LCA10S

10







High voltage pulse noise type : NAP series Low leakage current type : NAM series *The EMI/EMC Filter is recommended to connect with several devices.

- ①Series name ②100/120V input ③Output wattage ④Single output
- ⑤Output voltage

- ©Optional *3
 C :with Coating
 G :Low leakage current
- Y :with Potentiometer

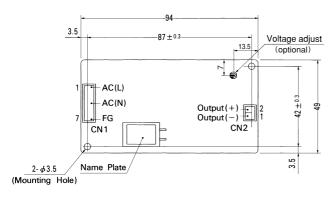
MODEL	LCA10S-5	LCA10S-5-H	LCA10S-12	LCA10S-15	LCA10S-24
MAX OUTPUT WATTAGE[W]	10	10	10.8	10.5	12
DC OUTPUT	5V 2A	5V 2A	12V 0.9A	15V 0.7A	24V 0.5A

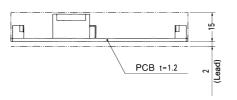
SPECIFICATIONS

	MODEL		LCA10S-5	LCA10S-5-H	LCA10S-12	LCA10S-15	LCA10S-24			
	VOLTAGE[V]		AC85 - 132 1 φ or [DC110 - 170						
	CURRENT[A]	ACIN 100V	0.3typ (lo=100%)							
INPUT			47 - 440 or DC							
INPUI			71typ	71typ	75typ	75typ	78typ			
	INRUSH CURRENT[A]	ACIN 100V								
_	LEAKAGE CURREI	NT[mA]	0.5max (60Hz, Acco	ording to UL, CSA ar	nd DEN-AN)					
	VOLTAGE[V]		5	5	12	15	24			
	CURRENT[A]		2	2 (Peak 3)	0.9	0.7	0.5			
	LINE REGULATION	V[mV]	20max	20max	48max	60max	96max			
	LOAD REGULATIO	N[mV]	40max	40max	100max	120max	150max			
	DIDDI Elm)/m m1	0 to +50°C *1	80max	80max	120max	120max	120max			
	RIPPLE[mVp-p]	-10 - 0°C *1	140max	140max	160max	160max	160max			
OUTPUT	DIDDLE NOICEIVa -1	0 to +50°C *1	120max	120max	150max	150max	150max			
OUIPUI	RIPPLE NOISE[mVp-p]	-10 - 0°C *1	160max	160max	180max	180max	180max			
	TEMPERATURE REGULA	TION[mV]	50max	50max	120max	150max	240max			
	DRIFT[mV]	*2	20max	20max	48max	60max	96max			
	START-UP TIME[m	s]	100max (ACIN 85V, Io=100%)							
	HOLD-UP TIME[ms	s]	10typ (ACIN 85V, Io=100%) 20typ (ACIN 100V, Io=100%)							
	OUTPUT VOLTAGE ADJUSTMENT	T RANGE[V]	Fixed ("Y"which can be adjusted the output is available as optional:5V -5 to +10% : 12, 15, 24V ±10%							
	OUTPUT VOLTAGE SET	TING[V]	4.9 - 5.3	4.9 - 5.3	11.5 - 12.5	14.4 - 15.6	23.0 - 25.0			
	OVERCURRENT PROT	ECTION	Works over 105% of	f rating (works over	105% of peak current	at option -H) and re	covers automatically			
PROTECTION	OVERVOLTAGE PROT	ECTION	Works over 115% of rating, by zener diode clamping							
CIRCUIT AND	OPERATING INDIC	ATION	Not provided							
OTHERS	REMOTE SENSING	3	Not provided							
	REMOTE ON/OFF		Not provided							
	INPUT-OUTPUT		AC2,000V 1minute,	Cutoff current = 10r	nA, DC500V 50M Ω n	nin (At Room Tempe	rature)			
ISOLATION	INPUT-FG		AC2,000V 1minute,	Cutoff current = 10r	nA, DC500V 50M Ω n	nin (At Room Tempe	rature)			
	OUTPUT-FG		AC500V 1minute, C	utoff current = 100m	A, DC500V 50MΩ m	in (At Room Temper	ature)			
	OPERATING TEMP.,HUMID.AND	ALTITUDE	-10 to +60°C, 20 - 9	0%RH (Non conden	sing) (Refer to DERA	TING CURVE), 3,000	Om (10,000feet) max			
ENVIRONMENT	STORAGE TEMP.,HUMID.AND	ALTITUDE	-20 to +75°C, 20 - 9	0%RH (Non conden	sing), 9,000m (30,000	Ofeet) max				
LIVINONWLIVI	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis							
	IMPACT		196.1m/s² (20G), 11	ms, once each X, Y	and Z axis					
NOISE	AGENCY APPROV		UL60950-1, CSA C2	22.2 No.60950-1 Co	mplies with DEN-AN					
REGULATIONS	CONDUCTED NOIS		Complies with FCC-							
OTHERS	CASE SIZE/WEIGH	łT	49×17×94mm (W:	×H×D) / 65g max						
	COOLING METHO	D	Convection							

- *1 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN: RM101).
 *2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C with the input voltage held constant at the rated input/output.
- *3 Please contact us about safety approvals for the model with option.
- Avoid prolonged use under over-load.

LCA-2 June 29, 2011





I/O Connector		Mating Connector.	Terminal		
CN1	B3(7.5)B-XH-A	XHP-7	Chain: SXH-001T-P0.6		
CIVI	D3(7.0)D-XII-A	ΛΠΓ-/	Loose: BXH-001T-P0.6		
CNI2	B2B-XH-A	XHP-2	Chain: SXH-001T-P0.6		
CIVZ	DZD-XIII-A	Ai ii -2	Loose: BXH-001T-P0.6		

(PIN CONNECTION)

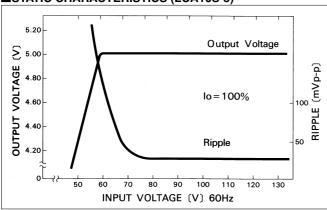
	Pin No.	Input
	1	AC(L)
	2	
CN1	3	
CIVI	4	AC(N)
	5	
	6	
	7	FG

Pin No. Output CN2

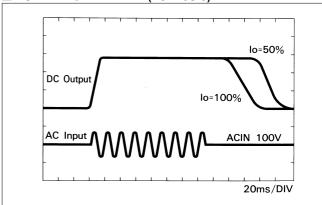
Weight: 65g or less
Tolerance: ±1
Dimensions in mm.
PCB Material: Glass composite (CEM3)

Performance data

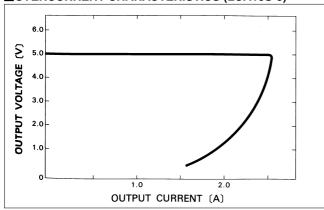
■STATIC CHARACTERISTICS (LCA10S-5)



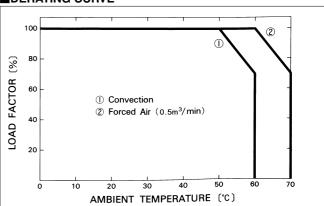




■OVERCURRENT CHARACTERISTICS (LCA10S-5)



DERATING CURVE



LCA-3 June 29, 2011

LCA15S

15







High voltage pulse noise type : NAP series Low leakage current type : NAM series *The EMI/EMC Filter is recommended to connect with several devices.

