Features

• Constant Voltage Output

ENEC, UL, RCM and CB Certified

LED DRIVER

Power Factor Corrected Short Circuit, Overload and Overtemperature Protected

Description

The RACV30 is the first of a new series of constant voltage LED drivers, ideal for powering LED strips and LED modules in applications such as cove lighting, signage, back lighting, channel letters, displays or under cabinet lighting. The input voltage range of 90 to 264VAC assures full functionality worldwide. The new drivers provide up to 30 watts and are available with outputs of 12VDC or 24VDC. The output voltages are closely regulated to compensate for varying loads or supply changes (2% max.)

Selection Guide				
Part Number	Input Voltage Range (VAC)	Output Voltage (VDC)	Output Current Range (mA)	Efficiency typ. (%)
RACV30-24	90-264	24	0-1250	84
RACV30-12	90-264	12	0-2500	83

Specifications (typical at 25°C, nominal input voltage and full load)

Input Frequency Range47-63HzInput CurrentFull Load< 380mAPower Factor CorrectionFull Load>0.92THDFull Load, 115VAC12% max.Inrush Current(2ms peak)30A max.Input Fuseinternal 2A/250VOutput Voltage Accuracy(Output Load min <-> max)±5%Load Regulation(Output Load min <-> max)2% max.Dutput Ripple3% max.2% max.Output Ripple3% max.2% max.Output Ripple3% max.2% max.Output Ripple3% Max.2% max.Output Ripple3k/AC / 1 minuteOperating Trequency≤125kHzIsolation Voltage3k/AC / 1 minuteOperating Temperature RangeAmbient Temperature-75°C max.167gHumidity85% RH max.Case MaterialEpoxy UL94V-0WeightRACV30-24167gRACV30-12170gMTBFMIL STD 217FOya x 10³ hoursFCC18ACertificationsENS5015LED General SafetyUL8750, cUL8750ENECEN61347-2-13:2006EN61347-1:2008Serew Terminal SpecificationScrew Terminal Specification5.5mm connectorShort Circuit ProtectionCurrent Limit, Automatic RestartOverload ProtectionFUI Load110-160%Overload ProtectionFUI Load110-160%Overload ProtectionFUI Load110-160%Overload ProtectionFUI Load110-160%	Input Voltage Range		90-264VAC or 140-370VDC
Power Factor CorrectionFull Load>0.92THDFull Load, 115VAC12% max.Inrush Current(2ms peak)30A max.Input Fuseinternal 2A/250VOutput Voltage Accuracy(Output Load min <-> max) $\pm 5\%$ Load Regulation(Output Load min <-> max) 2% max.Line Regulation(VACin min <-> VACin max) 2% max.Output Ripple 3% max. 3% max.Output Ripple 3% max. 3% max.Operating Frequency ≤ 125 KHzIsolation Voltage $3kVAC / 1$ minuteOperating Temperature RangeAmbient TemperatureCase Temperature 75° C max.Humidity85% RH max.Case MaterialEpoxy UL94V-0WeightRACV30-24TheffMIL STD 217F30x10 ³ hoursDesign Lifetime 70×10^{2} hours max.EMC StandardsEN55015FCC 18ACertificationsEN61347-2-13:2006ENECEN61347-2-13:2006PSEJ61347-1(H20), J61347-2-13(H21), J55015(H20)Screw Terminal Specification 5.5 mm connectorShort Circuit Protection 5.5 mm connectorShort Circuit ProtectionFull LoadOverload ProtectionFull LoadThe Load110~160%	Input Frequency Range		47-63Hz
