

## LDA10F

LDA 10 F -5 -□

① ② ③ ④ ⑤

Recommended EMI/EMC Filter  
NAC-06-472

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

- ① Series name  
② Output wattage  
③ Universal input  
④ Output voltage  
⑤ Optional \*2  
C :with Coating  
G :Low leakage current  
S :with Chassis  
SN :with Chassis & cover  
Y :with Potentiometer

| MODEL                 | LDA10F-3 | LDA10F-5 | LDA10F-12 | LDA10F-15 | LDA10F-24 |
|-----------------------|----------|----------|-----------|-----------|-----------|
| MAX OUTPUT WATTAGE[W] | 6        | 10       | 10.8      | 10.5      | 12        |
| DC OUTPUT             | 3V 2.0A  | 5V 2.0A  | 12V 0.9A  | 15V 0.7A  | 24V 0.5A  |

## SPECIFICATIONS

|                               | MODEL                                | LDA10F-3                                                                                    | LDA10F-5                                                                                      | LDA10F-12   | LDA10F-15   | LDA10F-24 |        |
|-------------------------------|--------------------------------------|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-------------|-------------|-----------|--------|
| INPUT                         | VOLTAGE[V]                           | AC85 - 264 1 $\phi$ or DC110 - 370                                                          |                                                                                               |             |             |           |        |
|                               | CURRENT[A]                           | ACIN 100V                                                                                   | 0.25typ (Io=100%)                                                                             |             |             |           |        |
|                               |                                      | ACIN 200V                                                                                   | 0.16typ (Io=100%)                                                                             |             |             |           |        |
|                               | FREQUENCY[Hz]                        | 47 - 440 or DC                                                                              |                                                                                               |             |             |           |        |
|                               | EFFICIENCY[%]                        | 68typ                                                                                       | 72typ                                                                                         | 74typ       | 74typ       | 78typ     |        |
|                               | INRUSH CURRENT[A]                    | ACIN 100V                                                                                   | 15typ (Io=100%) (At cold start)                                                               |             |             |           |        |
|                               |                                      | ACIN 200V                                                                                   | 30typ (Io=100%) (At cold start)                                                               |             |             |           |        |
|                               | LEAKAGE CURRENT[mA]                  | 0.75max (60Hz, According to UL, CSA, VDE and DEN-AN)                                        |                                                                                               |             |             |           |        |
| OUTPUT                        | VOLTAGE[V]                           | 3                                                                                           | 5                                                                                             | 12          | 15          | 24        |        |
|                               | CURRENT[A]                           | 2                                                                                           | 2                                                                                             | 0.9         | 0.7         | 0.5       |        |
|                               | LINE REGULATION[mV]                  | 20max                                                                                       | 20max                                                                                         | 48max       | 60max       | 96max     |        |
|                               | LOAD REGULATION[mV]                  | 40max                                                                                       | 40max                                                                                         | 100max      | 120max      | 150max    |        |
|                               | RIPPLE[mVp-p]                        | 0 to +50°C                                                                                  | 80max                                                                                         | 80max       | 120max      | 120max    | 120max |
|                               |                                      | -10 - 0°C                                                                                   | 140max                                                                                        | 140max      | 160max      | 160max    | 160max |
|                               | RIPPLE NOISE[mVp-p]                  | 0 to +50°C                                                                                  | 120max                                                                                        | 120max      | 150max      | 150max    | 150max |
|                               |                                      | -10 - 0°C                                                                                   | 160max                                                                                        | 160max      | 180max      | 180max    | 180max |
|                               | TEMPERATURE REGULATION[mV]           | 50max                                                                                       | 50max                                                                                         | 120max      | 150max      | 240max    |        |
|                               | DRIFT[mV]                            | *1 20max                                                                                    | 20max                                                                                         | 48max       | 60max       | 96max     |        |
|                               | START-UP TIME[ms]                    | 200max (ACIN 100V, Io=100%)                                                                 |                                                                                               |             |             |           |        |
|                               | HOLD-UP TIME[ms]                     | 10typ (ACIN 85V, Io=100%) 20typ (ACIN 100V, Io=100%) 100typ (ACIN 200V, Io=100%)            |                                                                                               |             |             |           |        |
|                               | OUTPUT VOLTAGE ADJUSTMENT RANGE[V]   | 2.85 - 3.6                                                                                  | Fixed ("Y" which can be adjusted the output is available as option :5, 12, 15, 24V $\pm$ 10%) |             |             |           |        |
| OUTPUT VOLTAGE SETTING[V]     | —                                    | 4.9 - 5.3                                                                                   | 11.5 - 12.5                                                                                   | 14.4 - 15.6 | 23.0 - 25.0 |           |        |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION               | Works over 105% of rating and recovers automatically                                        |                                                                                               |             |             |           |        |
|                               | OVERVOLTAGE PROTECTION               | 4.00V min                                                                                   | Works over 115% of rating, by zener diode clamping                                            |             |             |           |        |
|                               | OPERATING INDICATION                 | Not provided                                                                                |                                                                                               |             |             |           |        |
|                               | REMOTE SENSING                       | Not provided                                                                                |                                                                                               |             |             |           |        |
|                               | REMOTE ON/OFF                        | Not provided                                                                                |                                                                                               |             |             |           |        |
| ISOLATION                     | INPUT-OUTPUT                         | AC3.000V 1minute, Cutoff current = 10mA, DC500V 50M $\Omega$ min (At Room Temperature)      |                                                                                               |             |             |           |        |
|                               | INPUT-FG                             | AC2.000V 1minute, Cutoff current = 10mA, DC500V 50M $\Omega$ min (At Room Temperature)      |                                                                                               |             |             |           |        |
|                               | OUTPUT-FG                            | AC500V 1minute, Cutoff current = 100mA, DC500V 50M $\Omega$ min (At Room Temperature)       |                                                                                               |             |             |           |        |
| ENVIRONMENT                   | OPERATING TEMP., HUMID. AND ALTITUDE | -10 to +60°C, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE) 3,000m (10,000feet) max |                                                                                               |             |             |           |        |
|                               | STORAGE TEMP., HUMID. AND ALTITUDE   | -20 to +75°C, 20 - 90%RH (Non condensing) 9,000m (30,000feet) max                           |                                                                                               |             |             |           |        |
|                               | VIBRATION                            | 10 - 55Hz, 19.6m/s <sup>2</sup> (2G), 3minutes period, 60minutes each along X, Y and Z axis |                                                                                               |             |             |           |        |
|                               | IMPACT                               | 196.1m/s <sup>2</sup> (20G), 11ms, once each X, Y and Z axis                                |                                                                                               |             |             |           |        |
| SAFETY AND NOISE REGULATIONS  | AGENCY APPROVALS                     | UL60950-1, EN60950-1, EN50178, CSA C22.2 No.60950-1 Complies with DEN-AN and IEC60950-1     |                                                                                               |             |             |           |        |
|                               | CONDUCTED NOISE                      | Complies with FCC-B, CISPR22-B, EN55022-B, VCCI-B                                           |                                                                                               |             |             |           |        |
| OTHERS                        | CASE SIZE/WEIGHT                     | 50 X 21 X 105mm (W X H X D) /75g max (without chassis and cover)                            |                                                                                               |             |             |           |        |
|                               | COOLING METHOD                       | Convection                                                                                  |                                                                                               |             |             |           |        |

