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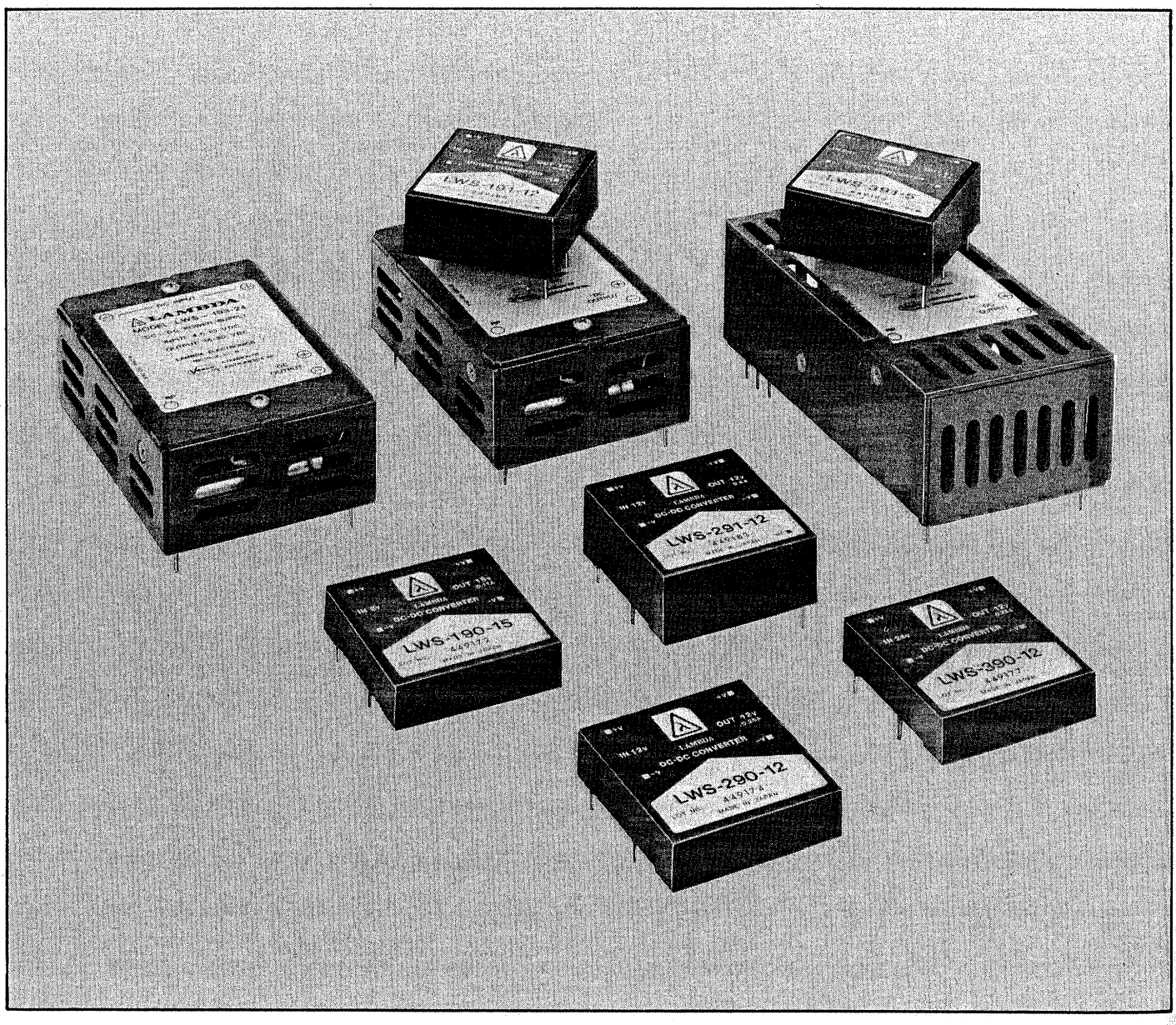
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Lambda LW Series



Features—LW Series

48 models to meet your exact requirements

All outputs isolated

High efficiency

New dual output models

Available for one day delivery from stock

All outputs regulated

PC board mountable

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Specifications—LW Series

DC Output
Voltage range shown in tables.

