Current Design
- ◆ Active PFC > 0.9
- ◆ Low inrush current < 5A
- ◆ No load power consumption < 0.5W
- ◆ Low profile with 25.2mm height and narrow 40mm width
- ◆ Low frequency flicker design
- ◆ Continuous short circuit protection
- ◆ Over temperature protection
- ◆ IP 67 Rated
- ◆ Fully isolated plastic case
- ◆ Dimming function: DALI / PWM / 1-10VDC / Potentiometer



* Please see page 26 for ordering information

Mechanical Dimensions

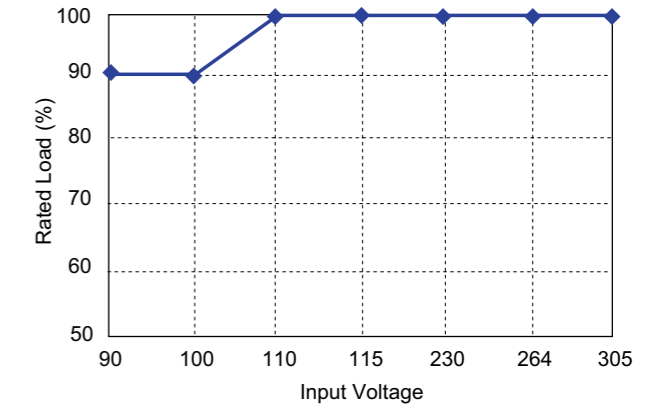
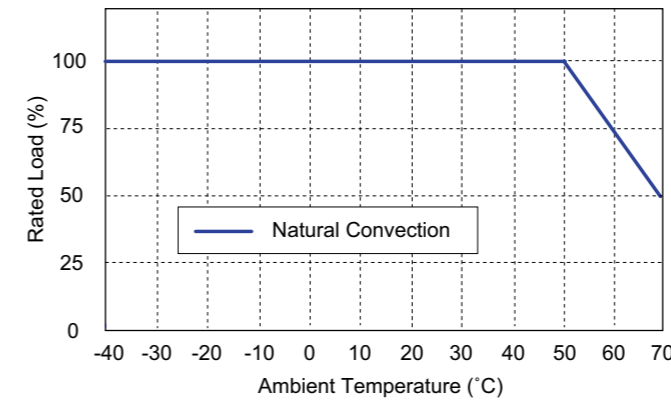
All Dimensions are in inches(mm)
Tolerance:Inches:X.XXX±0.02
Millimeters:X.XX±0.5



MODEL NUMBER	Output Rated Voltage	Constant Current Region	Ripple & Noise (V p-p max.) Note 1	Output Rated Current	No Load Output Voltage (max.)	Output Rated Power	%EFF. (typ.)
LDP60A240-C250BR	24 V	9-24 VDC	0.24 V	2500 mA	29 VDC	60.0 W	85%
LDP60A240-C250B	24 V	16-24 VDC	2.2 V				88%
LDP60A240-C210BR	24 V	9-24 VDC	0.24 V	2100 mA	29 VDC	50.4 W	84%
LDP60A240-C210B	24 V	16-24 VDC	2.2 V				87%
LDP60A240-C175BR	24 V	9-24 VDC	0.24 V	1750 mA	29 VDC	42.0 W	84%
LDP60A240-C175B	24 V	16-24 VDC	2.2 V				86%
LDP60A360-C166BR	36 V	9-36 VDC	0.36 V	1666 mA	43 VDC	60.0 W	85%
LDP60A360-C166B	36 V	24-36 VDC	2.7 V				89%
LDP60A360-C140BR	36 V	9-36 VDC	0.36 V	1400 mA	43 VDC	50.5 W	84%
LDP60A360-C140B	36 V	24-36 VDC	2.7 V				88%
LDP60A480-C125BR	48 V	9-48 VDC	0.48 V	1250 mA	56 VDC	60.0 W	86%
LDP60A480-C125B	48 V	32-48 VDC	4.8 V				90%
LDP60A480-C105BR	48 V	9-48 VDC	0.48 V	1050 mA	56 VDC	50.4 W	85%
LDP60A480-C105B	48 V	32-48 VDC	4.8 V				89%
LDP60B240-C125BR	24 V	9-24 VDC	0.24 V	V1 1250 mA V2 1250 mA	29 VDC 29 VDC	30.0 W 30.0 W	85%
LDP60B240-C105BR	24 V	9-24 VDC	0.24 V	V1 1050 mA V2 1050 mA	29 VDC 29 VDC	25.2 W 25.2 W	84%
LDP60B360-C083BR	36 V	9-36 VDC	0.36 V	V1 833 mA V2 833 mA	43 VDC 43 VDC	30 W 30 W	85%
LDP60B360-C070BR	36 V	9-36 VDC	0.36 V	V1 700 mA V2 700 mA	43 VDC 43 VDC	25.2 W 25.2 W	84%
LDP60B480-C062BR	48 V	9-48 VDC	0.48 V	V1 625 mA V2 625 mA	56 VDC 56 VDC	30 W 30 W	87%

Note : Ripple and Noise are measured at 20MHz bandwidth with a 0.1µF ceramic capacitor and 10µF aluminum capacitor.

Derating Curve



Specifications

All specifications are typical values tested at the condition of nominal line, full load, and 25°C unless otherwise indicated

INPUT SPECIFICATIONS

AC Input Voltage	90-305Vac
Frequency	50/60Hz
Power Factor	PF ≥ 0.9 @ 115Vac/230Vac, 75%-100%Load
Inrush Current	< 5A After 100µs @240Vac, Cold Start @25°C
Leakage Current	0.75mA max
Standby Power	< 0.5W @ DALI off, D+, D- off (0V, shorted)
No Load Power Consumption	< 0.5W (No Dimming)
Input Current (Full Load)	0.69A/0.32A typ @115Vac/230Vac

OUTPUT SPECIFICATIONS

Maximum Output Voltage	See Table.
Constant Current Accuracy (note 1)	±5%max.
Current Line Regulation (note 2)	±5%max.
Current Load Regulation (note 3)	±5%max.
Start Up Time	0.5 second max.
Over Voltage Protection	TVS Clamp.
Short Circuit Protection	Hiccup Mode, Auto Recovery
Over Temperature Protection	105°C typ.

SAFETY AND EMISSIONS

Safety	UL8750, IEC61347-1 IEC61347-2-13
EMI	FCC part 15/EN55015 Class B
EMS	EN61547,EN61000-4-2,3,4,5,6,8,11 EN61000-3-2 Harmonic Class C, EN61000-3-3

GENERAL SPECIFICATIONS

Efficiency	See Table.
Temperature Coefficient	±0.05%/°C (0-50°C).
Isolation Voltage, Input to Output	3.75KVac.
Isolation Resistance, Input to Output	10 ⁸ Ω min.
Operating Ambient Temperature	-40-70°C (see Derating Curve).
Cooling	natural convection.
Storage Temperature	-40-85°C.
Operating Humidity	20%-95%RH non-condensing.
Operating Altitude	Sea Level to 3000m
MTBF, MIL-HDBK-217F (25°C Ta)	200K Hrs.
Dimensions	10.315 x 1.575 x 0.992 inches 262.00 x 40.00 x 25.20 mm).
Weight	530g.

NOTE

1. Current accuracy is set at nominal input voltage and full load.
2. Line regulation is measured from High Line to Low Line with full load.
3. Load regulation is measured minimum to maximum of the constant. current region.
4. Nominal Input Voltage at 230Vac.
5. The input/output wires accessibility shall be evaluated during final system assembly.

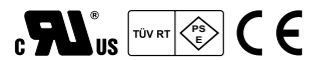
CLD50D SERIES

50 WATT, DUAL OUTPUTS

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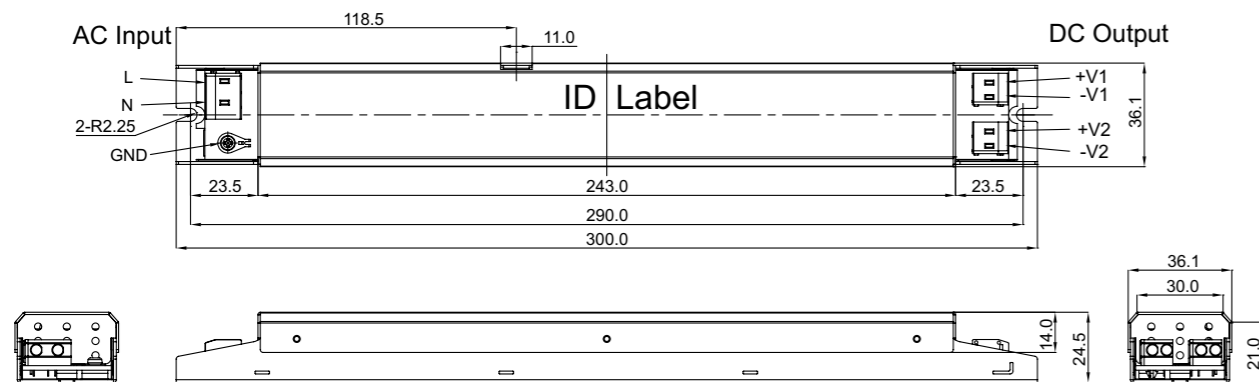
Features

- ◆ Universal AC Input Range 90-264Vac
- ◆ High Active PFC >0.9
- ◆ Low Inrush Current <5A
- ◆ Low Profile for Easy Installation
- ◆ Low Flicker for Lighting, with Low Ripple & Noise
- ◆ Output Constant Current Design
- ◆ Continuous Short Circuit Protection
- ◆ Suitable for LED Lighting and Moving Sign Applications
- ◆ Safety UL8750, PSE