\*1 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.

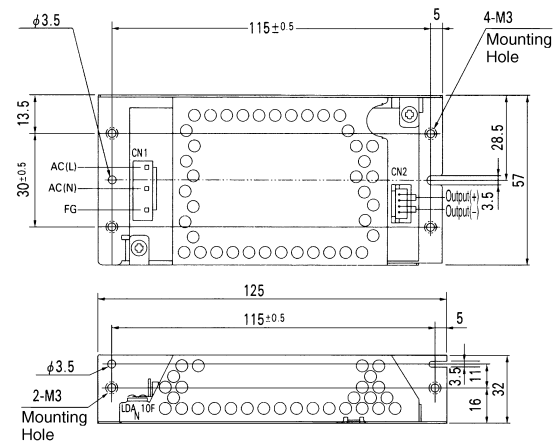
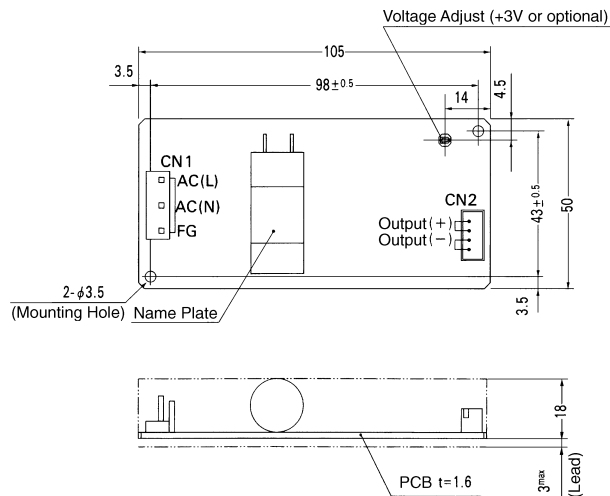
\*2 Please contact us about safety approvals for the model with option.