①Series name	
@ 400/400\/:	

- ②100/120V input ③Output wattage ④Single output
- ⑤Output voltage
- ©Optional *3
 C :with Coating
 G :Low leakage current
- Y :with Potentiometer

MODEL	LCA15S-5	LCA15S-12	LCA15S-15	LCA15S-24
MAX OUTPUT WATTAGE[W]	15	15.6	15	16.8
DC OUTPUT	5V 3A	12V 1.3A	15V 1A	24V 0.7A

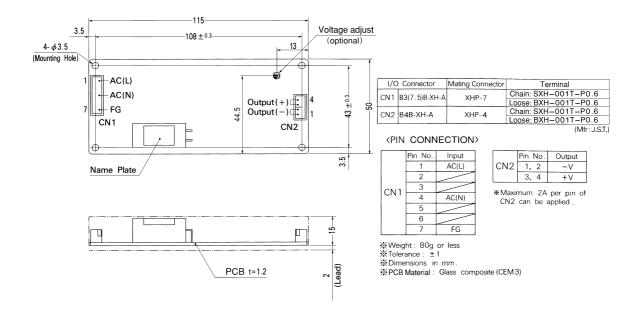
SPECIFICATIONS

	MODEL		LCA15S-5	LCA15S-12	LCA15S-15	LCA15S-24					
	VOLTAGE[V]		AC85 - 132 1 φ or DC110) - 170							
	FREQUENCY[Hz] 4 EFFICIENCY[%] 7		0.4typ (lo=100%)								
INPUT			47 - 440 or DC								
INPUT			72typ	75typ	75typ	78typ					
	INRUSH CURRENT[A]	ACIN 100V	20typ (lo=100%) (At cold	20typ (lo=100%) (At cold start)							
	LEAKAGE CURRE	NT[mA]	0.5max (60Hz, According	0.5max (60Hz, According to UL, CSA and DEN-AN)							
A	VOLTAGE[V]		5	12	15	24					
	CURRENT[A]		3	1.3	1	0.7					
	LINE REGULATION	N[mV]	20max	48max	60max	96max					
	LOAD REGULATIO	N[mV]	40max	100max	120max	150max					
	DIDDI Elm\/n n1	0 to +50°C *1	80max	120max	120max	120max					
	RIPPLE[mVp-p]	-10 - 0°C *1	140max	160max	160max	160max					
OUTPUT	RIPPLE NOISE[mVp-p]	0 to +50°C *1	120max	150max	150max	150max					
OUIFUI	HIPPLE NOISE[IIIVP-P]	-10 - 0°C *1	160max	180max	180max	180max					
	TEMPERATURE REGULATION[mV]		50max	120max	150max	240max					
	DRIFT[mV]	*2	20max	48max	60max	96max					
	START-UP TIME[m	ıs]	100max (ACIN 85V, lo=100%)								
	HOLD-UP TIME[ms	s]	10typ (ACIN 85V, Io=100%) 20typ (ACIN 100V, Io=100%)								
	OUTPUT VOLTAGE ADJUSTMEN	T RANGE[V]	Fixed ("Y"which can be adjusted the output is available as optional:5V -5 to +10% : 12, 15, 24V \pm 10% is available as optional:5V -5 to +10% : 12, 15, 24V \pm 10% is available as optional:5V -5 to +10% : 12, 15, 24V \pm 10% is available as optional:5V -5 to +10% : 12, 15, 24V \pm 10% is available as optional:5V -5 to +10% : 12, 15, 24V \pm 10% is available as optional:5V -5 to +10% : 12, 15, 24V \pm 10% is available as optional:5V -5 to +10% : 12, 15, 24V \pm 10% is available as optional:5V -5 to +10% : 12, 15, 24V \pm 10% is available as optional:5V -5 to +10% : 12, 15, 24V \pm 10% is available as optional:5V -5 to +10% : 12, 15, 24V \pm 10% is available as optional:5V -5 to +10% : 12, 15, 24V \pm 10% is available as optional:5V -5 to +10% : 12, 15, 24V \pm 10% is available as optional:5V -5 to +10% : 12, 15, 24V \pm 10% is available as optional:5V -5 to +10% : 12, 15, 24V \pm 10% is available as optional:5V -5 to +10% : 12, 15, 24V \pm 10% is available as optional:5V -5 to +10% is availab								
	OUTPUT VOLTAGE SET	TTING[V]	4.9 - 5.3	11.5 - 12.5	14.4 - 15.6	23.0 - 25.0					
	OVERCURRENT PROT	TECTION	Works over 105% of rating	g and recovers automatica	lly						
PROTECTION	OVERVOLTAGE PROT	ECTION	Works over 115% of rating, by zener diode clamping								
CIRCUIT AND	OPERATING INDIC	CATION	Not provided								
OTHERS	REMOTE SENSING	G	Not provided								
	REMOTE ON/OFF		Not provided								
	INPUT-OUTPUT				$^\prime$ 50M Ω min (At Room Tem	<u> </u>					
ISOLATION	INPUT-FG				$^\prime$ 50M Ω min (At Room Ten	•					
	OUTPUT-FG				50 Μ Ω min (At Room Tem						
	OPERATING TEMP.,HUMID.AND			<u>.</u>	to DERATING CURVE), 3,	000m (10,000feet) max					
ENVIRONMENT	STORAGE TEMP.,HUMID.AND	ALTITUDE		H (Non condensing), 9,000							
	VIBRATION			<u> </u>	es each along X, Y and Z	axis					
	IMPACT		, ,	nce each X, Y and Z axis							
NOISE	AGENCY APPROV			lo.60950-1 Complies with I	DEN-AN						
REGULATIONS	CONDUCTED NOI		Complies with FCC-B, VC								
OTHERS	CASE SIZE/WEIGH		50×17×115mm (W×H>	(D) / 80g max							
	COOLING METHO	D	Convection								

- *1 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN: RM101).
 *2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C with the input voltage held constant at the rated input/output.
- *3 Please contact us about safety approvals for the model with option.
- Avoid prolonged use under over-load.

