Features LED DRIVER

- 25W Class II AC-DC LED Power Supply
- 350, 500, 700, 1050mA or 2100mA Output
- **Active Power Factor Correction > 0.90**
- Efficiency up to 81%
- IP67 Certified
- 3 in 1 Dimming

Description

Selection Guide

The 25W LED drivers of the RACD25-A series come with a 3-in-1 dimming function so that the LED load can be dimmed with analog (1-10V), PWM, or resistor inputs. Due to wide input voltage range of 90 - 305VAC these LED drivers are suitable for worldwide use. They operate with efficiencies of up to 81%, feature active PFC, and are fully protected against short circuit, overvoltage, and over-temperature conditions. They are sealed against damp and wet conditions, and the warranty is 5 years.

Coloction datas					
Part Number	Rated Power (W)	Output Current (mA)	Output Voltage (VDC)		
RACD25-350A	20	350	48 - 57		
RACD25-500A	24	500	36 - 48		

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RACD25-350A	20	350	48 - 57	79
RACD25-500A	24	500	36 - 48	81
RACD25-700A	25.2	700	24 - 36	82
RACD25-1050A	25.2	1050	12 - 24	80
RACD25-2100A	25.2	2100	9 - 12	79

Specifications	(measured at 240VAC and 25°C ambient temperature)
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Input Frequency Range	Input Voltage Range		90-305 VAC
Full Load, 230VAC >0.92	Input Frequency Range		47-63Hz
Full Load, 110VAC 0.4A 230VAC 0.2A Inrush Current (Max.) 264VAC Cold Start 50A Leakage Current 230VAC < 0.25mA Output Current Accuracy (includes Line Regulation, Load Regulation and set-up tolerance) ±5% Isolation Voltage 3.75kVAC / 1minute Short Circuit Protection Hiccup mode & recovers after fault condition removed Over Voltage Protection 115% - 135% Output Voltage auto-recovery Over Temperature Protection Type Latch Mode Dimming Control: PWM 1 <adj<10v(500hz (free="" (lxbxh)="" +50°c="" +80°c="" -="" -20°c="" 1-10vdc="" 10-500hz,="" 100kω="" 100mω="" 10k="" 10lfm)="" 10°c="" 110="" 120vac="" 1967="" 2="" 20%="" 2g,="" 33mm="" 384g="" 3khz)="" 40°c="" 500vdc="" 60="" 73.5="" 85°c="" 95%="" air="" along="" analogue="" and="" by="" case="" control="" convection="" dimension="" external="" full="" humidity="" index<="" isolation="" load="" load,="" min.="" non-condensing="" operating="" p="" range="" rating="" resistance="" rh="" sec="" set="" storage="" td="" temperature="" time="" to="" up="" vibration="" voltage="" weight="" x="" x,="" y="" z="" ="" ±=""><td>Power Factor</td><td>Full Load, 277VAC</td><td>>0.90</td></adj<10v(500hz>	Power Factor	Full Load, 277VAC	>0.90
AC Input Current 110VAC 0.4A 230VAC 0.2A Inrush Current (Max.) 264VAC Cold Start 50A Leakage Current 230VAC <0.25mA		Full Load, 230VAC	>0.92
Part Part		Full Load, 110VAC	>0.98
Inrush Current (Max.)	AC Input Current	110VAC	0.4A
Leakage Current230VAC<0.25mAOutput Current Accuracy (includes Line Regulation, Load Regulation and set-up tolerance)±5%Isolation Voltage3.75kVAC / 1minuteShort Circuit ProtectionHiccup mode & recovers after fault condition removedOver Voltage Protection115% - 135% Output Voltageauto-recoveryOver Temperature ProtectionThermistor105°C ± 10°CTypeLatch ModeDimming Control:PWM1 <adj<10v(500hz -="" 3khz)<="" td="">Analoguecontrol by external voltage 1-10VDCResistance10K - 100KΩSet Up TimeFull Load, 120VAC2 secVibration10-500Hz, 2G, 60 Min. along X, Y and ZStorage Humidity10% - 95% RHOperating Humidity20% - 95% RH Non-CondensingWeight384gDimension (LxBxH)110 x 73.5 x 33mmOperating Temperature RangeFull load-20°C to +50°C(free air convection 10LFM)Case Temperature85°C ± 10°CStorage Temperature-40°C to +80°CIP RatingIP67Isolation Resistance500VDC100MQ</adj<10v(500hz>		230VAC	0.2A
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Inrush Current (Max.)	264VAC	Cold Start 50A
	Leakage Current	230VAC	<0.25mA
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Output Current Accuracy (includes Line	e Regulation, Load Regulation and set-u	p tolerance) ±5%
Over Voltage Protection 115% - 135% Output Voltage auto-recovery Over Temperature Protection Thermistor 105° C \pm 10° C Type Latch Mode Dimming Control: PWM $1 < Adj < 10V(500Hz - 3kHz)$ Analogue control by external voltage 1-10VDC Resistance $10K - 100K\Omega$ Set Up Time Full Load, 120VAC 2 sec Vibration 10 -500Hz, 2G, 60 Min. along X, Y and Z Storage Humidity 10° - 95° RH Non-Condensing Weight 20° - 95° RH Non-Condensing Weight $384g$ Dimension (LxBxH) $110 \times 73.5 \times 33mm$ Operating Temperature Range Full load -20° C to $+50^{\circ}$ C (free air convection $10LFM$) Case Temperature 85° C \pm 10° C Storage Temperature -40° C to $+80^{\circ}$ C IP Rating IP67 Isolation Resistance $500VDC$ $100M\Omega$	Isolation Voltage		3.75kVAC / 1minute