\* Avoid prolonged use under over-load.

\* Series/Parallel operation with other model is not possible.

\* Derating is required when operated with chassis and cover.

## External view



| I/O Connector |          | Mating Connector | Terminal            |
|---------------|----------|------------------|---------------------|
| CN1           | B3P5-VH  | VHR-5N           | Chain:SVH-21T-P1.1  |
|               |          |                  | Loose:BVH-21T-P1.1  |
| CN2           | B4B-XH-A | XHP-4            | Chain:SXH-001T-P0.6 |
|               |          |                  | Loose:BXH-001T-P0.6 |

(Mfr : J.S.T.)

### <PIN CONNECTION>

|     |         |       |
|-----|---------|-------|
| CN1 | Pin No. | Input |
|     | 1       | AC(L) |
|     | 2       |       |
|     | 3       | AC(N) |
|     | 4       |       |
|     | 5       | FG    |

|     |         |        |
|-----|---------|--------|
| CN2 | Pin No. | Output |
|     | 1       | -V     |
|     | 2       | -V     |
|     | 3       | +V     |
|     | 4       | +V     |

※Weight : 75g or less (Without chassis and cover)

※Tolerance :  $\pm 1$

※Dimensions in mm.

※PCB Material : Glass composite (CEM3)

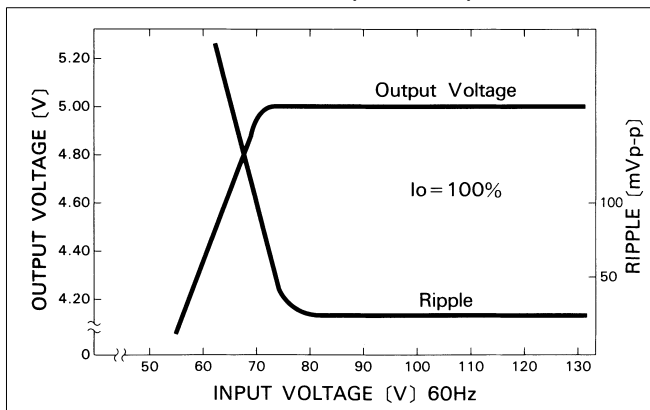
※ Chassis and cover is optional.

※Mounting torque : 0.6N・m (6.3kgf・cm) max

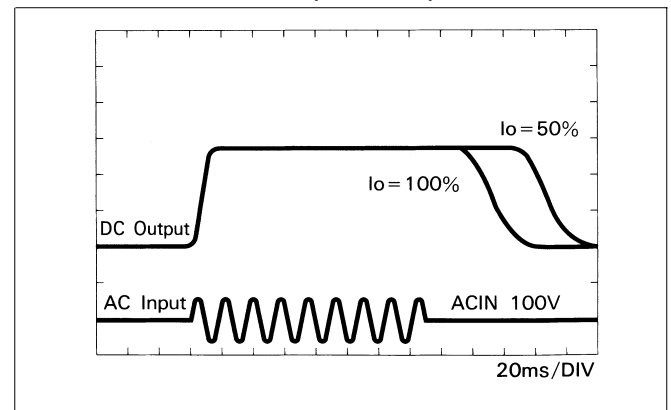
※ Keep drawing current per pin below 2A for CN2.