REGULATED VOLTAGE

regulation, line . . . . . 0.1% from minimum to maximum and from maximum to minimum. 0.5% on LWS-190, 191, 290, 291, 390, 391. 0.2% on both outputs of dual output models for input variations from 21.6 to 26.4 VDC or 26.4 to 21.6 VDC on LWD-391, 392; from 10.8 to 13.2 VDC or 13.2 to 10.8 VDC on LWD-291, 292; from 4.5 to 5.5 VDC or 5.5 to 4.5 VDC on LWD-191, 192.

regulation, load . . . . . 0.4% for load variations from no load to full load and full load to no load. 1.0% on LWS-190, 191, 290, 291, 390, 391. 0.2% on dual output models.

ripple and noise . . . . . 20mV RMS, 100mV pk-pk for 5 models of LWS-193, 194, 195, 294, 295, 394, 395.
120mV pk-pk for 5V models of LWS-190, 191, 290, 291, 390, 391 and 12V models of LWD-191, 192, 291, 292, 391, 392.
150mV pk-pk for 12V models of LWD-191, 192, 291, 292, 391, 392 and 12V and 15V models of LWS-190, 191, 290, 291, 390, 391.
25mV RMS, 200mV pk-pk for all other models.

efficiency . . . . . 50% minimum for LWS-194, LWS-294, LWS-394, and LWS-193.
57% minimum for LWS-195.
58% minimum for LWS-190.
60% minimum for LWS-191.
64% minimum for LWS-391.
67% minimum for LWS-390.
68% minimum for LWS-291.
70% minimum for LWS-290.
75% minimum for LWS-296, 397.

temp. coeff. . . . . 0.03%/°C. 0.02% on LWS-190, 191, 290, 291, 390, 391 and on all dual output models.

Ambient Operating Temperature
Continuous duty 0 to +60°C with suitable derating above 40°C for LWS-193, 194, 195, 294, 295, 296, 394, 395, 397, and dual output models. Continuous duty -5°C to 60°C with suitable derating above 45°C for LWS-191, 291, 391. Continuous duty -5°C to +65°C with suitable derating above 50°C for LWS-190, 290, 390.

Overload Protection
External overload protection. Automatic electronic current limiting circuit limits the output current to a preset value, thereby providing protection for the load as well as the power supply.

Storage Temperature Range
-55°C to +85°C. -20°C to +85°C for LWS-190, 191, 290, 291, 390, 391. −30°C to +85°C on all dual output models.

Overshoot
No overshoot at turn-on, turn-off, or power failure.

Cooling
All units are convection cooled. No fans or blowers needed.

Mounting
PC board mountable. Refer to outline drawings.

Output Voltage Adjust
LWS-193, 194, 195, 294, 295, 296, 394, 395, 397
Output voltage can be set to desired value within the entire range by inserting a resistor between +V and RP terminals. Resistor can be selected as per equations supplied in instruction manual.

Input/Output Connections
DC input and outputs are via pin type connections. Refer to outline drawings.

Isolation Rating
1500 VDC on LWS-394, 395, 397.
500 VDC on all other models.

Physical Data

Package Model	Weight Lbs. Net	Weight Lbs. Ship	Size Inches
LWS-190	.10	.12	1.85 x 1.85 x 0.47
LWS-191	.16	.19	1.85 x 1.85 x 0.75
LWS-193	.65	.90	2.50 x 3.50 x 1.25
LWS-194	.65	.90	2.50 x 3.50 x 1.25
LWS-195	.75	1.00	2.50 x 4.50 x 1.50
LWS-290	.10	.12	1.85 x 1.85 x 0.47
LWS-291	.16	.19	1.85 x 1.85 x 0.75
LWS-294	.65	.90	2.50 x 3.50 x 1.25
LWS-295	.75	1.00	2.50 x 4.50 x 1.50
LWS-296	.75	1.00	2.50 x 4.50 x 1.50
LWS-390	.10	.12	1.85 x 1.85 x 0.47
LWS-391	.16	.19	1.85 x 1.85 x 0.75
LWS-394	.65	.90	2.50 x 3.50 x 1.25
LWS-395	.75	1.00	2.50 x 4.50 x 1.50
LWS-397	.75	1.00	2.50 x 4.50 x 1.50
LWD-191	.06	.10	1.77 x 1.19 x .40
LWD-291	.06	.10	1.77 x 1.19 x .40
LWD-391	.06	.10	1.77 x 1.19 x .40
LWD-192	.09	.12	1.85 x 1.85 x .47
LWD-292	.09	.12	1.85 x 1.85 x .47
LWD-392	.09	.12	1.85 x 1.85 x .47

/CSA
Under evaluation

Guarantee
90 day guarantee includes labor as well as parts.

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DC-TO-DC Selector Guide

DC Input. Single Output. LW Series.