Mechanical Dimensions

All Dimensions In mm
Tolerance Millimeters: x.x= ±0.5, x.xx= ±0.25

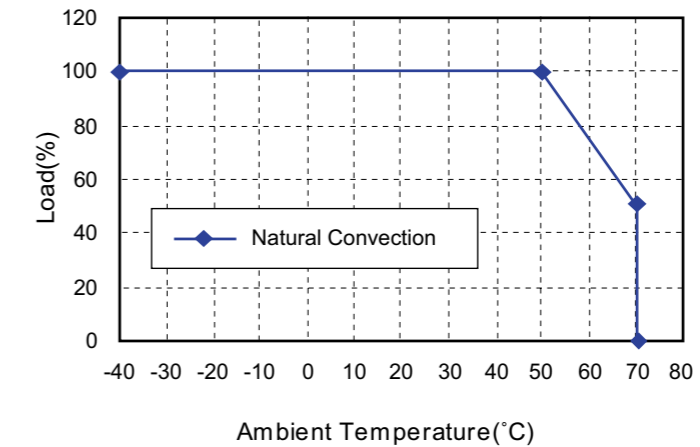


Input Connector: WAGO 235-502 2Pin or Equivalent
Output Connector: WAGO 235-402 2Pin or Equivalent

MODEL NUMBER	INPUT VOLTAGE RANGE	OUTPUT OPERATING VOLTAGE	OUTPUT RATED CURRENT	OUTPUT RATED POWER	OUTPUT VOLTAGE (Max.)	RIPPLE & NOISE (Max.) NOTE 2	%EFF. (Typ.) NOTE 3
CLD50D240-C100	90-264 VAC	V1	8-24 VDC	1000 mA	24 W	30 VDC	85%
		V2	8-24 VDC	1000 mA	24 W	30 VDC	300 mVpp
CLD50D420-C060	90-264 VAC	V1	18-42 VDC	600 mA	25.2 W	48 VDC	86%
		V2	18-42 VDC	600 mA	25.2 W	48 VDC	300 mVpp

Note:
1. Nominal Input Voltage: 100Vac, 230Vac
2. Ripple and Noise are measured at rated current, 100Vac, Vo=36Vdc(CLD50D420), 21V(CLD50D240) and 20MHz bandwidth with a 0.1µF ceramic capacitor.
3. Measured at rated current, 100Vac, Vo=36Vdc(CLD50D420), 21Vdc(CLD50D240)

Derating Curve



Specifications

All specifications are typical values tested at the condition of nominal line, full load, and 25°C unless otherwise indicated

INPUT SPECIFICATIONS

AC Input Voltage	90-264Vac
Frequency	50 to 60Hz
Power Factor	100Vac/220Vac PF ≥ 0.9 at 85%-100% Load
Inrush Current	230Vac Cold start 20A max. After 400µs < 5A
Leakage Current	3.5mA max.

OUTPUT SPECIFICATIONS

Maximum Output Voltage (note 1)	See Table.
Constant Current Accuracy	±5% max.
Current Line Regulation (note 2)	±5% max.
Current Load Regulation (note 3)	±5% max.
Over Voltage Protection	Voltage Clamp by TVS
Short Circuit Protection	Constant Current with Auto Recovery
Start Up Time	100Vac 1.6 second max.

SAFETY AND EMISSIONS

Safety	UL8750
EMI	EN55022/EN55015 Class B
EMS	EN61547, EN61000-4-2,3,4, 5,6,8,11
	EN61000-3-2 Harmonic Class C, EN61000-3-3
Dimensions	300 x 36.1 x 24.5 mm
Weight	230g
Case Material	Aluminum

GENERAL SPECIFICATIONS

Efficiency	See Table
Temperature Coefficient	±0.03%/°C (0-50°C)
Isolation Voltage Input to Output	3.75KVac
Input to Ground	1.5KVac
Isolation Resistance Input to Output	10 ⁸ Ω min.
Operating Ambient Temperature	-40-70°C
Cooling	Natural Convection
Storage Temperature	-40-85°C
Operating Humidity	10%-80%RH non-condensing
Operating Altitude	Sea Level to 3000m
Vibration	10-500Hz, 2G 60min./1cycle, period for 3hours, 3 axes
Shock	30g peak, half sine, 6 axes
MTBF, MIL-HDBK-217F (25°C)	200Khrs typ.

NOTE

1. Output voltage is measured at no load.
2. Current line regulation is measured from high line to low line.
3. Current load regulation is measured from high to low operating voltage.

LDM60S SERIES

60 WATT, SINGLE OUTPUT

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Features

- ◆ Universal Input 90–305Vac or 127–420Vdc
- ◆ High Efficiency up to 90%
- ◆ EN55015, EN61000-3-2 Class C
- ◆ EN61347-1, EN61347-2-13
- ◆ Safety UL8750, UL1310 Class 2
- ◆ Active PFC Function
- ◆ IP67 Design (note 7)
- ◆ Max. Output power 60W
- ◆ Dimming function: 1–10Vdc and Resistance or DALI (Optional)
- ◆ Protections: Short Circuit, Over Current Over Voltage and Over Temperature
- ◆ Constant Voltage and Constant Current
- ◆ No Load Power Consumption < 0.5W (note 10)

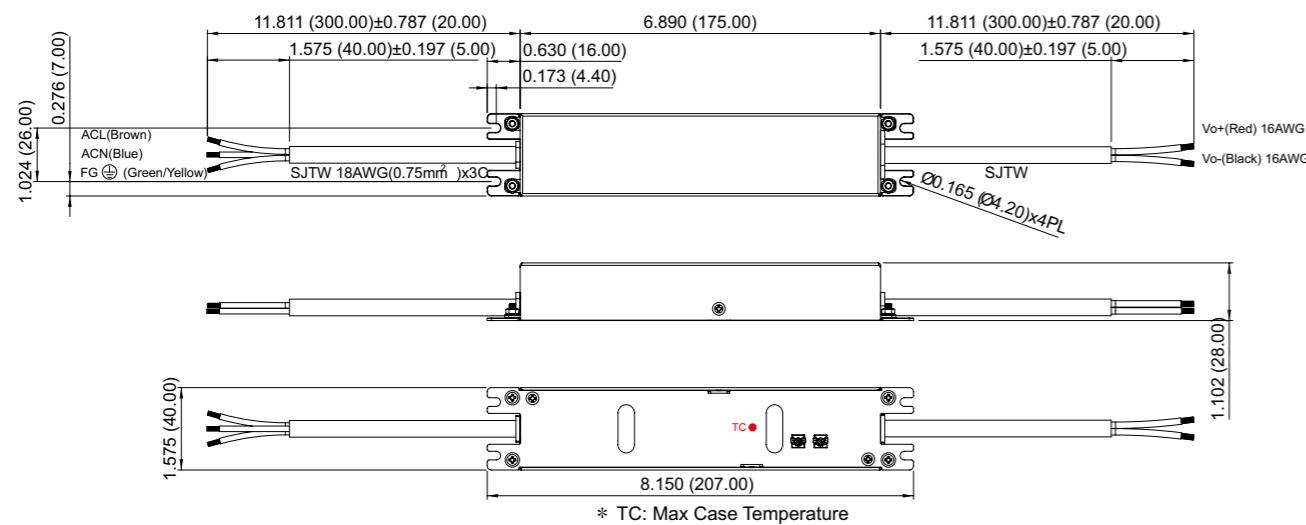


IP67 **Class 2**

* Please see page 27 for ordering information

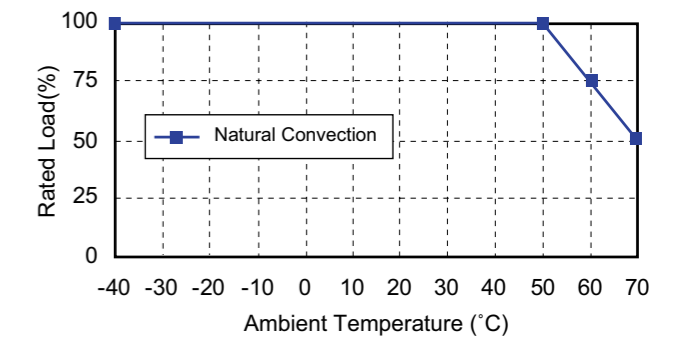
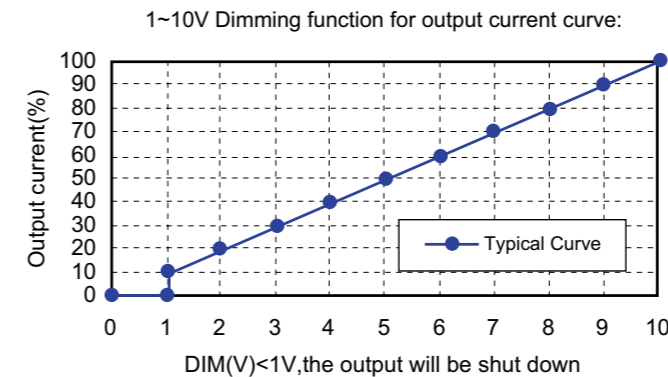
Mechanical Dimensions

All Dimensions in Inches (mm)
 Tolerance Inches: x.xxx±0.02
 Millimeters: x.xx±0.5



Model Number	Output Voltage	Output Current Note.6	Ripple (mV p-p) Note.1	Voltage Accuracy Note.2	Line Regulation Note.3	Load Regulation Note.4	Constant Current Region	Current Adj. Rang (Optional) Note.5	Voltage Adj. Rang (Optional) Note.5	%EFF. (Typ.) Note.8
LDM60S120	12 V	5.00 A	120 mV	±1%	±1%	±2%	6.5 V–12 V	3 A–5 A	10.8 V–13.2 V	87%
LDM60S240	24 V	2.50 A	120 mV	±1%	±1%	±2%	13 V–24 V	1.5 A–2.5 A	21.6 V–26.4 V	88%
LDM60S360	36 V	1.67 A	120 mV	±1%	±1%	±2%	19 V–36 V	1.0 A–1.67 A	32.4 V–39.6 V	89%
LDM60S480	48 V	1.25 A	120 mV	±1%	±1%	±2%	26 V–48 V	0.75 A–1.25 A	43.2 V–52.8 V	90%

Derating Curve



Specifications

All specifications are typical values tested at the condition of nominal line, 75% load, and 25°C unless otherwise indicated

INPUT SPECIFICATIONS

Voltage	90–305Vac or 127–420Vdc
Frequency	47 to 63Hz
Inrush Current	60A max. @240Vac, Cold Start @25°C CISPR/FCC Class B
Conducted EMI	PF> = 0.9
Power Factor	0.75mA max. @ 277Vac
Leakage Current	0.6A typ. @110Vac, Pout=59W
Input Current	0.31A typ. @230Vac, Pout=59W

SAFETY AND EMC

Emission and Immunity	EN55015, CISPR22 EN61547, EN61000-3-2, EN61000-3-3
Isolation Voltage	I/P-O/P 3750VAC
Surge	4KV
Safety	UL8750, UL1310 Class 2 EN61347-1, EN61347-2-13
Harmonic Current	EN61000-3-2 Class C (>60% load)
Isolation Resistance	100MΩ min.