Over Temperature Protection Thermistor Type $105^{\circ}\text{C} \pm 10^{\circ}\text{C}$ Dimming Control: PWM $1 < \text{Adj} < 10\text{V}(500\text{Hz} - 3\text{kHz})$ Analogue Resistance control by external voltage $1 - 10\text{VDC}$ Set Up Time Full Load, 120VAC 2 sec Vibration $10 - 500\text{Hz}$, 2G , $60\text{ Min. along X, Y and Z}$ Storage Humidity $10\% - 95\%$ RH Operating Humidity $20\% - 95\%$ RH Non-Condensing Weight $384g$ Dimension (LxBxH) $110 \times 73.5 \times 33\text{mm}$ Operating Temperature Range Full load -20°C to $+50^{\circ}\text{C}$ (free air convection 10LFM) Case Temperature $85^{\circ}\text{C} \pm 10^{\circ}\text{C}$ Storage Temperature -40°C to $+80^{\circ}\text{C}$ IP Rating IP67 Isolation Resistance 500VDC $100\text{M}\Omega$	Short Circuit Protection	Hiccup mode	e & recovers after fault condition removed
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Over Voltage Protection	115% - 135% Output Vol	Itage auto-recovery
Dimming Control:PWM $1 < Adj < 10V(500Hz - 3kHz)$ Analogue Resistancecontrol by external voltage 1-10VDC ResistanceSet Up TimeFull Load, 120VAC2 secVibration $10-500Hz$, 2G, 60 Min. along X, Y and ZStorage Humidity $10\% - 95\%$ RHOperating Humidity $20\% - 95\%$ RH Non-CondensingWeight $384g$ Dimension (LxBxH) $110 \times 73.5 \times 33mm$ Operating Temperature RangeFull load $-20\% C$ to $+50\% C$ (free air convection $10LFM$)Case Temperature $85\% C \pm 10\% C$ Storage Temperature $-40\% C$ to $+80\% C$ IP RatingIP67Isolation Resistance $500VDC$ $100M\Omega$	Over Temperature Protection	Thermistor	105°C ± 10°C
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		Туре	Latch Mode
Set Up TimeResistance $10K$ - $100K$ ΩSet Up TimeFull Load, 120 VAC 2 secVibration 10 -500Hz, 2 G, 60 Min. along X, Y and ZStorage Humidity 10% - 95% RH Non-CondensingOperating Humidity 20% - 95% RH Non-CondensingWeight $384g$ Dimension (LxBxH) $110 \times 73.5 \times 33$ mmOperating Temperature RangeFull load -20% C to $+50\%$ C(free air convection 10 LFM)Case Temperature 85% C $\pm 10\%$ CStorage Temperature -40% C to $+80\%$ CIP RatingIP67Isolation Resistance 500 VDC 100 M Ω	Dimming Control:	PWM	1 <adj<10v(500hz -="" 3khz)<="" td=""></adj<10v(500hz>
Set Up TimeFull Load, 120VAC2 secVibration $10\text{-}500\text{Hz}$, 2G, 60 Min. along X, Y and ZStorage Humidity 10% - 95% RHOperating Humidity 20% - 95% RH Non-CondensingWeight $384g$ Dimension (LxBxH) $110 \times 73.5 \times 33\text{mm}$ Operating Temperature RangeFull load -20% C to $+50\%$ C(free air convection 10LFM)Case Temperature 85% C $\pm 10\%$ CStorage Temperature -40% C to $+80\%$ CIP RatingIP67Isolation Resistance 500VDC $100\text{M}\Omega$		Analogue	control by external voltage 1-10VDC
Vibration10-500Hz, 2G, 60 Min. along X, Y and ZStorage Humidity 10% - 95% RHOperating Humidity 20% - 95% RH Non-CondensingWeight $384g$ Dimension (LxBxH) $110 \times 73.5 \times 33$ mmOperating Temperature RangeFull load -20° C to $+50^{\circ}$ C(free air convection 10 LFM)Case Temperature 85° C $\pm 10^{\circ}$ CStorage Temperature -40° C to $+80^{\circ}$ CIP RatingIP67Isolation Resistance 500 VDC 100 M Ω		Resistance	10K - 100KΩ
Storage Humidity10% - 95% RHOperating Humidity20% - 95% RH Non-CondensingWeight384gDimension (LxBxH) $110 \times 73.5 \times 33$ mmOperating Temperature RangeFull load -20° C to $+50^{\circ}$ C(free air convection 10LFM)Case Temperature 85° C \pm 10°CStorage Temperature -40° C to $+80^{\circ}$ CIP RatingIP67Isolation Resistance500VDC 100 M Ω	Set Up Time	Full Load, 120VAC	2 sec
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Vibration		10-500Hz, 2G, 60 Min. along X, Y and Z
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Dimension (LxBxH) $110 \times 73.5 \times 33 mm$ Operating Temperature RangeFull load -20° C to $+50^{\circ}$ C(free air convection 10LFM)Case Temperature 85° C \pm 10° CStorage Temperature -40° C to $+80^{\circ}$ CIP RatingIP67Isolation Resistance 500 VDC 100 M Ω	Operating Humidity		20% - 95% RH Non-Condensing
Operating Temperature Range Full load -20° C to $+50^{\circ}$ C (free air convection 10LFM) Case Temperature 85° C \pm 10°C Storage Temperature -40° C to $+80^{\circ}$ C IP Rating IP67 Isolation Resistance 500VDC 100M Ω	Weight		384g
$\begin{tabular}{lllllllllllllllllllllllllllllllllll$	Dimension (LxBxH)		110 x 73.5 x 33mm
Storage Temperature -40°C to $+80^{\circ}\text{C}$ IP RatingIP67Isolation Resistance 500VDC	Operating Temperature Range	Full load	-20°C to +50°C
IP Rating IP67 Isolation Resistance 500VDC 100M $Ω$	(free air convection 10LFM)	Case Temperature	85°C ± 10°C
Isolation Resistance 500VDC 100M Ω	Storage Temperature		-40°C to +80°C
	IP Rating		IP67
MTBF (+25°C) using MIL-HDBK 217F 200 x 10³ hours	Isolation Resistance	500VDC	100ΜΩ
	MTBF (+25°C)	using MIL-HDBK 217F	200 x 10 ³ hours