## Performance data

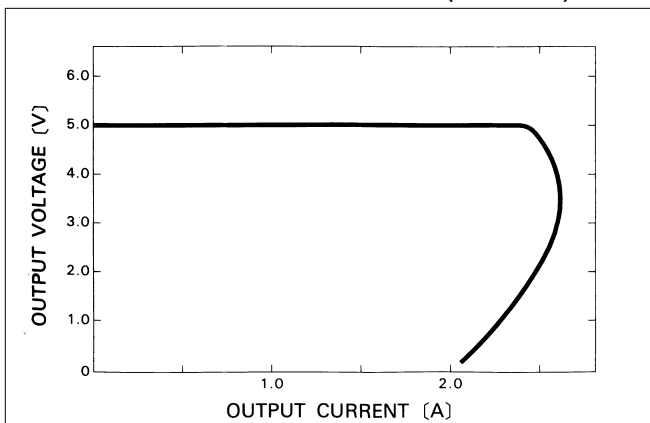
## ■STATIC CHARACTERISTICS (LDA10F-5)



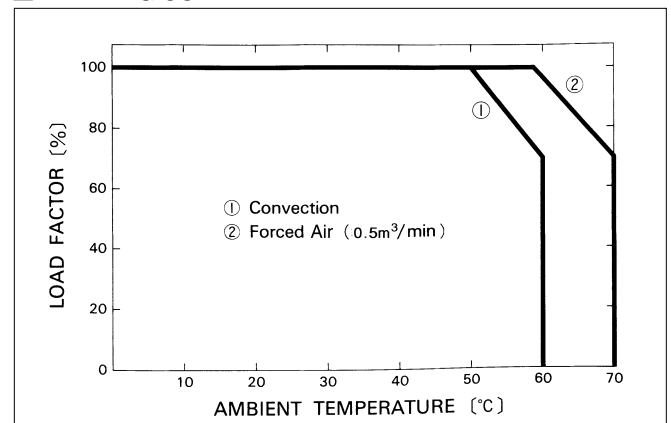
### ■ RISE TIME & FALL TIME (LDA10F-5)



## ■ OVERCURRENT CHARACTERISTICS (LDA10F-5)



## ■ DERATING CURVE



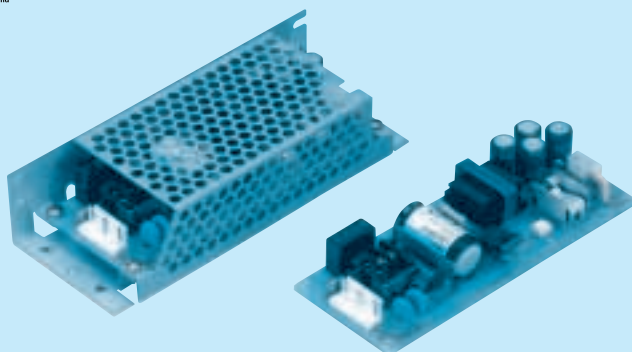
## LDA15F

LDA 15 F -5 -□

① ② ③ ④ ⑤



RoHS

Recommended EMI/EMC Filter  
NAC-06-472High voltage pulse noise type : NAP series  
Low leakage current type : NAM series\*The EMI/EMC Filter is recommended  
to connect with several devices.

- ① Series name  
② Output wattage  
③ Universal input  
④ Output voltage  
⑤ Optional \*2  
C :with Coating  
G :Low leakage current  
S :with Chassis  
SN :with Chassis & cover  
Y :with Potentiometer

| MODEL                 | LDA15F-3 | LDA15F-5 | LDA15F-12 | LDA15F-15 | LDA15F-24 |
|-----------------------|----------|----------|-----------|-----------|-----------|
| MAX OUTPUT WATTAGE[W] | 9        | 15       | 15.6      | 15        | 16.8      |
| DC OUTPUT             | 3V 3.0A  | 5V 3.0A  | 12V 1.3A  | 15V 1.0A  | 24V 0.7A  |