OUTPUT SPECIFICATIONS

Holdup Time	16ms typ. @115Vac
Short Circuit Protection	Hiccup Mode (Auto Recover)
Temperature Coefficient	±0.05% /°C
Over Voltage Protection	TVS Component to Clamp
Over Current Limit	constant current mode (note 9)
Over Temperature Protection	110°C typ.
Altitude	2000 m
Startup Time	0.5s max. (note 11)
Rise Time	50ms typ.
MTBF...MIL-HDBK-217F, GB, at 25°C/115VAC	150KHrs typ.
Life time	50000 Hours. min. @ full load, 25°C.
Vibration	15–2000Hz 4G period for 60min, each along X Y Z axes

GENERAL SPECIFICATIONS

Operating Temperature	-40–70°C (see Derating Curve)
Storage Temperature	-40–85°C
Cooling	Natural Convection

NOTE

1. Measured from high line to low line.
2. Add a 0.1μF ceramic capacitor and a 10μF E.L. capacitor to output for Ripple, Noise measuring @20MHz BW and 95% rated current.
3. Voltage accuracy is set of 90% rated current.
4. Line regulation is measured from High Line to Low Line with 90% Rated current.
5. Load regulation is measured from 90% to 10% Rated current.
6. Can be adjusted by internal potentiometer.
7. Output Constant Current Accuracy ±5%.
8. IP67 for model: LDM60SXXX-01, LDM60SXXX-03, LDM60SXXX-04
9. IP65 for model: LDM60SXXX-02, LDM60SXXX-03A, LDM60SXXX-04A
10. Efficiency is measured 95% rated power at Vin=230VAC.
11. Less than 50% (Typ.) of the rated output voltage will enter hiccup mode.
12. No load power consumption< 0.5W for LDM60SXXX-01, 02
13. No load power consumption< 1.5W for LDM60SXXX-03, -03A, -04, -04A
14. Stand by power consumption< 0.5W for LDM60SXXX-03, -03A, -04, -04A
15. Start-up time interval must be greater than 3 seconds.

MECHANICAL CHARACTERISTICS

Dimensions	1.5748 x 8.149 x 1.1023 inches (40 x 207 x 28 mm)
Weight	454g typ.

LDM100S SERIES

100 WATT, SINGLE OUTPUT

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Features

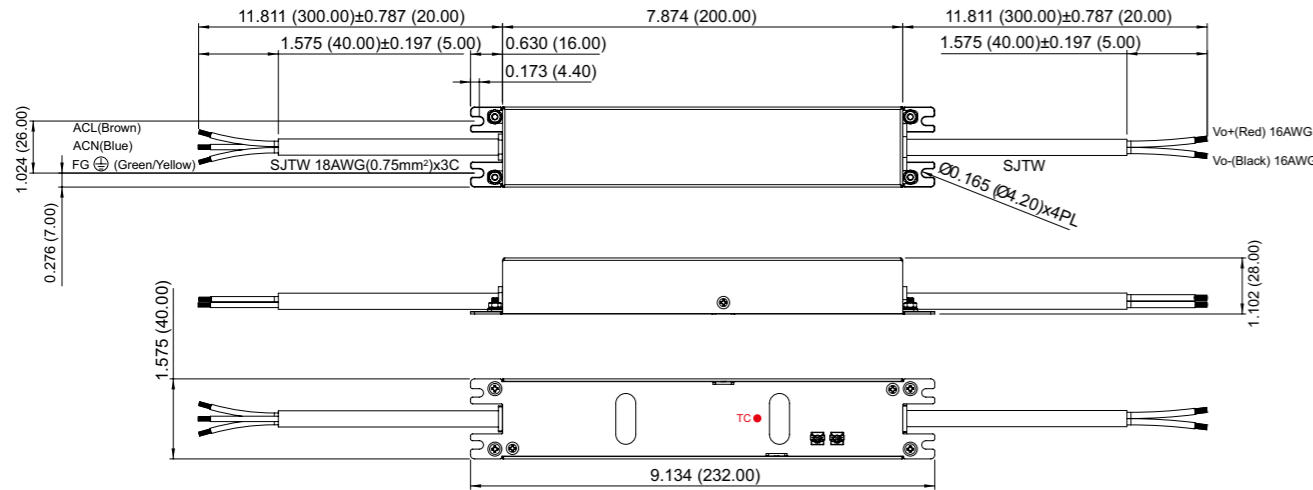
- ◆ Universal Input 90-305Vac or 127-420Vdc
- ◆ High Efficiency up to 90%
- ◆ EN55015, EN61000-3-2 Class C
- ◆ EN61347-1, EN61347-2-13
- ◆ Safety UL8750
- ◆ Active PFC Function
- ◆ IP67 Design (note 7)
- ◆ Max. Output power 100W
- ◆ Dimming function: 1-10Vdc, and Resistance or DALI (Optional)
- ◆ Protections: Short circuit, Over Current, Over Voltage and Over Temperature
- ◆ Constant Voltage and Constant Current
- ◆ No Load Power Consumption < 0.5W (note 10)



* Please see page 27 for ordering information

Mechanical Dimensions

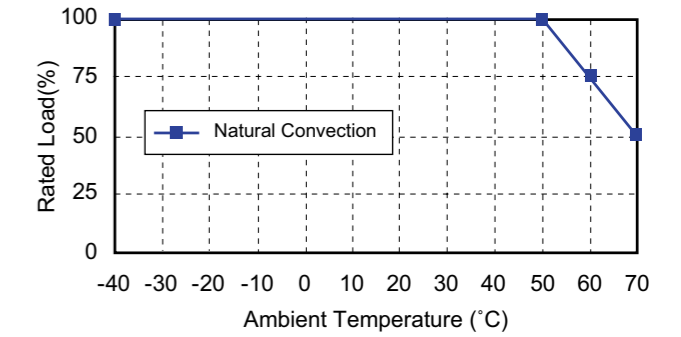
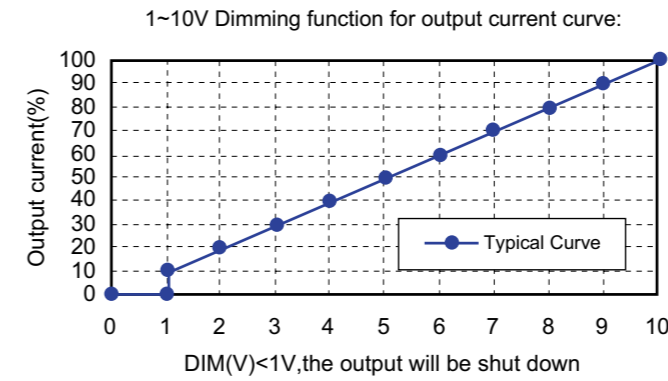
All Dimensions in Inches (mm)
Tolerance Inches: x.xxx±0.02
Millimeters: x.xx±0.5



* TC: Max Case Temperature

Model Number	Output Voltage	Output Current Note.6	Ripple (mV p-p) Note.1	Voltage Accuracy Note.2	Line Regulation Note.3	Load Regulation Note.4	Constant Current Region	Current Adj. Rang (Optional) Note.5	Voltage Adj. Rang (Optional) Note.5	%EFF. (Typ.) Note.8
LDM100S120	12V	8.34 A	120 mV	±1%	±1%	±2%	6.5 V-12 V	5.3 A-8.34 A	10.8 V-13.2 V	88%
LDM100S240	24V	4.17 A	120 mV	±1%	±1%	±2%	13 V-24 V	2.6 A-4.17 A	21.6 V-26.4 V	89%
LDM100S360	36V	2.78 A	120 mV	±1%	±1%	±2%	19 V-36 V	1.74 A-2.78 A	32.4 V-39.6 V	90%
LDM100S480	48V	2.08 A	120 mV	±1%	±1%	±2%	26 V-48 V	1.3 A-2.08 A	43.2 V-52.8 V	90%

Derating Curve



Specifications

All specifications are typical values tested at the condition of nominal line, 75% load, and 25°C unless otherwise indicated

INPUT SPECIFICATIONS

Voltage	90-305Vac or 127-420Vdc
Frequency	47 to 63Hz
Inrush Current	75A max. @240Vac, Cold Start @25°C
Conducted EMI	CISPR/FCC Class B
Power Factor	PF>= 0.9
Leakage Current	0.75mA max. @ 277Vac
Input Current	1.1A typ. @110Vac, Pout=99W 0.55A typ. @230Vac, Pout=99W

SAFETY AND EMC

Emission and Imunity	EN55015, CISPR22
Isolation Voltage	EN61547, EN61000-3-2, EN61000-3-3
Surge	I/P-O/P 3750VAC
Safety	4KV
Harmonic Current	UL8750, EN61347-1, EN61347-2-13
Isolation Resistance	EN61000-3-2 Class C (>60% load) 100MΩ min

OUTPUT SPECIFICATIONS

Holdup Time	16ms typ. @115Vac
Short Circuit Protection	Hiccup Mode (Auto Recover)
Temperature Coefficient	±0.05% /°C
Over Voltage Protection	TVS Component to Clamp
Over Current Limit	constant current mode (note 9)
Over Temperature Protection	110°C typ
Altitude	2000 m
Startup Time	0.5s max. (note 11)
Rise Time	50ms typ.
MTBF..... MIL-HDBK-217F, GB, at 25°C /115VAC	160KHrs typ.
Life Time	40000 Hours min, @ full load, 25°C
Vibration	15-2000Hz 4G period for 60min, each along X Y Z axes

MECHANICAL CHARACTERISTICS

Dimensions	1.5748 x 9.1338 x 1.1023 inches (40 x 232 x 28 mm)
Weight	504g typ.