LCA-4 June 29, 2011





Performance data

50 60 70 80 90

■STATIC CHARACTERISTICS (LCA15S-5)

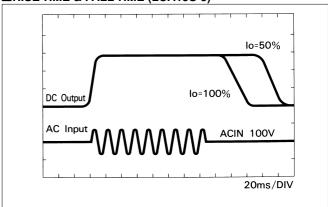
5.20 Output Voltage 5.00 PPLE [mVp-p] VOLTAGE 4.80 lo = 100%4.60 OUTPUT 4.40 Ripple 4.20

INPUT VOLTAGE (V) 60Hz

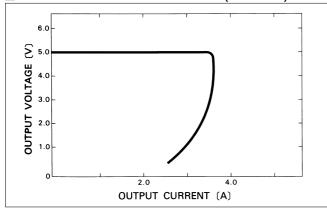
120 130

100 110

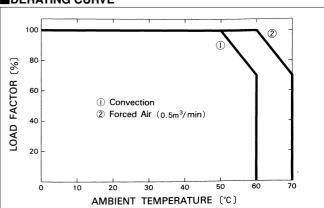








DERATING CURVE



June 29, 2011 LCA-5

LCA30S

30







High voltage pulse noise type : NAP series Low leakage current type : NAM series *The EMI/EMC Filter is recommended to connect with several devices.

- ①Series name ②100/120V input ③Output wattage ④Single output
- ⑤Output voltage
- ©Optional *3
 C :with Coating
 G :Low leakage current
- Y :with Potentiometer

MODEL	LCA30S-3	LCA30S-5	LCA30S-12	LCA30S-15	LCA30S-24	LCA30S-36	LCA30S-48
MAX OUTPUT WATTAGE[W]	18	30	30	30	31.2	32.4	33.6
DC OUTPUT	3V 6A	5V 6A	12V 2.5A	15V 2A	24V 1.3A	36V 0.9A	48V 0.7A

SPECIFICATIONS

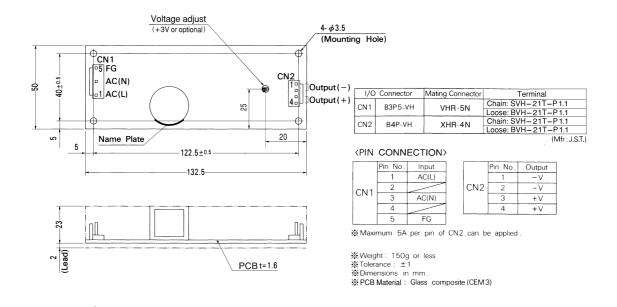
	MODEL		LCA30S-3	LCA30S-5	LCA30S-12	LCA30S-15	LCA30S-24	LCA30S-36	LCA30S-48			
	VOLTAGE[V]		AC85 - 132 1	ϕ or DC110 - $^{-1}$	170							
	CURRENT[A]	ACIN 100V	0.7typ (lo=100)%)								
INDUT	FREQUENCY[Hz]		47 - 440 or D0	7 - 440 or DC								
INPUT	EFFICIENCY[%]		69typ	75typ	80typ	81typ	82typ	80typ	80typ			
	INRUSH CURRENT[A]	ACIN 100V	25typ (lo=100	25typ (lo=100%) (At cold start)								
	LEAKAGE CURRE	NT[mA]	0.5max (60Hz	, According to	UL, CSA and D	EN-AN)						
	VOLTAGE[V]		3	5	12	15	24	36	48			
	CURRENT[A]		6	6	2.5	2	1.3	0.9	0.7			
	LINE REGULATION	N[mV]	20max	20max	48max	60max	96max	144max	192max			
	LOAD REGULATIO	N[mV]	40max	40max	100max	120max	150max	240max	300max			
	DIDDI Elm\/m m1	0 to +50°C *1	80max	80max	120max	120max	120max	150max	150max			
	RIPPLE[mVp-p]	-10 - 0°C *1	140max	140max	160max	160max	160max	200max	200max			
OUTPUT	DIDDI E NOICEIM/n n1	0 to +50°C *1	120max	120max	150max	150max	150max	250max	350max			
OUIPUI	RIPPLE NOISE[mVp-p]	-10 - 0℃ *1	160max	160max	180max	180max	180max	300max	400max			
	TEMPERATURE REGULA	TION[mV]	50max	50max	120max	150max	240max	360max	480max			
	DRIFT[mV]	*2	20max	20max	48max	60max	96max	144max	192max			
	START-UP TIME[m	ıs]	100max (ACIN 85V, Io=100%)									
	HOLD-UP TIME[ms	s]	10typ (ACIN 85V, Io=100%) 20typ (ACIN 100V, Io=100%)									
	OUTPUT VOLTAGE ADJUSTMENT	T RANGE[V]	2.85 - 3.6	Fixed ("Y"which o	can be adjusted the	output is available	as optional:5V -5	to +10% : 12, 15, 2	24, 36, 48V ±10%			
	OUTPUT VOLTAGE SET	TTING[V]		4.9 - 5.3	11.5 - 12.5	14.4 - 15.6	23.0 - 25.0	34.5 - 37.5	46.0 - 50.0			
	OVERCURRENT PROT	TECTION	Works over 10	5% of rating a	nd recovers aut	omatically						
PROTECTION	OVERVOLTAGE PROTI	ECTION	4.00V min	Works over 1	15% of rating, b	y zener diode o	clamping					
CIRCUIT AND	OPERATING INDIC	ATION	Not provided									
OTHERS	REMOTE SENSING	G	Not provided									
	REMOTE ON/OFF		Not provided									
	INPUT-OUTPUT		AC2,000V 1m	inute, Cutoff cu	ırrent = 10mA, I	DC500V 50M Ω	min (At Room	Temperature)				
ISOLATION	INPUT-FG		AC2,000V 1m	inute, Cutoff cu	ırrent = 10mA, I	DC500V 50M Ω	min (At Room	Temperature)				
	OUTPUT-FG		AC500V 1min	ute, Cutoff curr	ent = 100mA, D	C500V 50MΩ	min (At Room	Temperature)				
	OPERATING TEMP.,HUMID.AND	ALTITUDE	-10 to +60℃,	20 - 90%RH (N	Non condensing) (Refer to DEF	ATING CURVE	E), 3,000m (10,0	000feet) max			
ENVIRONMENT	STORAGE TEMP.;HUMID.AND	ALTITUDE	-20 to +75℃,	20 - 90%RH (N	lon condensing), 9,000m (30,0	00feet) max					
ENVIRONMENT	VIBRATION		10 - 55Hz, 19	.6m/s² (2G), 3n	ninutes period,	60minutes each	along X, Y an	d Z axis				
	IMPACT		196.1m/s ² (20	G), 11ms, once	e each X, Y and	I Z axis						
SAFETY AND NOISE	AGENCY APPROV	ALS	UL60950-1, C	SA C22.2 No.6	0950-1 Compli	es with DEN-AN	1					
REGULATIONS	CONDUCTED NOIS	SE	Complies with	FCC-B, VCCI-	В							
OTHERS	CASE SIZE/WEIGH	-IT	50 × 25 × 132.	5mm (W×H×I	D) / 150g max							
CITERS	COOLING METHO	D	Convection									

- *1 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN: RM101).
 *2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C with the input voltage held constant at the rated input/output.
- *3 Please contact us about safety approvals for the model with option.