## SPECIFICATIONS

|                                    | MODEL                              | LDA15F-3                                                                                    | LDA15F-5                                                                                     | LDA15F-12   | LDA15F-15   | LDA15F-24   |        |
|------------------------------------|------------------------------------|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|-------------|-------------|-------------|--------|
| INPUT                              | VOLTAGE[V]                         | AC85 - 264 1 $\phi$ or DC110 - 370                                                          |                                                                                              |             |             |             |        |
|                                    | CURRENT[A]                         | ACIN 100V                                                                                   | 0.37typ (Io=100%)                                                                            |             |             |             |        |
|                                    |                                    | ACIN 200V                                                                                   | 0.23typ (Io=100%)                                                                            |             |             |             |        |
|                                    | FREQUENCY[Hz]                      | 47 - 440 or DC                                                                              |                                                                                              |             |             |             |        |
|                                    | EFFICIENCY[%]                      | 70typ                                                                                       | 74typ                                                                                        | 76typ       | 76typ       | 78typ       |        |
|                                    | INRUSH CURRENT[A]                  | ACIN 100V                                                                                   | 15typ (Io=100%) (At cold start)                                                              |             |             |             |        |
| ACIN 200V                          |                                    | 30typ (Io=100%) (At cold start)                                                             |                                                                                              |             |             |             |        |
|                                    | LEAKAGE CURRENT[mA]                | 0.75max (60Hz, According to UL, CSA, VDE and DEN-AN)                                        |                                                                                              |             |             |             |        |
| OUTPUT                             | VOLTAGE[V]                         | 3                                                                                           | 5                                                                                            | 12          | 15          | 24          |        |
|                                    | CURRENT[A]                         | 3                                                                                           | 3                                                                                            | 1.3         | 1           | 0.7         |        |
|                                    | LINE REGULATION[mV]                | 20max                                                                                       | 20max                                                                                        | 48max       | 60max       | 96max       |        |
|                                    | LOAD REGULATION[mV]                | 40max                                                                                       | 40max                                                                                        | 100max      | 120max      | 150max      |        |
|                                    | RIPPLE[mVp-p]                      | 0 to +50°C                                                                                  | 80max                                                                                        | 80max       | 120max      | 120max      | 120max |
|                                    |                                    | -10 - 0°C                                                                                   | 140max                                                                                       | 140max      | 160max      | 160max      | 160max |
|                                    | RIPPLE NOISE[mVp-p]                | 0 to +50°C                                                                                  | 120max                                                                                       | 120max      | 150max      | 150max      | 150max |
|                                    |                                    | -10 - 0°C                                                                                   | 160max                                                                                       | 160max      | 180max      | 180max      | 180max |
|                                    | TEMPERATURE REGULATION[mV]         | 50max                                                                                       | 50max                                                                                        | 120max      | 150max      | 240max      |        |
|                                    | DRIFT[mV]                          | *1                                                                                          | 20max                                                                                        | 20max       | 48max       | 60max       | 96max  |
|                                    | START-UP TIME[ms]                  | 200max (ACIN 100V, Io=100%)                                                                 |                                                                                              |             |             |             |        |
|                                    | HOLD-UP TIME[ms]                   | 10typ (ACIN 85V, Io=100%) 20typ (ACIN 100V, Io=100%) 100typ (ACIN 200V, Io=100%)            |                                                                                              |             |             |             |        |
| OUTPUT VOLTAGE ADJUSTMENT RANGE[V] | 2.85 - 3.6                         |                                                                                             | Fixed ("Y"which can be adjusted the output is available as option :5, 12, 15, 24V $\pm$ 10%) |             |             |             |        |
| OUTPUT VOLTAGE SETTING[V]          | —                                  |                                                                                             | 4.9 - 5.3                                                                                    | 11.5 - 12.5 | 14.4 - 15.6 | 23.0 - 25.0 |        |
| PROTECTION CIRCUIT AND OTHERS      | OVERCURRENT PROTECTION             | Works over 105% of rating and recovers automatically                                        |                                                                                              |             |             |             |        |
|                                    | OVERVOLTAGE PROTECTION             | 4.00V min                                                                                   | Works over 115% of rating, by zener diode clamping                                           |             |             |             |        |
|                                    | OPERATING INDICATION               | Not provided                                                                                |                                                                                              |             |             |             |        |
|                                    | REMOTE SENSING                     | Not provided                                                                                |                                                                                              |             |             |             |        |
|                                    | REMOTE ON/OFF                      | Not provided                                                                                |                                                                                              |             |             |             |        |
| ISOLATION                          | INPUT-OUTPUT                       | AC3.000V 1minute, Cutoff current = 10mA, DC500V 50M $\Omega$ min (At Room Temperature)      |                                                                                              |             |             |             |        |
|                                    | INPUT-FG                           | AC2.000V 1minute, Cutoff current = 10mA, DC500V 50M $\Omega$ min (At Room Temperature)      |                                                                                              |             |             |             |        |
|                                    | OUTPUT-FG                          | AC500V 1minute, Cutoff current = 100mA, DC500V 50M $\Omega$ min (At Room Temperature)       |                                                                                              |             |             |             |        |
| ENVIRONMENT                        | OPERATING TEMP.,HUMID.AND ALTITUDE | -10 to +60°C, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE) 3.000m (10.000feet) max |                                                                                              |             |             |             |        |
|                                    | STORAGE TEMP.,HUMID.AND ALTITUDE   | -20 to +75°C, 20 - 90%RH (Non condensing) 9.000m (30.000feet) max                           |                                                                                              |             |             |             |        |
|                                    | VIBRATION                          | 10 - 55Hz, 19.6m/s <sup>2</sup> (2G), 3minutes period, 60minutes each along X, Y and Z axis |                                                                                              |             |             |             |        |
|                                    | IMPACT                             | 196.1m/s <sup>2</sup> (20G), 11ms, once each X, Y and Z axis                                |                                                                                              |             |             |             |        |
| SAFETY AND NOISE REGULATIONS       | AGENCY APPROVALS                   | UL60950-1, EN60950-1, EN50178, CSA C22.2 No.60950-1 Complies with DEN-AN and IEC60950-1     |                                                                                              |             |             |             |        |
|                                    | CONDUCTED NOISE                    | Complies with FCC-B, CISPR22-B, EN55022-B, VCCI-B                                           |                                                                                              |             |             |             |        |
| OTHERS                             | CASE SIZE/WEIGHT                   | 50×21×125mm (W×H×D) /95g max (without chassis and cover)                                    |                                                                                              |             |             |             |        |
|                                    | COOLING METHOD                     | Convection                                                                                  |                                                                                              |             |             |             |        |