NOTE

1. Add a 0.1μF ceramic capacitor and a 10μF E.L. capacitor to output for Ripple, Noise measuring @20MHz BW and 95% rated current.
2. Voltage accuracy is set of 90% rated current.
3. Line regulation is measured from High Line to Low Line with 90% Rated current.
4. Load regulation is measured from 90% to 10% Rated current.
5. Can be adjusted by internal potentiometer.
6. Output Constant Current Accuracy ±5%
7. IP67 for model: LDM100SXXX-01, LDM100SXXX-03, LDM100SXXX-04
IP65 for model: LDM100SXXX-02, LDM100SXXX-03A, LDM100SXXX-04A
8. Efficiency is measured 95% rated power at Vin=230VAC.
9. Less than 50% (Typ.) of the rated output voltage will enter hiccup mode.
10. No load power consumption<0.5W for LDM100SXXX-01,02
No load power consumption<1.5W for LDM100SXXX-03,03A,04,04A
Stand by power consumption<0.5W for LDM100SXXX-03,03A,04,04A
11. Start-up time interval must be greater than 3 seconds.

GENERAL SPECIFICATIONS

Operating Temperature	-40-70°C (see Derating Curve)
Storage Temperature	-40-85°C
Cooling	Natural Convection

LDA 100S SERIES

100 WATT, HIGH OUTPUT VOLTAGE 142 – 214 VDC

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Features

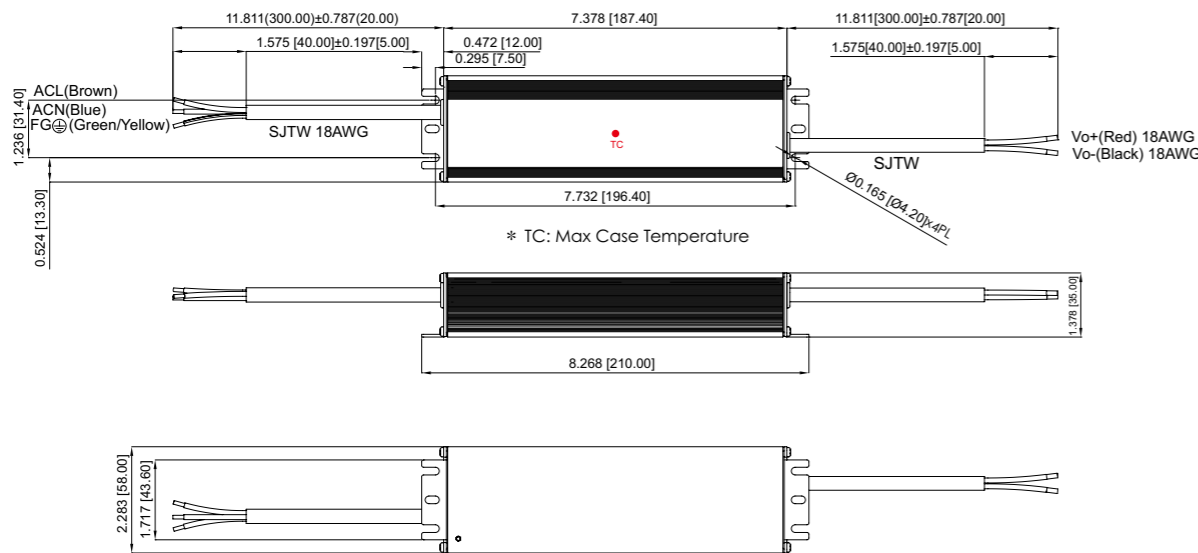
- ◆ Universal Input Range 90-305Vac
- ◆ Built-in active PFC function
- ◆ High efficiency up to 92%
- ◆ 4KV surge protection
- ◆ UL8750, EN61347, EN62384 approved
- ◆ Harmonic meet EN61000-3-2 Class C
- ◆ Short Circuit, Over Voltage, Over temperature Protection
- ◆ IP67 design
- ◆ Suitable for LED Street Lighting applications
- ◆ Dimming Function (Optional) : 1–10Vdc and Resistance or DALI and Touch-dim
- ◆ No Load Power Consumption < 0.5W (Note 8)



* Please see page 27 for ordering information

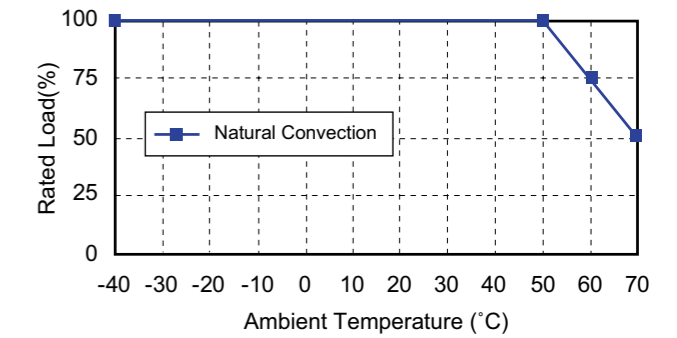
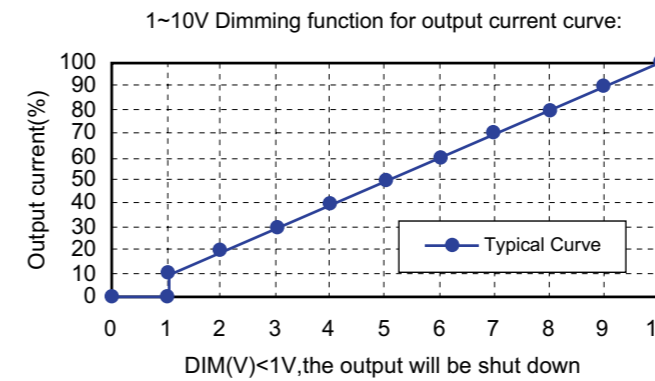
Mechanical Dimensions

All Dimensions in Inches (mm)
Tolerance Inches:x.xxx±0.02
Millimeters:x.xx±0.5



Model Number	Output Voltage (No Load)	Output Current Note.7	Ripple & Noise Note.1	Voltage Accuracy Note.2	Line Regulation Note.3	Load Regulation Note.4	Constant Current Region	Efficiency (Typical.) Note.5
LDA100S142	142 V	0.70 A	0.5%	±1%	±1%	±2%	71–138 V	92%
LDA100S214	214 V	0.5 A	0.5%	±1%	±1%	±2%	107–210 V	92%
LDA100S214A	214 V	0.35 A	0.5%	±1%	±1%	±2%	107–210 V	90%

Derating Curve



Specifications

All specifications are typical values tested at the condition of nominal line, 75% load, and 25°C unless otherwise indicated

INPUT SPECIFICATIONS

Voltage	90–305Vac
Frequency	47–63Hz
Inrush Current	Cold start @25°C 100A max. @240Vac
Leakage Current	0.75mA max.
Power Factor	PF> 0.98/115Vac, PF> 0.93/230Vac @ full load
Input Current	1.2A typ. @115Vac / 0.55A typ. @230Vac / 0.5A typ. @277vac

OUTPUT SPECIFICATIONS

Holdup Time	12ms typ. @115Vac
Short Circuit Protection	Auto Recovery
Over Voltage Protection	Recycle AC input to restart
Over Current Limit	Constant Current mode (note 6)
Over Temperature Protection	Yes
Startup time	0.5s max. (note 9)
Temperature Coefficient	±0.05%/°C

SAFETY AND EMC

Emission and Immunity	EN61547, EN55015, CISPR22 Class B EN61000-3-2, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11 EN61000-3-2 Class C (>50% load)
Harmonic Current	EN61000-3-2 Class C (>50% load)
Surge	4KV
Safety	UL8750, EN61347-1, EN61347-2-13, EN62384.

GENERAL SPECIFICATIONS

Isolation Voltage	Input to output = 3750VAC
Isolation Resistance	100MΩ min.
Operating Temperature	-40–70°C (see Drating Curve)
Storage Temperature	-40–85°C
Humidity	20–95% RH non condensing
Cooling	Natural Convection
Switching Frequency	65kHz typ.
MTBF	T.B.D
Vibration	15–2000Hz 4G period for 60min, each along X Y Z axes
Altitude	2000m
Dimensions	210 x 58 x 35 mm (8.268 x 2.283 x 1.378 inches)
Weight	750g Typical

NOTE

1. Add a 0.1μF ceramic capacitor and a 10μF E.L. Capacitor to output for Ripple & Noise measuring @20MHz BW with 95% Rated current.
2. Voltage accuracy is set of 90% rated current.
3. Line regulation is measured from high line to low Line with 90% Rated current.
4. Load regulation is measured from 90% to 10% Rated current.
5. Efficiency is measured 95% rated power at Vin=230VAC.
6. Less than 50% (Typ.) of the rated output voltage will enter hiccup mode.
7. Output Constant Current Accuracy ±5%.
8. No load power consumption< 0.5W for LDA100SXXX-01.
No load power consumption< 1.5W for LDA100SXXX-03, 04.
Stand by power consumption< 0.5W for LDA100SXXX-03, 04.
9. Start-up time interval must be greater than 3 seconds.
10. LDA100SXXX-03 safety UL approved only.