Avoid prolonged use under over-load.

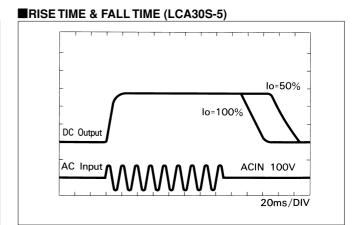
LCA-6 June 29, 2011

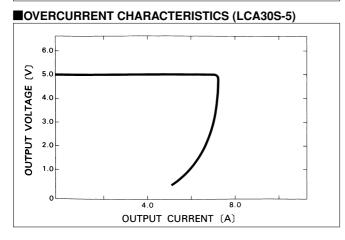


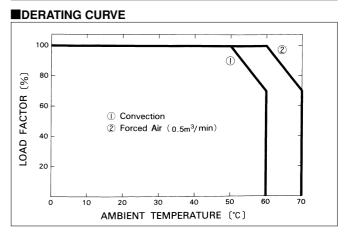


Performance data

■STATIC CHARACTERISTICS (LCA30S-5) 5.20 Output Voltage **∑** 5.00 (d-d/m) : VOLTAGE 4.80 lo = 100%4.60 IPPLE OUTPUT 4.40 $\overline{\mathbf{x}}$ 50 Ripple 4.20 50 70 80 90 100 110 INPUT VOLTAGE (V) 60Hz



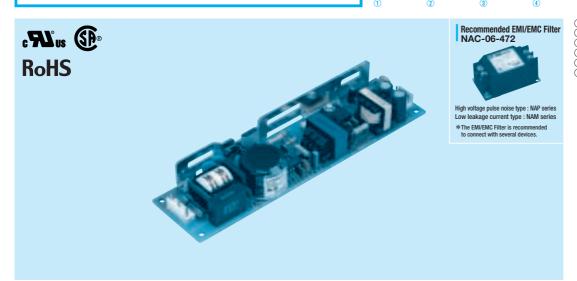




LCA-7

LCA50S

50



- ①Series name ②100/120V input ③Output wattage ④Single output
- ⑤Output voltage
- Optional *4
 C :with Coating
 G :Low leakage current Y :with Potentiometer

MODEL	LCA50S-3	LCA50S-5	LCA50S-12	LCA50S-15	LCA50S-24	LCA50S-24-H	LCA50S-36	LCA50S-48
MAX OUTPUT WATTAGE[W]	30	50	51.6	52.5	60	60	61.2	62.4
DC OUTPUT	3V 10A	5V 10A	12V 4.3A	15V 3.5A	24V 2.5A	24V 2.5A	36V 1.7A	48V 1.3A

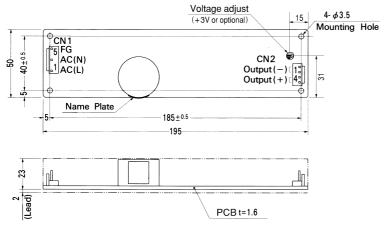
SPECIFICATIONS

N	MODEL		LCA50S-3	LCA50S-5	LCA50S-12	LCA50S-15	LCA50S-24	LCA50S-24-H	LCA50S-36	LCA50S-48			
V	/OLTAGE[V]			ϕ or DC110 -	170								
C	CURRENT[A]	ACIN 100V	1.3typ (lo=10	1.3typ (lo=100%)									
INPUT F	EFFICIENCY[%] INRUSH CURRENT[A] ACIN 100V		47 - 440 or D	47 - 440 or DC									
INFO!			71typ	78typ	80typ	81typ	82typ	82typ	82typ	82typ			
II			71 '	%) (At cold sta									
L	EAKAGE CURRENT	[mA]	0.5max (60Hz	0.5max (60Hz, According to UL, CSA and DEN-AN)									
V	/OLTAGE[V]		3	5	12	15	24	24	36	48			
C	CURRENT[A]	*3	10	10	4.3	3.5	2.5	2.5 (Peak 3)	1.7	1.3			
L	INE REGULATION[r	nV]	20max	20max	48max	60max	96max	96max	144max	192max			
L	OAD REGULATION	[mV]	40max	40max	100max	120max	150max	150max	240max	300max			
	RIPPLE[mVp-p]	0 to +50°C *1	80max	80max	120max	120max	120max	120max	150max	150max			
<u> </u>		-10 - 0℃ *1	140max	140max	160max	160max	160max	160max	200max	200max			
l _R	RIPPLE NOISE[mVp-p]	0 to +50°C *1	120max	120max	150max	150max	150max	150max	250max	350max			
OUTPUT 🗀	III 1 EE NOISE[IIIVP-P]	-10 - 0℃ *1	160max	160max	180max	180max	180max	180max	300max	400max			
TE	EMPERATURE REGULATION(mV)	0 to +50℃	50max	50max	120max	150max	240max	240max	360max	480max			
	LINIT ETIATOTIE TIEGOEATION[IIIV]	-10 to +50°C	60max	60max	150max	180max	290max	290max	450max	600max			
	PRIFT[mV]	*2		20max	48max	60max	96max	96max	144max	192max			
S	START-UP TIME[ms]		200max (ACIN 85V, Io=100%)										
	HOLD-UP TIME[ms]		10typ (ACIN 85V, Io=100%) 20typ (ACIN 100V, Io=100%) 2.85 - 3.6 Fixed ("Y"which can be adjusted the output is available as optional: 5, 12, 15, 24, 36, 48V ±10%)										
01	UTPUT VOLTAGE ADJUSTMENT	RANGE[V]	2.85 - 3.6	· ·						18V ±10%)			
	OUTPUT VOLTAGE SET			4.9 - 5.3	11.5 - 12.5	14.4 - 15.6	23.0 - 25.0	23.0 - 25.0	34.5 - 37.5	46.0 - 50.0			
	VERCURRENT PROT				works over 10	<u> </u>	rent at option -	H) and recover	s automaticall	У			
FROIECTION —	VERVOLTAGE PROTE		4.00 - 5.25V	Works at 115	5 - 140% of ration	ng							
OTHERS -	PERATING INDICAT	TION	Not provided										
OTHERS R	REMOTE SENSING		Not provided										
	REMOTE ON/OFF		Not provided										
<u> </u>	NPUT-OUTPUT			· · · · · · · · · · · · · · · · · · ·	current = 10mA		,						
	NPUT-FG				current = 10mA				·				
	DUTPUT-FG				rrent = 100mA,		·- ·						
_	PERATING TEMP.,HUMID.AND				Non condensin			VE), 3,000m (1	0,000feet) ma:	X .			
	STORAGE TEMP.,HUMID.AND ALTITUDE				Non condensin								
V	/IBRATION				minutes period		ch along X, Y	and Z axis					
	MPACT				ce each X, Y ar								
NOISE -	AGENCY APPROVAL				60950-1 Com	olies with DEN	-AN						
	CONDUCTED NOISE			n FCC-B, VCC									
OTHERS =	CASE SIZE/WEIGHT			mm (W×H×D)) / 200g max								
C	COOLING METHOD		Convection										