\*1 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.

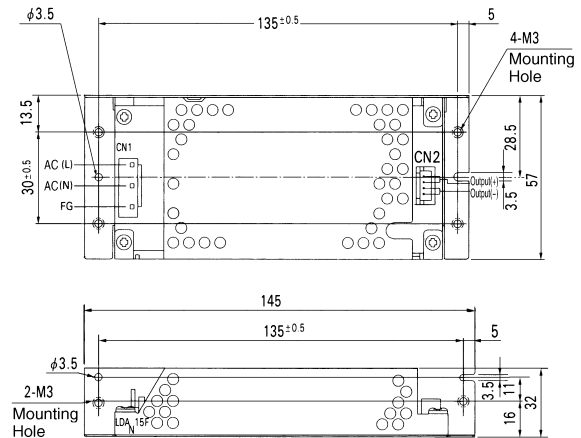
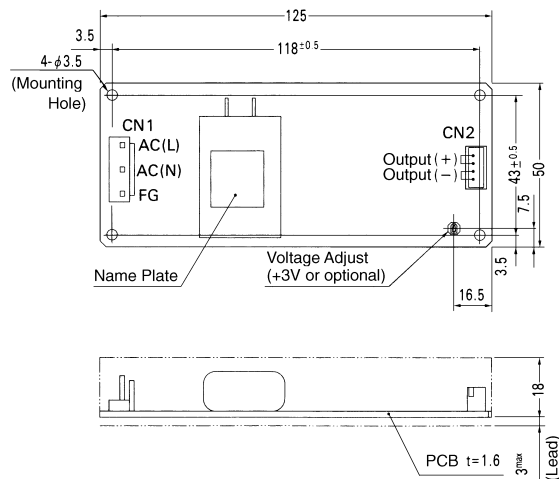
\*2 Please contact us about safety approvals for the model with option.

\* Avoid prolonged use under over-load.

\* Series/Parallel operation with other model is not possible.

\* Derating is required when operated with chassis and cover.

## External view



| I/O Connector |          | Mating Connector | Terminal                                   |
|---------------|----------|------------------|--------------------------------------------|
| CN1           | B3P5-VH  | VHR-5N           | Chain:SVH-21T-P1.1<br>Loose:BVH-21T-P1.1   |
| CN2           | B4B-XH-A | XHP-4            | Chain:SXH-001T-P0.6<br>Loose:BXH-001T-P0.6 |

(Mfr : J.S.T.)