PMC05S180

3.6 WATT DALI POWER SUPPLY

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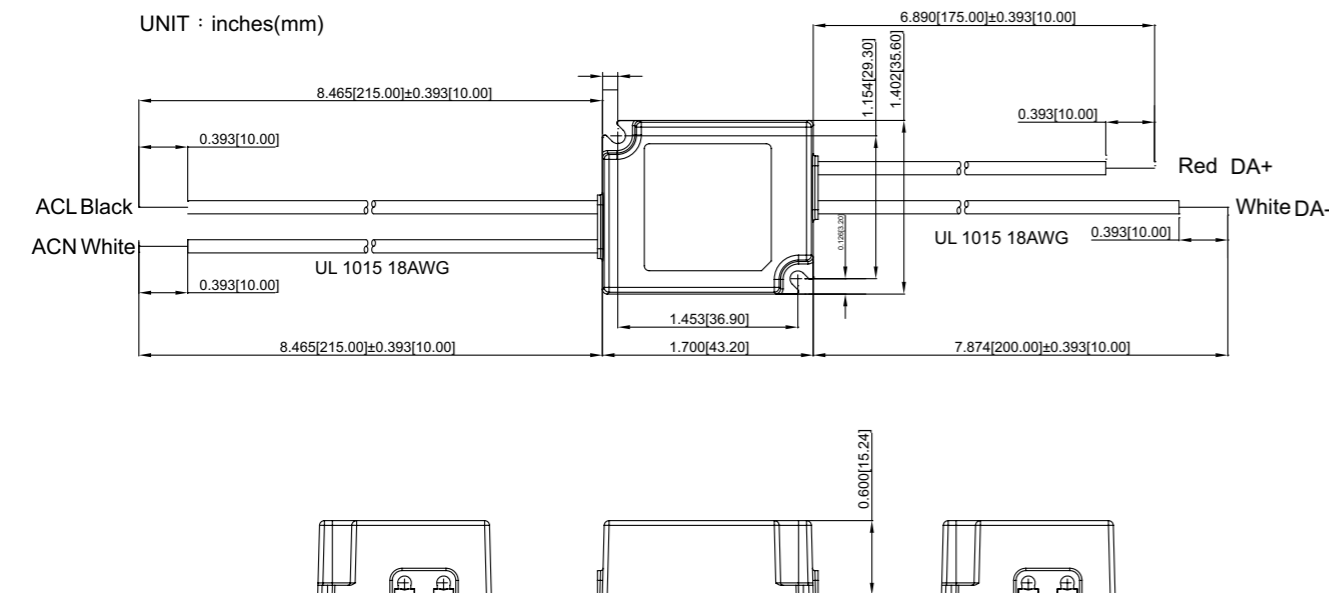
Features

- ◆ Universal AC Input Range 100–277Vac
- ◆ Output Constant Current Design
- ◆ Continuous Short Circuit Protection
- ◆ EMC meet EN55022/EN55015 Class B
- ◆ Power Supply for DALI Systems (DALI Protocol) for Remote Mounting



Mechanical Dimensions

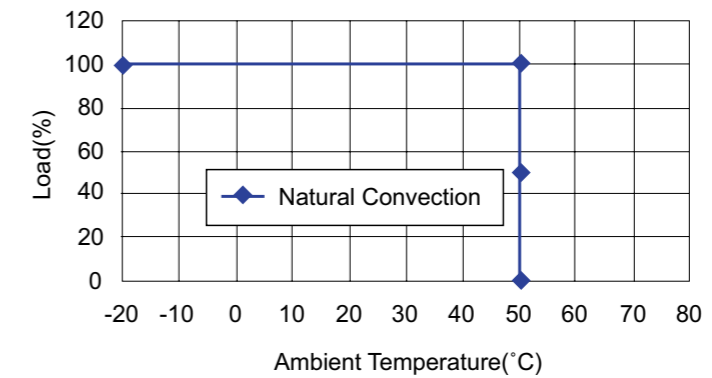
All Dimensions are in inches(mm)
Tolerance:Inches:X.XXX±0.02
Millimeters:X.XX±0.5



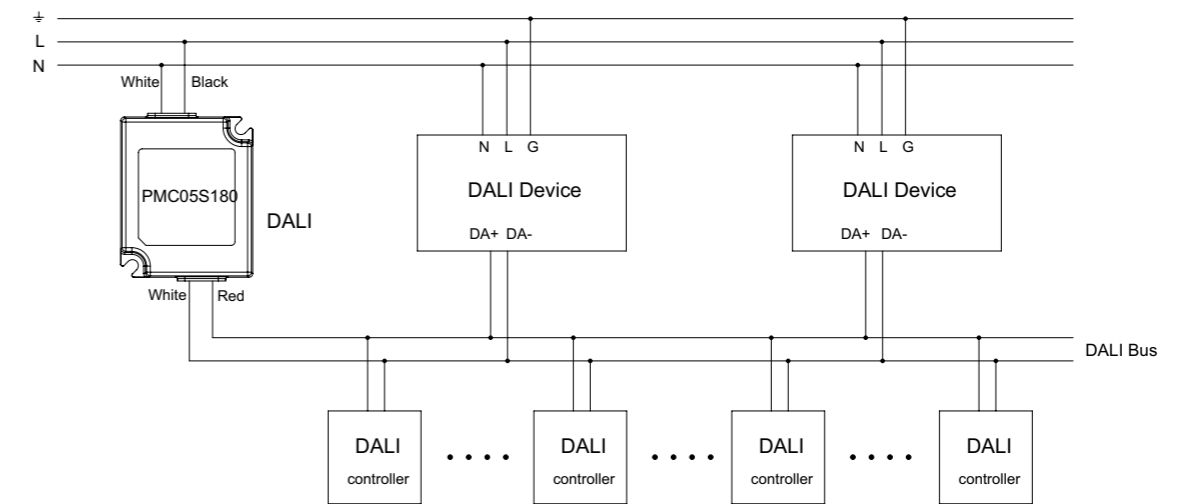
MODEL NUMBER	Input Voltage Range	Output Operating Voltage	Output Rated Current	Output Rated Power	Output Voltage Maximum	Ripple and Noise (max.) Note 2
PMC05S180	100-277 VAC	9.5–18 V	200 mA	3.6 W	22 V	1% Vo

Note:
1. Nominal Input Voltage: 115Vac, 230Vac.
2. Ripple and Noise are measured at rated current, 115Vac/ 230Vac, Vo=18Vdc and 20MHz bandwidth with a 0.1µF ceramic capacitor.
3. Measured at rated current, 115Vac/ 230Vac, Vo=18Vdc.

Derating Curve



Installation Drawing



Specifications

All specifications are typical values tested at the condition of nominal line, full load, and 25°C unless otherwise indicated

INPUT SPECIFICATIONS

AC Input Voltage	90–305Vac
Frequency	50 to 60Hz
Leakage Current	0.75mA max

OUTPUT SPECIFICATIONS

Output Voltage Accuracy at No Load	22V max.
Output Voltage Accuracy at full Load (note 1)	16V±10%.
Constant Current Accuracy	220mA±20mA
Current Line Regulation (note 2)	±5% max.
Over Voltage Protection	Voltage Clamp by TVS
Short Circuit Protection	Constant Current with Auto Recovery
Start Up Time	2.0 second max.

GENERAL SPECIFICATIONS

Isolation Voltage, Input to Output	3.75KVac
Isolation Resistance, Input to Output	10 ⁸ Ω min.
Operating Ambient Temperature	-20–50°C
Cooling	Natural Convection
Storage Temperature	-40–85°C
Operating Humidity	10%–80%RH non-condensing.
Operating Altitude	3000m
Vibration	0–500Hz, 2G 60min./1cycle, period for 3hours, 3 axes
Shock	30g peak, half sine, 6 axes

SAFETY AND EMISSIONS

EMI	EN55022/EN55015 Class B
EMS	EN61000-3-2 Harmonic Class A, EN61000-3-3
Dimensions	43.20 x 35.60 x 15.24 mm
Weight	30g
Case Material	Plastic

NOTE

1. Output voltage is measured at full load @25°C. (C.R mode 80Ω).
2. Current Line regulation is measured from High Line to Low Line at full load.