- *1 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN: RM101).
 *2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C with the input voltage held constant at the rated input/output.
- *3 Peak load for 10 sec. or less is acceptable(The average current has to be less than the rated current).
- *4 Please contact us about safety approvals for the model with option.

LCA-8 June 29, 2011





1/0	O Connector Mating Connector		Terminal
CN1	B3P5-VH	VHR-5N	Chain: SVH-21T-P1.1
CIVI	DOI 0-411	VIIN-SIN	Loose: BVH-21T-P1.1
CN2	B4P-VH	VHR-4N	Chain: SVH-21T-P1.1
CIVZ	D41 - VII	VIIII	Loose: BVH-21T-P1.1
			(Mfr:J.S.T.

(PIN CONNECTION)

	Pin No.	Input		Pin No.	Output	
	1	AC(L)				
CN1	2		CN2	1 • 2	-V	
CNT	3	AC(N)	CNZ	-		
	4			3 • 4	+V	
	5	FG				

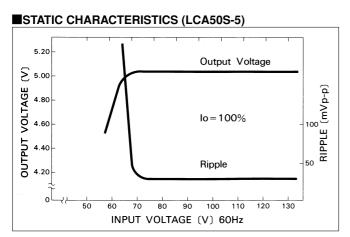
*Maximum 5A per pin of CN2 can be applied

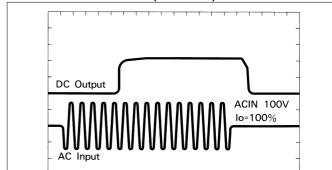
% Weight: 200g or less

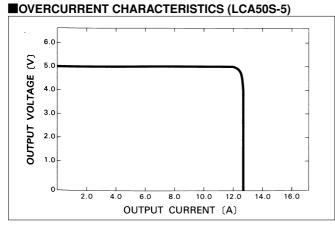
■RISE TIME & FALL TIME (LCA50S-5)

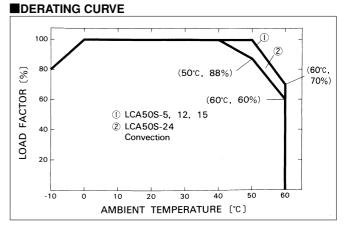
★ Tolerance : ± 1
 ★ Dimensions in mm.
 ★ PCB Material : Glass composite (CEM3)

Performance data







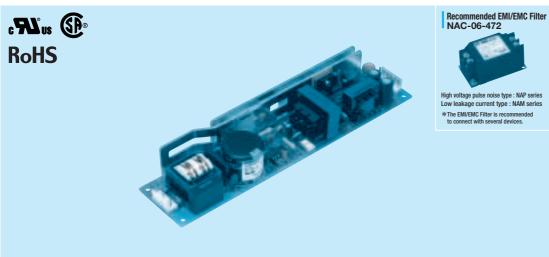


LCA-9

20ms/DIV

LCA75S

75



①Series name ②100/120V input ③Output wattage ④Single output ⑤Output voltage Optional *4
 C :with Coating
 G :Low leakage current

	Y :with Potentiometer
es	
es	

MODEL	LCA75S-3	LCA75S-5	LCA75S-12	LCA75S-15	LCA75S-24	LCA75S-24-H	LCA75S-36	LCA75S-48
MAX OUTPUT WATTAGE[W]	45	75	75.6	75	76.8	76.8	75.6	76.8
DC OUTPUT	3V 15A	5V 15A	12V 6.3A	15V 5A	24V 3.2A	24V 3.2A	36V 2.1A	48V 1.6A