THDFull Load, 115VAC12% max.Inrush Current(2ms peak)30A max.Input Fuseinternal 2A/250VOutput Voltage Accuracy(Output Load min <-> max)±5%Load Regulation(Output Load min <-> max)2% max.Line Regulation(VACin min <-> VACin max)2% max.Output Ripple3% max.3% max.Operating Frequency≤125kHzIsolation Voltage3kVAC / 1 minuteOperating Temperature RangeAmbient Temperature-20°C to +50°C(free air convection)Case Temperature75°C max.Humidity85% RH max.Case MaterialEpoxy UL94V-0WeightRACV30-24167gRACV30-12170g170gMTBFMIL STD 217F30x10³ hoursDesign Lifetime70 x 10° hours max.EMC StandardsEN55015FCC18AEN61347-2-13:2006EN61347-1:2008EN61347-2-13:2006ENECEN61347-2-13:2006ENECEN61347-2-13:2006ENECEN61347-2-13:2006ENECEN61347-2-13:2006ENECEN61347-2-13:2006ENECEN61347-2-13:2006ENECEN61347-2-13:2006ENECEN61347-2-13:2006ENECEN61347-2-13:2006ENECEN61347-2-13:2006ENECEN61347-2-13:2006ENA147-1:2008PSEJota47-0Jota47-2-13:2006ENA147-1:2008Screw Terminal SpecificationStort Circuit ProtectionScrew Terminal Corent Limit, Automati	Input Current	Full Load	< 380mA
Inrush Current(2ms peak)30A max.Input Fuseinternal 2A/250VOutput Voltage Accuracy(Output Load min <-> max)±5%Load Regulation(Output Load min <-> max)2% max.Line Regulation(VACin min <-> VACin max)2% max.Output Ripple3% max.2% max.Operating Frequency≤125kHzIsolation Voltage3kVAC / 1 minuteOperating Temperature RangeAmbient Temperature-20°C to +50°C(free air convection)Case Temperature75°C max.Humidity85% RH max.Case MaterialEpoxy UL94V-0WeightRACV30-24167gRACV30-12170g170gMTBFMIL STD 217F30x10³ hoursDesign Lifetime70 x 10° hours max.EMC StandardsEN55015FCC18AEN61347-2-13:2006ENECEN61347-2-13:2006ENECEN61347-2-13:2006ENECEN61347-2-13:2006ENECEN61347-2-13:2006ENECEN61347-2-13:2006ENECEN61347-2-13:2006ENECEN61347-2-13:2006ENECEN61347-2-13:2006ENECEN61347-2-13:2006ENECEN61347-2-13:2006ENECEN61347-2-13:2006ENECEN61347-2-13:2006ENECEN61347-2-13:2006ENECEN61347-2-13:2006ENECEN61347-2-13:2006ENECEN61347-2-13:2006ENECEN61347-2-13:2006ENECEN61347-2-13:2006ENECEN613	Power Factor Correction	Full Load	>0.92
Input FuseInternal 2A/250VOutput Voltage Accuracy(Output Load min <-> max)±5%Load Regulation(Output Load min <-> max)2% max.Line Regulation(VACin min <-> VACin max)2% max.Output Ripple3% max.2% max.Output Ripple3% max.2% max.Operating Frequency≤125kHzIsolation Voltage3kVAC / 1 minuteOperating Temperature RangeAmbient Temperature-20°C to +50°C(free air convection)Case Temperature75°C max.Humidity85% RH max.Case MaterialEpoxy UL94V-0WeightRACV30-24167gRACV30-12170gMTBFMIL STD 217FObstandardsEN55015FCC18ACertificationsEN55015FCC18ALED General SafetyUL8750, cUL8750EN61347-2-13:2006ENECEN61347-2-13:2006EN61347-2-13:2006PSEJ61347-1(H20), J61347-2-13(H21), J55015(H20)Screw Terminal SpecificationScrew Terminal Specification14AWG or 2.5mm²Connector Plug Specification5.5mm connectorShort Circuit ProtectionCurrent Limit, Automatic RestartOverload ProtectionFull Load110~160%	THD	Full Load, 115VAC	12% max.