continued on next page

Efficiency (typ.) (%)

LIGHTLINE

AC/DC-Converter with 5 year Warranty



25 Watt PFC Single **Output**

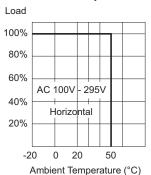


UL8750 Certified **EN61347** Certified **EN55015** Certified **EN61547 Certified**

RACD25-A

Derating-Graph

(Ambient Temperature)



All LED Drivers may not be used without a load. They must be switched on the primary side only. Noncompliance may damage the LED or reduce its lifetime.

Refer to Application Notes

LIGHTLINE AC/DC-Converter

RACD25-A Series

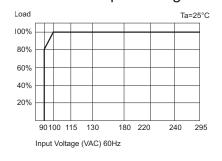
IEC/EN 60529

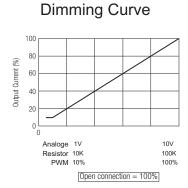
Specifications (measured at 240VAC and 25°C ambient temperature)

Certifications:		
UL Standards	Report: E340696	UL8750
		(based on) UL1310
Safety Standards	Report: P201403013	EN61347-1; EN61347-2-13
Emission	Report: HA130831-SACE	EN55015, Class B
		IEC61000-3-2
		IEC61000-3-3
FCC	Report: HA130831-SAFD	Part 15, Class B
EMC	Report: HA130831-SACE	IEC61000-4-2, 3, 4, 5, 6, 8, 11
Immunity		EN61547
IP67	Report: 14022002	IEC/EN 60598-1

Technical Characteristic

Load vs. Input Voltage

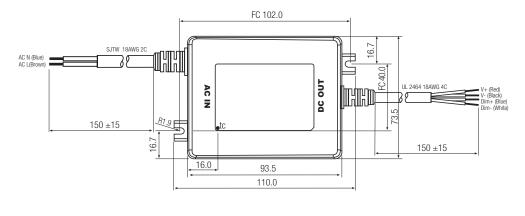




Maximum Number of LED drivers per circuit breakers

Condition	Circuit Breaker	Circuit Breaker Current			
	Тур	10A	16A	20A	25A
115VAC, 10hm 90° phase angle	С	32	48	57	72
230VAC, 10hm 90° phase angle	В	24	38	46	58
	С	38	62	74	92
277VAC, 10hm 90° phase angle	В	28	44	53	66
	С	44	71	84	106

Package Style & Pinning





The product information and specifications are subject to change without prior notice. RECOM products are not authorized for use in safety-critical applications (such as life support) without RECOM's explicit written consent. A safety-critical application is defined as an application where a failure of a RECOM product may reasonably be expected to endanger or cause loss of life, inflict bodily harm or damage property. The buyer shall indemnify and hold harmless RECOM, its affiliated companies and its representatives against any damage claims in connection with the unauthorized use of RECOM products in such safety-critical applications.