SPECIFICATIONS

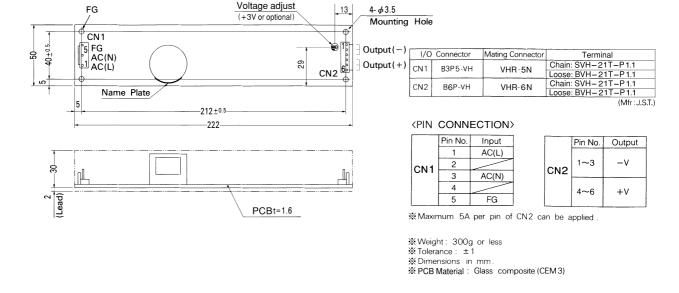
	MODEL		LCA75S-3	LCA75S-5	LCA75S-12	LCA75S-15	LCA75S-24	LCA75S-24-H	LCA75S-36	LCA75S-48	
	VOLTAGE[V]		AC85 - 132 1 ϕ or DC110 - 170								
	CURRENT[A]	ACIN 100V	1.9typ (lo=100%)								
INPUT	FREQUENCY[Hz]		47 - 440 or DC								
	EFFICIENCY[%]		72typ	79typ	81typ	83typ	84typ	84typ	84typ	84typ	
	INRUSH CURRENT[A]	ACIN 100V	30typ (Io=100	%) (At cold st	art)						
	LEAKAGE CURRENT[mA]		0.5max (60Hz, According to UL, CSA and DEN-AN)								
	VOLTAGE[V]		3	5	12	15	24	24	36	48	
OUTPUT .	CURRENT[A]	*3	15	15	6.3	5	3.2	3.2 (Peak 4.2)	2.1	1.6	
	LINE REGULATION[I	mV]	20max	20max	48max	60max	96max	96max	144max	192max	
	LOAD REGULATION	[mV]	40max	40max	100max	120max	150max	150max	240max	300max	
	DIDDI E(m)/m m1	0 to +50°C *1	80max	80max	120max	120max	120max	120max	150max	150max	
	RIPPLE[mVp-p]	-10 - 0℃ *1	140max	140max	160max	160max	160max	160max	200max	200max	
	DIDDLE NOICEIMV: ::1	0 to +50°C *1	120max	120max	150max	150max	150max	150max	250max	350max	
	RIPPLE NOISE[mVp-p]	-10 - 0℃ *1	160max	160max	180max	180max	180max	180max	300max	400max	
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	50max	120max	150max	240max	240max	360max	480max	
		-10 to +50℃	60max	60max	150max	180max	290max	290max	450max	600max	
	DRIFT[mV] *2		20max	20max	48max	60max	96max	96max	144max	192max	
	START-UP TIME[ms]		200max (ACIN 85V, Io=100%)								
	HOLD-UP TIME[ms]		10typ (ACIN 85V, Io=100%) 20typ (ACIN 100V, Io=100%)								
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.85 - 3.6 Fixed ("Y"which can be adjusted the output is available as optional: 5, 12, 15, 24, 36, 48V ±10%)								
	OUTPUT VOLTAGE SET	TING[V]		4.9 - 5.3	11.5 - 12.5	14.4 - 15.6	23.0 - 25.0	23.0 - 25.0	34.5 - 37.5	46.0 - 50.0	
	OVERCURRENT PROTECTION										
PROTECTION	OVERVOLTAGE PROTE	ECTION	4.00 - 5.25V	Works at 115	5 - 140% of rati	ng					
CIRCUIT AND	OPERATING INDICA	TION	Not provided								
PROTECTION CIRCUIT AND OTHERS	REMOTE SENSING		Not provided								
	REMOTE ON/OFF		Not provided								
	INPUT-OUTPUT		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)								
SOLATION	INPUT-FG		AC2.000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)								
	OUTPUT-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50M Ω min (At Room Temperature)								
	OPERATING TEMP.;HUMID.AND	ALTITUDE	-10 to +60°C, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000feet) max								
ENVIRONMENT	STORAGE TEMP.;HUMID.AND	ALTITUDE	-20 to +75°C, 20 - 90%RH (Non condensing), 9,000m (30,000feet) max								
INVIRONMENT	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis								
	IMPACT		196.1m/s ² (20	0G), 11ms, one	ce each X, Y a	nd Z axis					
SAFETY AND	AGENCY APPROVAL	LS	UL60950-1, C	CSA C22.2 No.	.60950-1 Comp	lies with DEN-	AN				
REGULATIONS	CONDUCTED NOISE	:	Complies with	n FCC-B, VCC	I-B						
OTHERS	CASE SIZE/WEIGHT		50 × 32 × 222	mm (W×H×E	0) / 300g max						
DIMERS	COOLING METHOD		Convection								

*1 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN: RM101).
 *2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C with the input voltage held constant at the rated input/output.

*3 Peak load for 10 sec. or less is acceptable(The average current has to be less than the rated current).

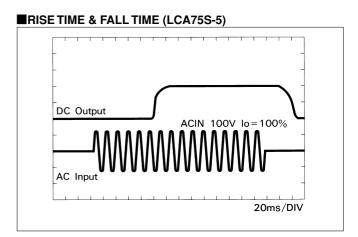
*4 Please contact us about safety approvals for the model with option.

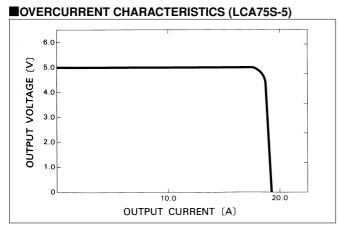
June 29, 2011 **LCA-10**

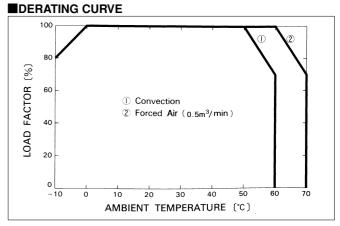


Performance data

■STATIC CHARACTERISTICS (LCA75S-5) 5.20 Output Voltage 5.00 4.80 4.60 LDATAGE 4.40 4.20 흥 RIPPLE (mVp-p) lo = 100%Ripple 50 70 100 110 120 INPUT VOLTAGE (V) 60Hz



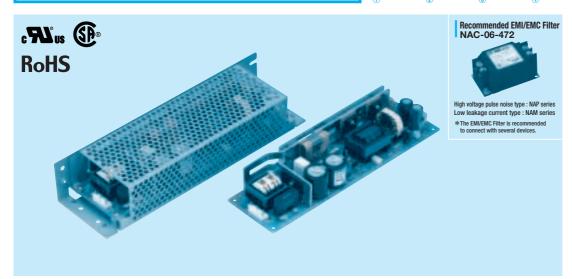




LCA-11

LCA100S

100



- ①Series name ②100/120V input ③Output wattage ④Single output ⑤Output voltage Optional *4
 C :with Coating
 G :Low leakage current
- S :with Chassis SN:with Chassis & cover Y:with Potentiometer

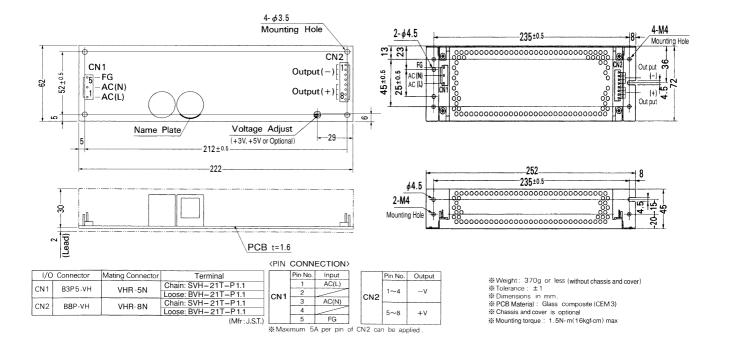
MODEL	LCA100S-3	LCA100S-5	LCA100S-12	LCA100S-15	LCA100S-24	LCA100S-24-H	LCA100S-36	LCA100S-48
MAX OUTPUT WATTAGE[W]	60	100	102	105	103.2	103.2	108	105.6
DC OUTPUT	3V 20A	5V 20A	12V 8.5A	15V 7A	24V 4.3A	24V 4.3A	36V 3A	48V 2.2A