DLD SERIES

50.4 WATT BUCK LED DRIVER

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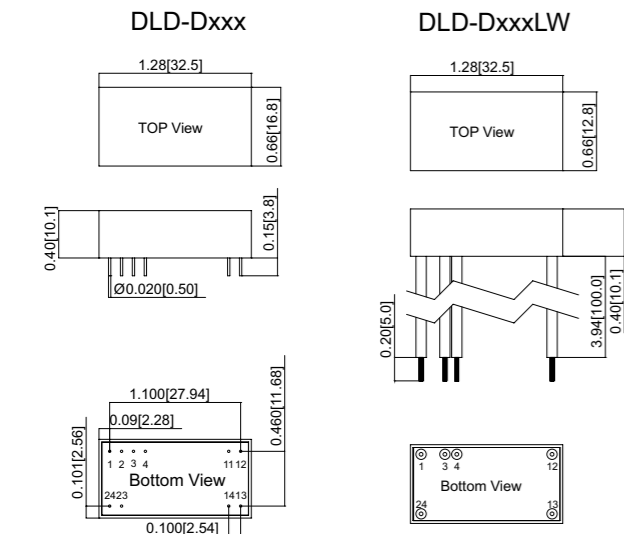
Features

- ◆ LED Driver Current up to 1400mA
- ◆ Constant Current Output
- ◆ Digital PWM Dimming
- ◆ Analog Dimming Control
- ◆ High Efficiency up to 96%
- ◆ Continuous Short Circuit Protection
- ◆ DIP16 package and Wired Version
- ◆ High Reliability
- ◆ IP67 Protection

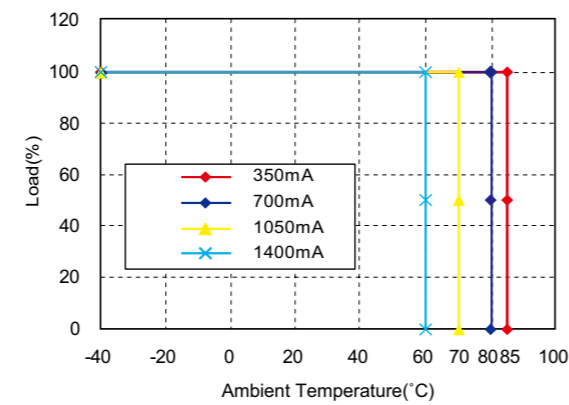


Mechanical Dimensions

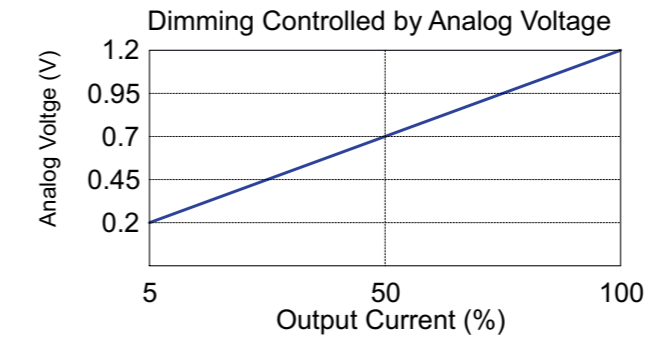
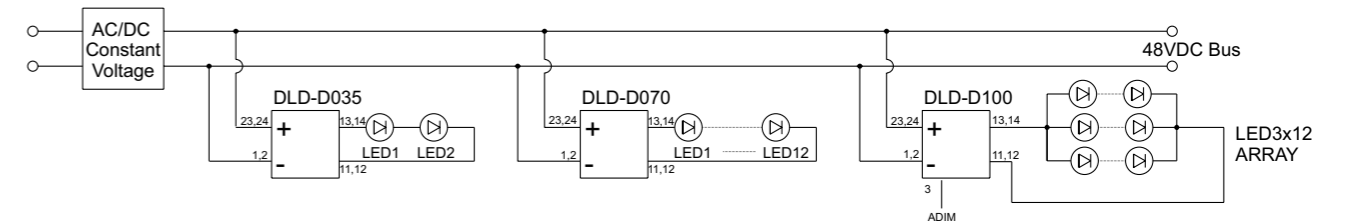
NOTE: Pin Size is 0.020" Inch (0.5mm) DIA±0.05
All Dimensions in Inches(mm)
Tolerance Inches: x.xx=±0.02, x.xxx=±0.010
Millimeters: x.x=±0.5, x.xx=±0.25



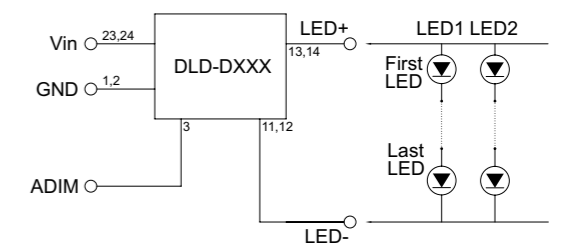
Derating Curve



Installation Drawing



Lighting Wall Application



Specifications

All specifications are typical values tested at the condition of nominal line, full load, and 25°C unless otherwise indicated

INPUT SPECIFICATIONS

Input Voltage	1400mA/other 6-40Vdc/6-50Vdc
Input Surge Voltage (1 second)	1400mA/other 50Vdc/65Vdc max.
Input Filter	Capacitor
Under Voltage Lockout	Power up4.2Vdc typ. Power down 3.8Vdc typ.

SAFETY AND EMISSIONS

EMI	EN55022/EN55015 Class B
EMS	EN61547, EN61000-4-2, 3, 4, 5, 6

OUTPUT SPECIFICATIONS

Constant Current Accuracy (note 1)	±5% max.
Current Line Regulation (note 2)	±5% max.
Current Load Regulation (note 3)	±5% max.
Short Circuit Protection	Constant Current with Auto Recovery
Start Up Time	60ms max.

GENERAL SPECIFICATIONS

Efficiency	See Table
Temperature Coefficient	±0.05%/°C
Isolation Voltage	Non-isolation
Switching Frequency	500KHz typ.
Operating Ambient Temperature	-40~85°C (see Derating Curve)
Case Temperature	100°C max.
Cooling	Natural Convection
Storage Temperature	-55~125°C
Operating Humidity	10%~95%RH non-condensing
Operating Altitude	Sea Level to 3000m
Vibration	0-500Hz, 2G 60min./1cycle, period for 3hours, 3 axes
Shock	30g peak, half sine, 6 axes
MTBF, L-HDBK-217F (25°C)	> 1.6Mhrs
Dimensions	1.28 x 0.66 x 0.40 inches (32.5 x 16.8 x 10.2 mm)
Weight	15g/13g.
Case Material	Plastic Case

PWM DIMMING (leave open if not used)

Input Voltage Range	TTL Logic Compatibility 5Vdc typ.
Threshold Voltage	Module on > 1.2Vdc, Module off < 0.2Vdc
Switching Frequency	1KHz max.
Output Current Range	5% to 100%
Minimum On Time	50ns

ANALOGUE DIMMING (leave open if not used)

Control Voltage Range	0.2-1.2Vdc
Analogue Pin Drive Current	0.4mA max.

NOTE

- 3V<Vin-Vout<30Vdc to keep current accuracy.
- Current line regulation is measured from High Line to Low Line.
- Current load regulation is measured from high to low operating voltage.
- Acceptable customer modifications.

DLD Connections		
DLD-DXXX	DLD-DXXXLW	Function
1&2	1 (Black)	-V Input
3	3 (White)	Analogue Dimming
4	4 (Green)	PWM/On/Off
11&12	12 (Blue)	-V Output
13&14	13 (Yellow)	+V Output
23&24	24 (Red)	+V Input

NP:NO Pin for DLD-C140

MODEL NUMBER	Input Voltage Range	Output Operating Voltage	Output Rated Current	Output Rated Power	Ripple and Noise (max.) Note 2	Efficiency (Typical) Note 3
DLD-D035	6-50 VDC	3-45 VDC	350 mA	15.75 W	300 mVpp	96%
DLD-D070	6-50 VDC	3-45 VDC	700 mA	31.5 W	500 mVpp	96%
DLD-D100	6-50 VDC	3-45 VDC	1050 mA	47.25 W	500 mVpp	96%
DLD-D140	6-40 VDC	3-36 VDC	1400 mA	50.4 W	500 mVpp	96%

- Note:
- 3V<Vin - Vout<30Vdc, to keep current accuracy. Nominal Input Voltage: 48Vdc, 28Vdc (D140 models)
 - Ripple and Noise are measured at rated current, Nominal Input and 36Vdc or 24Vdc (D140 models) output and 20MHz bandwidth with a 0.1µF ceramic capacitor.
 - Measured at rated current, Nominal Input and 36Vdc or 24Vdc (D140 models) output.
 - Acceptable customer modifications.

ALD SERIES

50.4 WATT BUCK LED DRIVER WITH DALI

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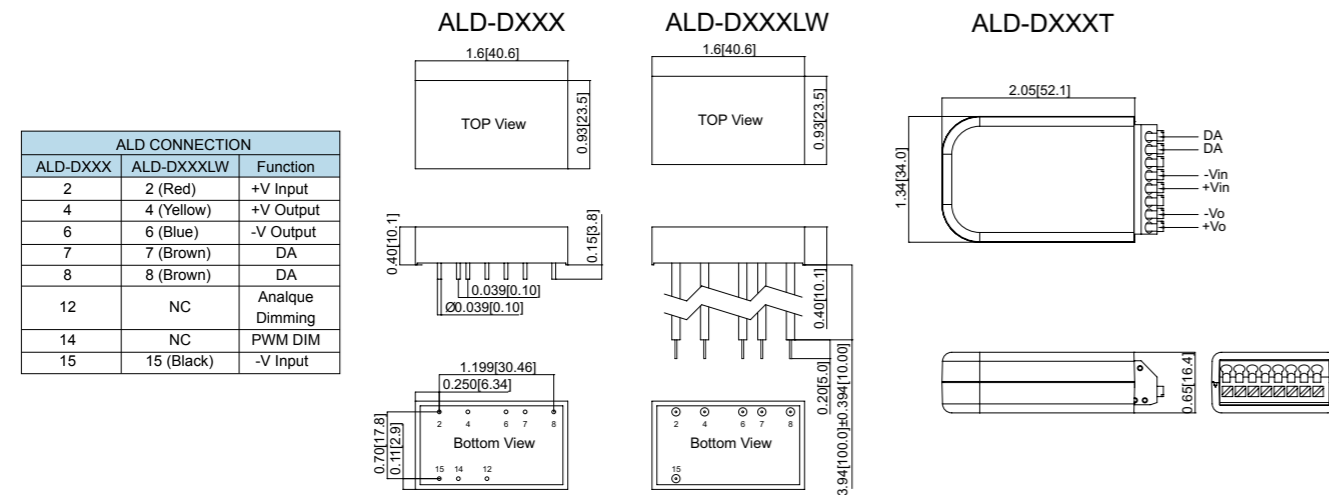
Features