### <PIN CONNECTION>

|     |         |       |
|-----|---------|-------|
| CN1 | Pin No. | Input |
|     | 1       | AC(L) |
|     | 2       |       |
|     | 3       | AC(N) |
|     | 4       |       |
|     | 5       | FG    |

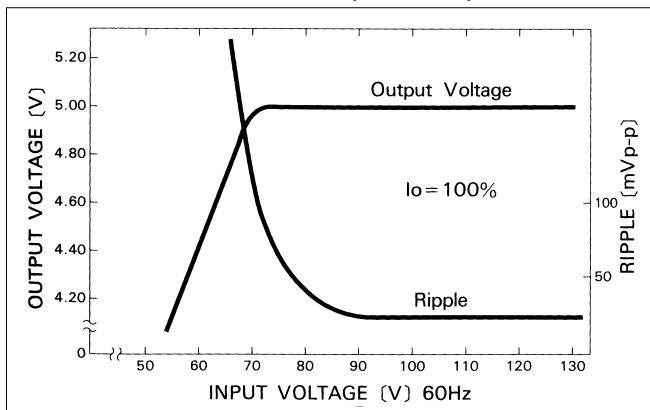
|     |         |        |
|-----|---------|--------|
| CN2 | Pin No. | Output |
|     | 1       | -V     |
|     | 2       | -V     |
|     | 3       | +V     |
|     | 4       | +V     |

- ※ Weight : 95g or less (Without chassis and cover)
- ※ Tolerance :  $\pm 1$
- ※ Dimensions in mm.
- ※ PCB Material : Glass composite (CEM3)
- ※ Chassis and cover is optional.
- ※ Mounting torque : 0.6N·m (6.3kgf·cm) max

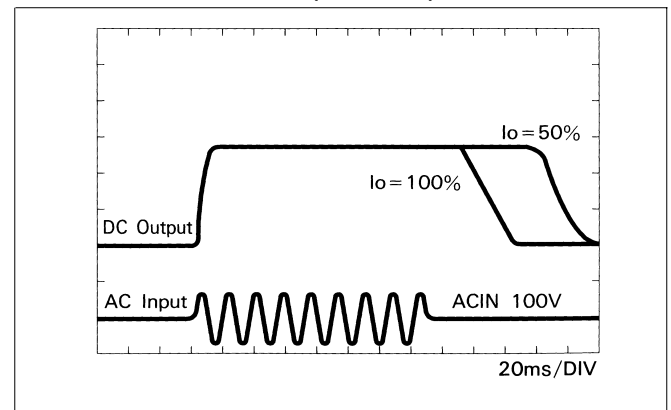
## LDA

## Performance data

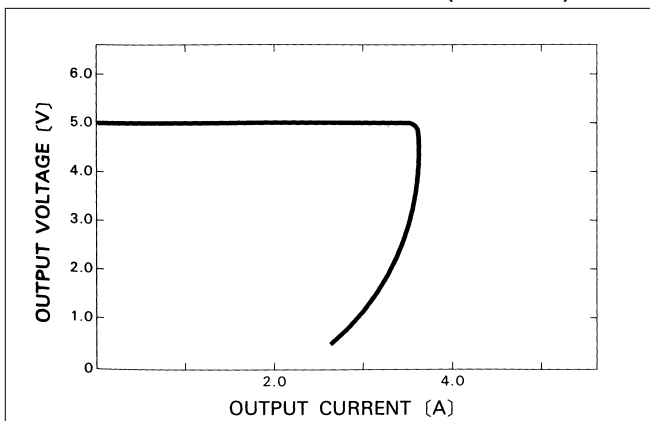
## ■STATIC CHARACTERISTICS (LDA15F-5)



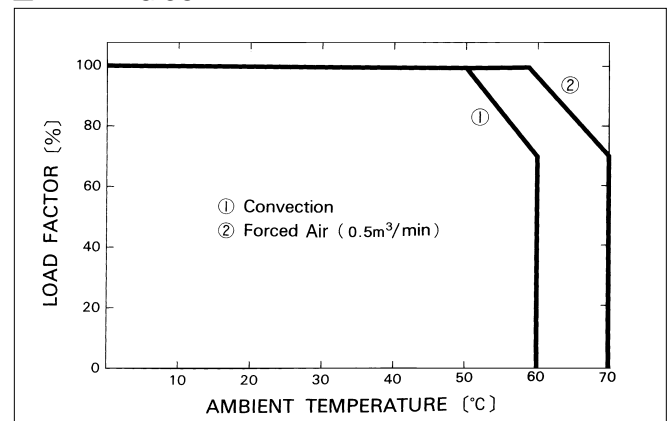
### ■ RISE TIME & FALL TIME (LDA15F-5)