SPECIFICATIONS

	MODEL		LCA100S-3	LCA100S-5	LCA100S-12	LCA100S-15	LCA100S-24	LCA100S-24-H	LCA100S-36	LCA100S-48		
	VOLTAGE[V]		AC85 - 132 1 ϕ or DC110 - 170									
	CURRENT[A]	ACIN 100V	2.5typ (lo=100%)									
INPUT	FREQUENCY[Hz]		47 - 440 or DC									
INFUI	EFFICIENCY[%]		74typ	79typ	83typ	84typ	85typ	85typ	85typ	85typ		
	INRUSH CURRENT[A]	ACIN 100V	15typ (lo=100	1%)								
	LEAKAGE CURRENT[mA]		0.5max (60Hz	0.5max (60Hz, According to UL, CSA and DEN-AN)								
	VOLTAGE[V]		3	5	12	15	24	24	36	48		
	CURRENT[A]	*3	20	20	8.5	7	4.3	4.3 (Peak 7)	3	2.2		
	LINE REGULATION[mV]	20max	20max	48max	60max	96max	96max	144max	192max		
	LOAD REGULATION	[mV]	40max	40max	100max	120max	150max	150max	240max	300max		
	DIDDI E(ma)/m m1	0 to +50°C *1	80max	80max	120max	120max	120max	120max	150max	150max		
	RIPPLE[mVp-p]	-10 - 0℃ *1	140max	140max	160max	160max	160max	160max	200max	200max		
	DIDDI E NOICEIMV:1	0 to +50°C *1	120max	120max	150max	150max	150max	250max	250max	350max		
OUTPUT	RIPPLE NOISE[mVp-p]	-10 - 0℃ *1	160max	160max	180max	180max	180max	280max	300max	400max		
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	50max	120max	150max	240max	240max	360max	480max		
		-10 to +50℃	60max	60max	150max	180max	290max	290max	450max	600max		
	DRIFT[mV] *2		20max	20max	48max	60max	96max	96max	144max	192max		
	START-UP TIME[ms]		200max (ACIN 85V, Io=100%)									
	HOLD-UP TIME[ms]		10typ (ACIN 85V, Io=100%) 20typ (ACIN 100V, Io=100%)									
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.85 - 3.6	4.5 - 5.5	Fixed ("Y"which	n can be adjuste	d the output is a	vailable as optio	nal: 12, 15, 24, 3	36, 48V ±10%		
	OUTPUT VOLTAGE SET	TING[V]			11.5 - 12.5	14.4 - 15.6	23.0 - 25.0	23.0 - 25.0	34.5 - 37.5	46.0 - 50.0		
	OVERCURRENT PROT	ECTION	Works over 105% of rating (works over 105% of peak current at option -H) and recovers automatically									
PROTECTION	OVERVOLTAGE PROT	ECTION	4.00 - 5.25V Works at 115 - 140% of rating									
PROTECTION CIRCUIT AND OTHERS	OPERATING INDICA	TION	Not provided									
OTHERS	REMOTE SENSING		Not provided									
	REMOTE ON/OFF		Not provided									
	INPUT-OUTPUT		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)									
ISOLATION	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)									
	OUTPUT-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At Room Temperature)									
	OPERATING TEMP., HUMID. AND	ALTITUDE	-10 to +60°C, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000feet) max									
ENN/IDONINENT	STORAGE TEMP.,HUMID.AND	ALTITUDE										
ENVIRONMENT	VIBRATION		10 - 55Hz, 19.6m/s ² (2G), 3minutes period, 60minutes each along X, Y and Z axis									
	IMPACT		196.1m/s ² (20	G), 11ms, onc	e each X, Y ar	nd Z axis						
SAFETY AND	AGENCY APPROVAL	LS	UL60950-1, C	SA C22.2 No.	60950-1 Comp	lies with DEN-A	AN					
	CONDUCTED NOISE		Complies with	FCC-B, VCCI	I-B							
	CASE SIZE/WEIGHT		62×32×222i	mm (W×H×D) / 370g max (v	without chassis	and cover)					
OTHERS	COOLING METHOD		Convection		<u> </u>							

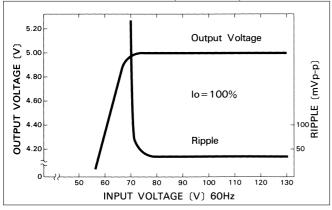
- *1 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN: RM101).
 *2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C with the input voltage held constant at the rated input/output.
 *3 Peak load for 20 sec. or less is acceptable (The average current has to be less than the rated current).
- Please contact us about safety approvals for the model with option. Derating is required when operated with chassis and cover.

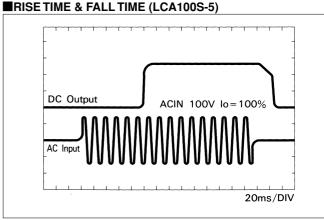
LCA-12 June 29, 2011



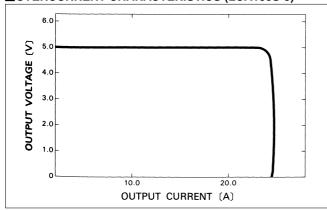
Performance data

■STATIC CHARACTERISTICS (LCA100S-5)

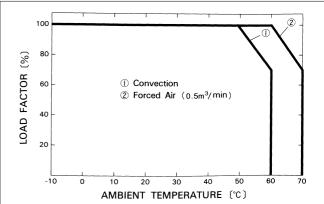




■OVERCURRENT CHARACTERISTICS (LCA100S-5)

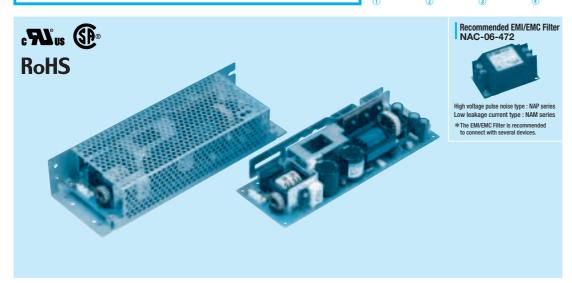


DERATING CURVE



LCA150S

150



- ①Series name ②100/120V input 3 Output wattage
 4 Single output ⑤Output voltage Optional *4
 C :with Coating
 G :Low leakage current
- S :with Chassis SN:with Chassis & cover Y:with Potentiometer

MODEL LCA150S-3 LCA150S-5 LCA150S-12 LCA150S-15 LCA150S-24 LCA150S-24-H LCA150S-36 LCA150S-48 MAX OUTPUT WATTAGE[W] 90 150 150 150 151.2 151.2 151.2 153.6 DC OUTPUT 3V 30A 5V 30A 12V 12.5A 15V 10A 24V 6.3A 24V 6.3A 36V 4.2A 48V 3.2A