- ◆ LED Driver Current up to 1400mA
- ◆ Constant Current Output
- ◆ Digital Address Lighting Interface (DALI)
- ◆ High Efficiency up to 95%
- ◆ Continuous Short Circuit Protection
- ◆ High Reliability
- ◆ IP67 Protection



Mechanical Dimensions

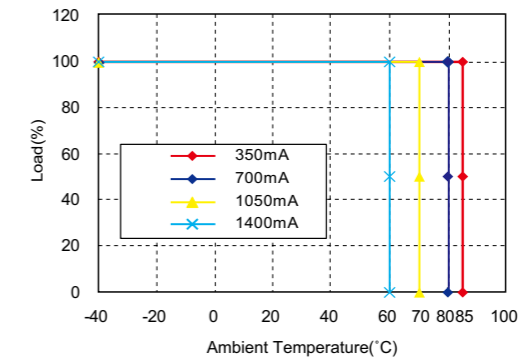
NOTE: Pin Size is 0.020" Inch (0.5mm) DIA±0.05
All Dimensions in Inches[mm]
Tolerance Inches:x.xx±0.02, x.xxx±0.010
Millimeters: x.x±0.5, x.xx±0.25



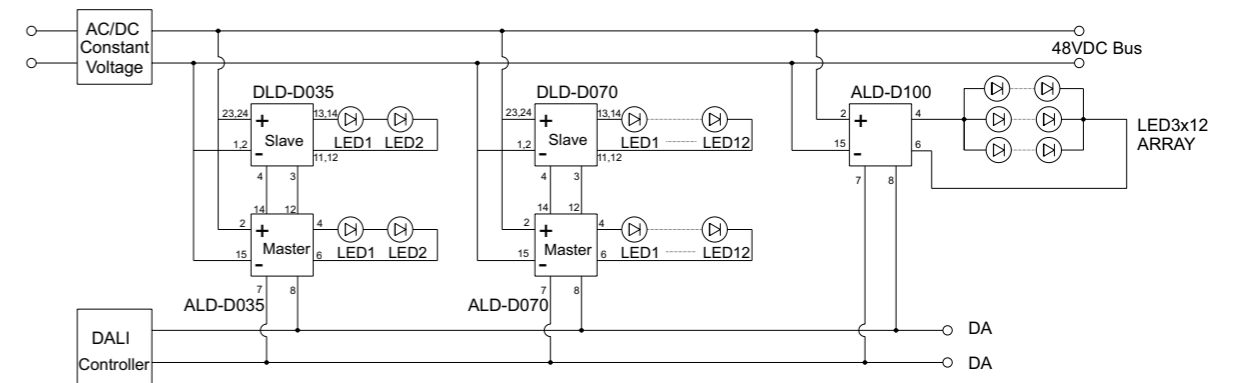
MODEL NUMBER	Input Voltage Range	Output Operating Voltage	Output Rated Current	Output Rated Power	Ripple and Noise (max.) Note 2	Efficiency (Typical) Note 3
ALD-D035	6-50 VDC	3-45 VDC	350 mA	15.75 W	300 mVpp	95%
ALD-D070	6-50 VDC	3-45 VDC	700 mA	31.50 W	500 mVpp	95%
ALD-D100	6-50 VDC	3-45 VDC	1050 mA	47.25 W	500 mVpp	95%
ALD-D140	6-40 VDC	3-36 VDC	1400 mA	50.4 W	500 mVpp	95%

Note:
1. 3V < Vin - Vout < 30Vdc, to keep current accuracy. Nominal Input Voltage: 48Vdc
2. Ripple and Noise are measured at rated current, Nominal Input and 42Vdc output and 20MHz bandwidth with a 0.1µF ceramic capacitor.
3. Measured at rated current, Nominal Input and 42Vdc output.
4. When used in the DALI system should be higher than 5.5V input voltage.
5. Acceptable customer modifications.

Derating Curve



Installation Drawing



Specifications

All specifications are typical values tested at the condition of nominal line, full load, and 25°C unless otherwise indicated

INPUT SPECIFICATIONS

Input Voltage	1400mA/other 6-40VDC/6-50Vdc
Input Surge Voltage (1 second)	1400mA/other 50Vdc/65Vdc max.
Input Filter	Capacitor
Under Voltage Lockout	Power up 4.2Vdc typ. Power down 3.8Vdc typ.

OUTPUT SPECIFICATIONS

Constant Current Accuracy (note 1)	±5% max.
Current Line Regulation (note 2)	±5% max.
Current Load Regulation (note 3)	±5% max.
Short Circuit Protection	Constant Current with Auto Recovery 60ms max.
Start Up Time	

DALI Control

Output Current Range	5%~100%
----------------------	---------

SAFETY AND EMISSIONS

EMI	EN55022/EN55015 Class B
EMS	EN61547, EN61000-4-2,3,4,5,6

GENERAL SPECIFICATIONS

Efficiency	See Table
Temperature Coefficient	±0.05%/°C (0-50°C)
Isolation Voltage	Non-isolation
Switching Frequency	500KHz typ.
Operating Ambient Temperature	-40~85°C (see Derating Curve)
Case Temperature	100°C max.
Cooling	Natural Convection
Storage Temperature	-55~125°C
Operating Humidity	10%~95%RH non-condensing
Operating Altitude	Sea Level to 3000m
Vibration	0-500Hz, 2G 60min./1cycle, period for 3hours, 3 axes 30g peak, half sine, 6 axes > 1.6Mhrs
Shock	MTBF, MIL-HDBK-217F (25°C)
Dimensions	1.6 x 0.93 x 0.40 inches (40.6 x 23.5 x 10.1 mm)
Weight	18g/23g
Case Material	Plastic Case

NOTE

- 3V < Vin-Vout < 30Vdc to keep current accuracy.
- Current line regulation is measured from high line to low line.
- Current load regulation is measured from high to low operating voltage.
- When used in the DALI system should be higher than 5.5V input voltage.
- Suffix "LW" to the model number with wire type.
- Suffix "T" to the model number with terminal type and only meets IP20 Terminal: WAGO 250-108 or equivalent; wire range: 16-20 AWG.
- Acceptable customer modifications.

MLD SERIES

MULTI-CHANNEL BUCK DC LED DRIVER WITH DALI

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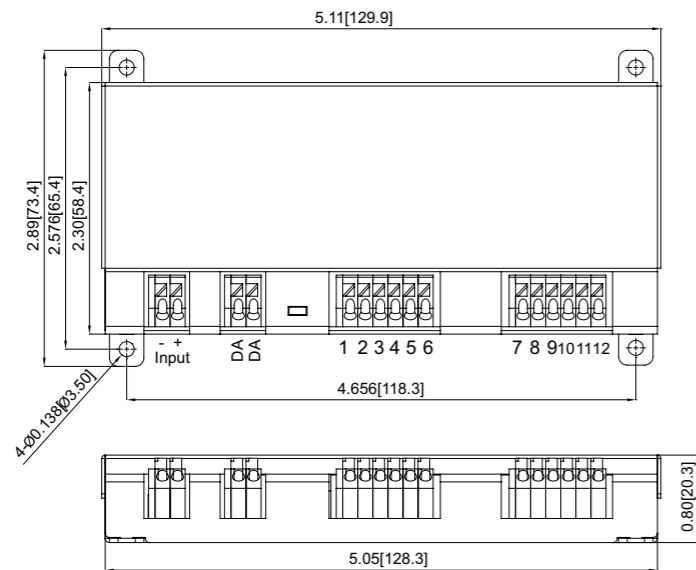
Features

- ◆ Wide Input Range
- ◆ LED Driver Current up to 1400mA
- ◆ Compatible to the DALI Standard
- ◆ Provides Multi-channel of LED Lighting Synchronization Controls
- ◆ Constant Current Dimming Control (DALI)



Mechanical Dimensions

All Dimensions in Inches (mm)
 Tolerance Inches: X.XX=±0.02, X.XXX=±0.010
 Millimeters: X.X=±0.5, X.XX=±0.25

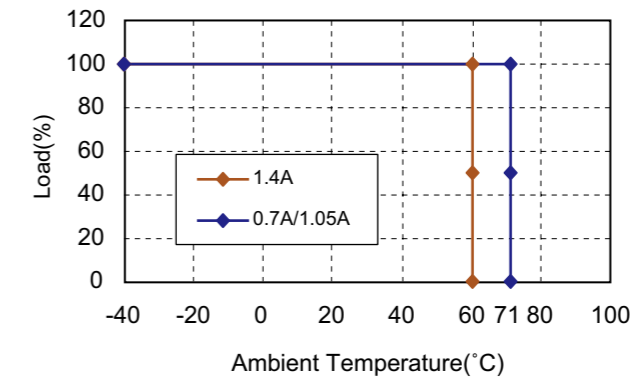


PIN CONNECTION		
Pin	MLD4-DXXX	MLD6-DXXX
1	V ₁₋	V ₁₋
2	V ₁₊	V ₁₊
3	V ₂₋	V ₂₋
4	V ₂₊	V ₂₊
5	NC	V ₃₋
6	NC	V ₃₊
7	NC	V ₄₋
8	NC	V ₄₊
9	V ₅₋	V ₅₋
10	V ₅₊	V ₅₊
11	V ₆₋	V ₆₋
12	V ₆₊	V ₆₊