DC INPUT 20.0-40.0 VDC

MODEL	REGULATION (line, load)	RIPPLE (mV pk-pk)	MAX CURRENT (A) (MAX WATTAGE) (WATTS) 40°C	50°C	60°C	COMPLETE ELEC. SPEC. PG	PKG. SIZE	DIMENSIONS (inches)	COMPLETE MECH. SPEC. PG	QTY. 1	PRICE QTY. 100	QTY. 1000
4.75-16 VOLTS ADJ.												
LWS-295-5	0.1%, 0.4%	100	5.0(25)	4.3(21.5)	3.6(18)	63	95	2.5 x 4.5 x 1.5	133	$150	$127	$95
15-30 VOLTS ADJ.												
LWS-295-24	0.1%, 0.4%	200	1.65(25)	1.4(21.5)	1.2(18)	63	95	2.5 x 4.5 x 1.5	133	150	127	95
20-40 VOLTS ADJ.												
LWS-296-28	0.1%, 0.4%	200	2.5(50)	2.1(42)	1.8(36)	63	95	2.5 x 4.5 x 1.5	133	200	170	127
30-60 VOLTS ADJ.												
LWS-296-48	0.1%, 0.4%	200	1.67(50)	1.4(42)	1.2(36)	63	95	2.5 x 4.5 x 1.5	133	200	170	127

DC INPUT 20.0-60.0 VDC

4.75-16 VOLTS ADJ.												
LWS-394-5	0.1%, 0.4%	100	3.0(15)	2.6(12)	2.3(11.5)	63	94	1.25 x 3.5 x 2.5	133	$119	$101	$75
15-30 VOLTS ADJ.												
LWS-394-24	0.1%, 0.4%	200	1.0(15)	0.9(13)	0.75(11.5)	63	94	1.25 x 3.5 x 2.5	133	119	101	75

DC INPUT 30.0-60.0 VDC

4.75-16 VOLTS ADJ.												
LWS-395-5	0.1%, 0.4%	100	5.0(25)	4.3(21.5)	3.6(18)	63	95	2.5 x 4.5 x 1.5	133	$150	$127	$95
15-30 VOLTS ADJ.												
LWS-395-24	0.1%, 0.4%	200	1.65(25)	1.4(21.5)	1.2(18)	63	95	2.5 x 4.5 x 1.5	133	150	127	95
20-40 VOLTS ADJ.												
LWS-397-28	0.1%, 0.4%	200	3.0(60)	2.5(50)	2.1(42)	63	95	2.5 x 4.5 x 1.5	133	200	170	127
30-60 VOLTS ADJ.												
LWS-397-48	0.1%, 0.4%	200	2.0(60)	1.67(50)	1.4(42)	63	95	2.5 x 4.5 x 1.5	133	200	170	127

DC Input. Dual Output. LW Series.

DC INPUT 5V ±10%

MODEL	Vo	REGULATION (line, load)	RIPPLE (mV pk-pk)	MAX CURRENT (AMPS AT) 40°C	50°C	60°C	COMPLETE ELECT. SPEC. PG	PKG. SIZE	DIMENSIONS (inches)	COMPLETE MECH. SPEC. PG	QTY. 1	PRICE QTY. 100	QTY. 1000
±12 VOLTS ±3% FIXED													
LWD-191-12	±12	0.2%, 0.2%	120	.060	.060	.060	63	D-91	1.77 x 1.19 x .40	133	$62	$49	$25.50
LWD-192-12	±12	0.2%, 0.2%	120	.120	.120	.084	63	D-92	1.85 x 1.85 x .47	133	76	60	31.00
±15 VOLTS ±3% FIXED													
LWD-191-15	±15	0.2%, 0.2%	150	.050	.050	.050	63	D-91	1.77 x 1.19 x .40	133	62	49	25.50
LWD-192-15	±15	0.2%, 0.2%	150	.100	.100	.070	63	D-92	1.85 x 1.85 x .47	133	76	60	31.00

DC INPUT 12V ±10%

±12 VOLTS ±3% FIXED													
LWD-291-12	±12	0.2%, 0.2%	120	.060	.060	.060	63	D-91	1.77 x 1.19 x .40	133	$62	$49	$25.50
LWD-292-12	±12	0.2%, 0.2%	120	.120	.120	.084	63	D-92	1.85 x 1.85 x .47	133	76	60	31.00
±15 VOLTS ±3% FIXED													
LWD-291-15	±15	0.2%, 0.2%	150	.050	.050	.050	63	D-91	1.77 x 1.19 x .40	133	62	49	25.50
LWD-292-15	±15	0.2%, 0.2%	150	.100	.100	.070	63	D-92	1.85 x 1.85 x .47	133	76	60	31.00

DC INPUT 24V ±10%

±12 VOLTS ±3% FIXED													
LWD-391-12	±12	0.2%, 0.2%	120	.060	.060	.060	63	D-91	1.77 x 1.19 x .40	133	$62	$49	$25.50
LWD-392-12	±12	0.2%, 0.2%	120	.120	.120	.084	63	D-92	1.85 x 1.85 x .47	133	76	60	31.00
±15 VOLTS ±3% FIXED													
LWD-391-15	±15	0.2%, 0.2%	150	.050	.050	.050	63	D-91	1.77 x 1.19 x .40	133	62	49	25.50
LWD-392-15	±15	0.2%, 0.2%	150	.100	.100	.070	63	D-92	1.85 x 1.85 x .47	133	76	60	31.00

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