SPECIFICATIONS

	MODEL		LCA150S-3	LCA150S-5	LCA150S-12	LCA150S-15	LCA150S-24	LCA150S-24-H	LCA150S-36	LCA150S-48	
	VOLTAGE[V]		AC85 - 132 1 φ or DC110 - 170								
	CURRENT[A] ACIN 100V		3.6typ (lo=100%)								
INDUT	FREQUENCY[Hz]		47 - 440 or DC								
INPUT	EFFICIENCY[%]		72typ	79typ	82typ	83typ	85typ	85typ	85typ	85typ	
	INRUSH CURRENT[A] ACIN 100V										
	LEAKAGE CURRENT[mA]		0.5max (60Hz, According to UL, CSA and DEN-AN)								
	VOLTAGE[V]		3	5	12	15	24	24	36	48	
	CURRENT[A]	*3	30	30	12.5	10	6.3	6.3 (Peak 10)	4.2	3.2	
	LINE REGULATION[mV]	20max	20max	48max	60max	96max	96max	144max	192max	
	LOAD REGULATION	[mV]	40max	40max	100max	120max	150max	150max	240max	300max	
	RIPPLE[mVp-p]	0 to +50°C *1	80max	80max	120max	120max	120max	120max	150max	150max	
	MIPPLE[IIIVP-P]	-10 - 0℃ *1	140max	140max	160max	160max	160max	160max	200max	200max	
	RIPPLE NOISE[mVp-p]	0 to +50°C *1	120max	120max	150max	150max	150max	150max	250max	350max	
OUTPUT	MIPPLE MOISE[IIIVP-P]	-10 - 0℃ *1	160max	160max	180max	180max	180max	180max	300max	400max	
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	50max	120max	150max	240max	240max	360max	480max	
1		-10 to +50℃	60max	60max	150max	180max	290max	290max	450max	600max	
	DRIFT[mV] *2		20max	20max	48max	60max	96max	96max	144max	192max	
	START-UP TIME[ms]		200max (ACIN 85V, Io=100%)								
	HOLD-UP TIME[ms]		10typ (ACIN 85V, Io=100%) 20typ (ACIN 100V, Io=100%)								
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.85 - 3.6	4.5 - 5.5	Fixed ("Y"which	can be adjuste	d the output is a	vailable as option	nal: 12, 15, 24, 3	36, 48V ±10%	
	OUTPUT VOLTAGE SET	TING[V]			11.5 - 12.5	14.4 - 15.6	23.0 - 25.0	23.0 - 25.0	34.5 - 37.5	46.0 - 50.0	
	OVERCURRENT PROT	ECTION	Works over 105% of rating (works over 105% of peak current at option -H) and recovers automatically								
PROTECTION	OVERVOLTAGE PROTI	ECTION	4.00 - 5.25V Works at 115 - 140% of rating								
PROTECTION CIRCUIT AND DITHERS SOLATION	OPERATING INDICA	TION	Not provided								
OTHERS	REMOTE SENSING		Not provided						36 4.2 144max 240max 150max 200max 250max 300max 360max 450max 144max al: 12, 15, 24, 3(34.5 - 37.5) automatically		
	REMOTE ON/OFF		Not provided								
	INPUT-OUTPUT		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)								
ISOLATION	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)								
	OUTPUT-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50M Ω min (At Room Temperature)								
	OPERATING TEMP., HUMID. AND	ALTITUDE	-10 to +60℃, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000feet) max								
ENVIDONMENT	STORAGE TEMP.,HUMID.AND	ALTITUDE	-20 to +75°C, 20 - 90%RH (Non condensing), 9,000m (30,000feet) max								
LINVINONMENT	VIBRATION		10 - 55Hz, 19	.6m/s² (2G), 3	minutes period	60minutes ea	ch along X, Y a	and Z axis			
	IMPACT		196.1m/s ² (20)G), 11ms, onc	ce each X, Y ar	id Z axis					
SAFETY AND	AGENCY APPROVAL	LS	UL60950-1, C	SA C22.2 No.	60950-1 Comp	ies with DEN-A	AN				
REGULATIONS	CONDUCTED NOISE		Complies with	FCC-B, VCC	I-B						
OTHERS	CASE SIZE/WEIGHT		75×36×2221	mm (W×H×D)) / 550g max (v	vithout chassis	and cover)				
CHIENS	COOLING METHOD		Convection								

- Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN: RM101).

 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C with the input voltage held constant at the rated input/output.

 Peak load for 15 sec. or less is acceptable (The average current has to be less than the rated current).
- Please contact us about safety approvals for the model with option.
- Derating is required when operated with chassis and cover.

LCA-14 June 29, 2011



4-M4

CN1

I/O Connector

CN2

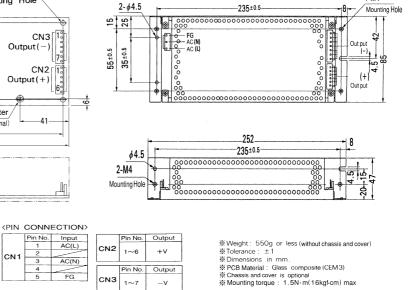
CN3

B3P5-VH

B6P-VH

B7P-VH

°5 FG AC(N) 1 AC(L)



Performance data

Mating Connector

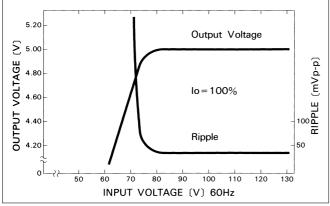
VHR-5N

XHR-6N

VHR-7N

■STATIC CHARACTERISTICS (LCA150S-5)

Name Plate,



 $4 - \phi 3.5$

Voltage Adjuster

(+3V, +5V or Optional

PCB t=1.6

212±0.5

-222

Termina

Chain: SVH-21T-P1.1

Loose: BVH-21T-P1.1 Chain: SVH-21T-P1.1 Loose: BVH-21T-P1.1

Chain: SVH-21T-P1.1 Loose: BVH-21T-P1.1

Mounting Hole

CN3

CN2 Output(+)

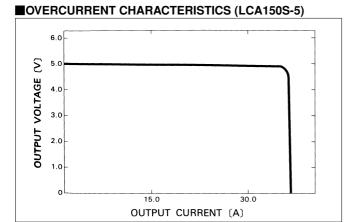
Pin No.

Input AC(L)

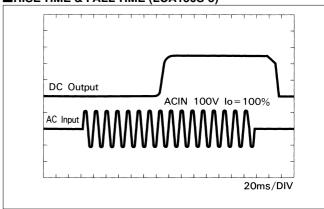
AC(N)

(Mfr: J.S.T.) *Maximum 5A per pin of CN2 and CN3 can be applied

Output (-)







DERATING CURVE