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Operating Temperature Range (free air convection)Ambient Temperature Case Temperature-20°C to +50°C C max.Humidity85% RH max.Case MaterialEpoxy UL94V-0WeightRACV30-24167g RACV30-12MTBFMIL STD 217F30x10³ hoursDesign Lifetime70 x 10³ hours max.EMC StandardsEN55015 FCC18ACertificationsEN61347-2-13:2006 EN61347-2-13:2006PSEJ61347-1(H20), J61347-2-13(H21), J55015(H20)Screw Terminal Specification14AWG or 2.5mm² S.5mm connectorShort Circuit ProtectionFull LoadOverload ProtectionFull LoadOverload ProtectionFull Load	Operating Frequency		≤125kHz
(free air convection)Case Temperature75°C max.Humidity85% RH max.Case MaterialEpoxy UL94V-0WeightRACV30-24167gRACV30-12170gMTBFMIL STD 217F30x10³ hoursDesign Lifetime70 x 10³ hours max.EMC StandardsEN55015FCC18AEN55015CertificationsEN61347-2-13:2006LED General SafetyUL8750, cUL8750ENECEN61347-2-13:2006ENESJ61347-1(H20), J61347-2-13(H21), J55015(H20)Screw Terminal Specification14AWG or 2.5mm²Connector Plug Specification5.5mm connectorShort Circuit ProtectionFull Load110~160%	Isolation Voltage		3kVAC / 1 minute
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LED General SafetyUL8750, cUL8750ENECEN61347-2-13:2006EN61347-2-13:2008EN61347-2-13(H21), J55015(H20)SCrew Terminal Specification14AWG or 2.5mm²Connector Plug Specification5.5mm connectorShort Circuit ProtectionCurrent Limit, Automatic RestartOverload ProtectionFull Load110~160%			FCC18A
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PSEJ61347-1(H20), J61347-2-13(H21), J55015(H20)Screw Terminal Specification14AWG or 2.5mm²Connector Plug Specification5.5mm connectorShort Circuit ProtectionCurrent Limit, Automatic RestartOverload ProtectionFull Load110~160%	ENEC		EN61347-2-13:2006
Screw Terminal Specification14AWG or 2.5mm²Connector Plug Specification5.5mm connectorShort Circuit ProtectionCurrent Limit, Automatic RestartOverload ProtectionFull Load110~160%			EN61347-1:2008
Connector Plug Specification5.5mm connectorShort Circuit ProtectionCurrent Limit, Automatic RestartOverload ProtectionFull Load110~160%	PSE	J61347-1(H20),	J61347-2-13(H21), J55015(H20)
Short Circuit Protection Current Limit, Automatic Restart Overload Protection Full Load 110~160%	Screw Terminal Specification		14AWG or 2.5mm ²
Overload Protection Full Load 110~160%	Connector Plug Specification		5.5mm connector
	Short Circuit Protection		Current Limit, Automatic Restart
Overtemperature Protection Tj=110°C Automatic Restart	Overload Protection	Full Load	110~160%
	Overtemperature Protection	Tj=110°C	Automatic Restart

LIGHTLINE AC/DC-Converter with 5 year Warranty

RECOM

30 Watt PFC Single CV Output



Note:

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

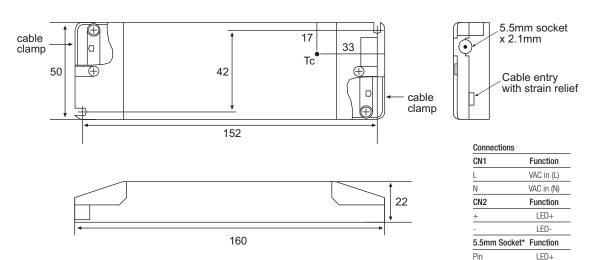
RACV30 Series

Characteristic

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
	1				
230VAC, 10hm	В	24	38	46	58
90° phase angle	С	38	62	74	92
		1	1		
277VAC, 10hm	В	28	44	53	66
90° phase angle	С	44	71	84	106

Package Style and Pinning



Shell LED-Tolerance

XX = +/-1mm XX.X = */-0.5mm

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.