MODEL NUMBER	Input Voltage Range	Output Operating Voltage	Output Rated Current	Output Power/Channel	Ripple and Noise (max.) Note 2	Efficiency (Typical) Note 3
MLD4-D070	6-50 VDC	3-45 VDC x 4	700 mA x 4	31.5 W	500 mVpp	95%
MLD4-D100	6-50 VDC	3-45 VDC x 4	1000 mA x 4	45 W	500mVpp	95%
MLD4-D140	6-40 VDC	3-36 VDC x 4	1400 mA x 4	50.4 W	500 mVpp	95%
MLD6-D070	6-50 VDC	3-45 VDC x 4	700 mA x 6	31.5 W	500 mVpp	95%
MLD6-D100	6-50 VDC	3-45 VDC x 4	1000 mA x 6	45 W	500 mVpp	95%
MLD6-D140	6-40 VDC	3-36 VDC x 4	1400 mA x 6	50.4 W	500 mVpp	95%

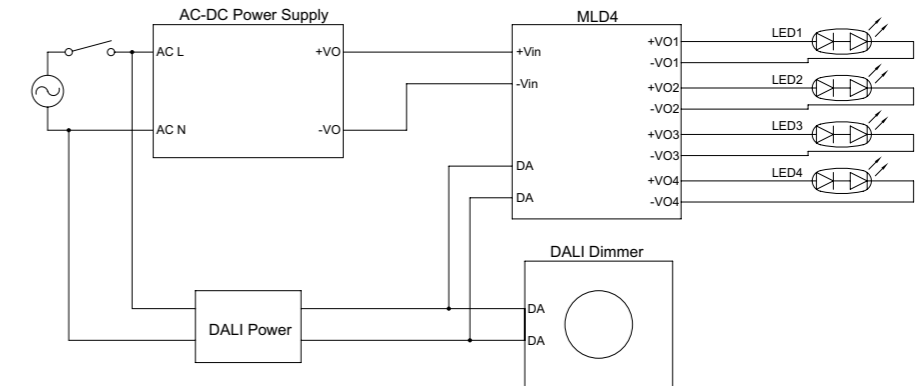
Note:
 1. Nominal Input Voltage: 48Vdc, 28Vdc (D140 models)
 2. Ripple and Noise are measured at rated current, Nominal Input and 36Vdc or 24Vdc (D140 models) output and 20MHz bandwidth with a 0.1µF ceramic capacitor.
 3. Measured at rated current, Nominal Input and 36Vdc or 24Vdc(D140 models) output.
 4. Acceptable customer modifications.

Derating Curve



Installation Drawing

Example Circuit Connection of MLD4 module for driving 4 LED Luminaries



Specifications

All specifications are typical values tested at the condition of nominal line, full load, and 25°C unless otherwise indicated

INPUT SPECIFICATIONS

Input Voltage	see table
Input Surge Voltage (1 second)	50Vdc max.
Input Filter	Capacitor
Under Voltage Lockout	Power up4.2Vdc typ. Power down 3.8Vdc typ.

OUTPUT SPECIFICATIONS

Constant Current Accuracy (note 1)	±5% max.
Current Line Regulation (note 2)	±5% max.
Current Load Regulation (note 3)	±5% max.
Short Circuit Protection	Constant Current with Auto Recovery
Start Up Time	10ms max.

DALI Control

Output Current Range	5%–100%
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SAFETY AND EMISSIONS

EMI Meet	EN55015 Class B
EMS Meet	EN61547, EN61000-4-2,3,4,6,8

GENERAL SPECIFICATIONS

Efficiency	See Table
Temperature Coefficient	±0.05%/°C
Isolation Voltage	Non-isolation
Switching Frequency	500KHz typ.
Operating Ambient Temperature	-40–71°C (see Derating Curve)
Cooling	Natural Convection
Storage Temperature	-55–105°C
Operating Humidity	10%–95%RH non-condensing
Operating Altitude	Sea Level to 3000m
Vibration	0–500Hz, 2G 60min./1cycle, period for 3hours, 3 axes
Shock	30g peak, half sine, 6 axes
Dimensions	5.05 x 2.30 x 0.80 inches (128.3 x 58.4 x 20.3 mm)
Weight	MLD4/MLD6145/160g
Case Material	Aluminum Case

NOTE

- 3V < Vin-Vout < 30Vdc, to keep current accuracy.
- Current line regulation is measured from high line to low line.
- Current load regulation is measured from high to low operating voltage.
- Terminal: WAGO 250-202 to 206 or equivalent Wire range: 16–20 AWG.

LDP25 SERIES



Ordering Information

Series	Output(W)	IP Code	Output Voltage	Dimming Function	Rated Output Current	Input Voltage	Ripple Noise
LDP	25	X	XXX	X	XXX	B	X
		S: Single O/P with IP64	240: 24V 360: 36V 480: 48V	C: No dimming P: PWM/1-10V	24V 110: 1100mA 36V 105: 1050mA 48V 070: 700mA	B:100-277 Vac	R:1% output ripple and noise or Blank:10% output ripple and noise
		A:Single O/P with IP67	240: 24V 360: 36V 480: 48V		110: 1100mA 105: 1050mA 070: 700mA 053: 530mA 035: 350mA		

LDP40 SERIES



Ordering Information

Series	Output(W)	IP Code	Output Voltage	Dimming Function	Rated Output Current	Input Voltage	Ripple Noise
LDP	40	X	XXX	X	XXX	B	X
		S: Single O/P with IP64	240: 24V 360: 36V 480: 48V	C: No dimming D: DALI dimming P: PWM 1-10V, Potentiometer	24V 170: 1700mA 36V 140: 1400mA 48V 111: 1110mA	B:100-277 Vac	R: 1% output ripple and noise or Blank: 10% output ripple and noise
		A:Single O/P with IP67	240: 24V 360: 36V 480: 48V		24V 105: 1050mA 36V 084: 840mA 48V 070: 700mA		

LDP60 SERIES



Ordering Information

Series	Output(W)	IP Code	Output Voltage	Dimming Function	Rated Output Current	Input Voltage	Ripple Noise
LDP	60	X	XXX	X	XXX	B	X
		S: Single O/P with IP67	240: 24V 360: 36V 480: 48V	C: No dimming D: DALI dimming P: PWM 1-10V, Potentiometer	24V 250: 2500mA 36V 210: 2100mA 48V 175: 1750mA	B:100-277 Vac	R: 1% output ripple and noise or Blank: 10% output ripple and noise
		B: Dual O/P with IP67	240: 24V 360: 36V 480: 48V		24V 166: 1666mA 36V 140: 1400mA 48V 125: 1250mA		

LDM60S SERIES



Ordering Information

LDM60SXXX	XXX = Output Voltage	XX	Optional Type
120:	12Vout	01:	Constant Current Mode (IP67) No dimming
240:	24Vout	02:	Constant Current Mode (IP65) No dimming With adjustment for output voltage and output current
360:	36Vout	03:	Constant Current Mode (IP67) Dimming: 1-10Vdc and Resistance No adjustment for output voltage and output current
480:	48Vout	03A:	Constant Current Mode (IP65) Dimming: 1-10Vdc and Resistance With adjustment for output voltage and output current
		04:	Constant Current Mode (IP67) Dimming: DALI No adjustment for output voltage and output current
		04A:	Constant Current Mode (IP65) Dimming: DALI With adjustment for output voltage and output current

LDM100S SERIES



Ordering Information

LDM100SXXX	XXX = Output Voltage	XX	Optional Type
120:	12Vout	01:	Constant Current Mode (IP67) No dimming No adjustment for output voltage and output current
240:	24Vout	02:	Constant Current Mode (IP65) No dimming With adjustment for output voltage and output current
360:	36Vout	03:	Constant Current Mode (IP67) Dimming: 1-10Vdc and Resistance No adjustment for output voltage and output current
480:	48Vout	03A:	Constant Current Mode (IP65) Dimming: 1-10Vdc and Resistance With adjustment for output voltage and output current
		04:	Constant Current Mode (IP67) Dimming: DALI No adjustment for output voltage and output current
		04A:	Constant Current Mode (IP65) Dimming: DALI With adjustment for output voltage and output current


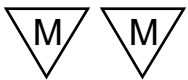
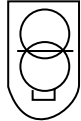
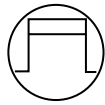
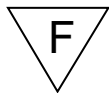
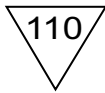
LDA100S SERIES



Ordering Information

LDA100SXXX	XXX = Output	XX	Optional Type
142:	142V / 0.7A	01:	Constant Current Mode (IP67) No dimming
214:	214V / 0.5A	03:	Constant Current Mode (IP67) Dimming: 1-10Vdc and Resistance
214A:	214V / 0.35A	04:	Constant Current Mode (IP67) Dimming: DALI

SYMBOLS AND MARKS

	<p>DALI (Digital Addressable Lighting Interface) is a world-wide standard for lighting control communications. DALI standard is technically managed under the International Electro-technical Commission IEC 62386.</p>
	<p>According to DIN VDE 0710-14, Cincon LED power supplies can be fitted on wooden material but needs to be kept clear with surrounding.</p>
<p>IP67</p>	<p>CINCON AC-DC LED power supplies have dust/water proof design, primarily based on international standard IEC60529. Description of IP67 levels can be defined – 6: Dust tight, 7: Protection against temporary immersion in water (30 minutes, 1m below surface).</p>
	<p>Safety isolation and short circuit proof control gear.</p>
	<p>Stands for independent control gear.</p>
	<p>CINCON AC-DC LED Driver can be installed in normally flammable materials surface, such as Wood.</p>
	<p>Protection against overheating to prevent the lamp control gear case temperature under any conditions of use from exceed the indicated value (110°C)</p>
<p>tc:90°C ta:50°C</p>	<p>tc=case temperature, ta= ambient temperature. CINCON AC-DC LED Driver case temperature spot tc should not exceed 90°C at full load condition under in 50°C ambient temperature.</p>
<p>Class 2</p>	<p>Due to its power limitations, a Class 2 circuit considers safety from a fire initiation standpoint and provides acceptable protection from electric shock.</p>



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