## ■ OVERCURRENT CHARACTERISTICS (LDA15F-5)



## ■ DERATING CURVE



## LDA30F

LDA 30 F -5 -□

① ② ③ ④ ⑤

Recommended EMI/EMC Filter  
NAC-06-472

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

- ① Series name  
② Output wattage  
③ Universal input  
④ Output voltage  
⑤ Optional \*2  
C :with Coating  
G :Low leakage current  
S :with Chassis  
SN :with Chassis & cover  
Y :with Potentiometer

| MODEL                 | LDA30F-3 | LDA30F-5 | LDA30F-12 | LDA30F-15 | LDA30F-24 |
|-----------------------|----------|----------|-----------|-----------|-----------|
| MAX OUTPUT WATTAGE[W] | 18       | 30       | 30        | 30        | 31.2      |
| DC OUTPUT             | 3V 6.0A  | 5V 6.0A  | 12V 2.5A  | 15V 2.0A  | 24V 1.3A  |

## SPECIFICATIONS

|                               | MODEL                              | LDA30F-3                                                                                    | LDA30F-5                                                                                     | LDA30F-12   | LDA30F-15   | LDA30F-24 |        |
|-------------------------------|------------------------------------|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|-------------|-------------|-----------|--------|
| INPUT                         | VOLTAGE[V]                         | AC85 - 264 1 $\phi$ or DC110 - 370                                                          |                                                                                              |             |             |           |        |
|                               | CURRENT[A]                         | ACIN 100V                                                                                   | 0.8typ (I <sub>o</sub> =100%)                                                                |             |             |           |        |
|                               |                                    | ACIN 200V                                                                                   | 0.4typ (I <sub>o</sub> =100%)                                                                |             |             |           |        |
|                               | FREQUENCY[Hz]                      | 47 - 440 or DC                                                                              |                                                                                              |             |             |           |        |
|                               | EFFICIENCY[%]                      | 70typ                                                                                       | 75typ                                                                                        | 77typ       | 78typ       | 79typ     |        |
|                               | INRUSH CURRENT[A]                  | ACIN 100V                                                                                   | 15typ (I <sub>o</sub> =100%) (At cold start)                                                 |             |             |           |        |
|                               |                                    | ACIN 200V                                                                                   | 30typ (I <sub>o</sub> =100%) (At cold start)                                                 |             |             |           |        |
|                               | LEAKAGE CURRENT[ma]                | 0.75max (60Hz, According to UL, CSA, VDE and DEN-AN)                                        |                                                                                              |             |             |           |        |
| OUTPUT                        | VOLTAGE[V]                         | 3                                                                                           | 5                                                                                            | 12          | 15          | 24        |        |
|                               | CURRENT[A]                         | 6                                                                                           | 6                                                                                            | 2.5         | 2           | 1.3       |        |
|                               | LINE REGULATION[mV]                | 20max                                                                                       | 20max                                                                                        | 48max       | 60max       | 96max     |        |
|                               | LOAD REGULATION[mV]                | 40max                                                                                       | 40max                                                                                        | 100max      | 120max      | 150max    |        |
|                               | RIPPLE[mVp-p]                      | 0 to +50°C                                                                                  | 80max                                                                                        | 80max       | 120max      | 120max    | 120max |
|                               |                                    | -10 - 0°C                                                                                   | 140max                                                                                       | 140max      | 160max      | 160max    | 160max |
|                               | RIPPLE NOISE[mVp-p]                | 0 to +50°C                                                                                  | 120max                                                                                       | 120max      | 150max      | 150max    | 150max |
|                               |                                    | -10 - 0°C                                                                                   | 160max                                                                                       | 160max      | 180max      | 180max    | 180max |
|                               | TEMPERATURE REGULATION[mV]         | 60max                                                                                       | 60max                                                                                        | 150max      | 180max      | 290max    |        |
|                               | DRIFT[mV]                          | *1 20max                                                                                    | 20max                                                                                        | 48max       | 60max       | 96max     |        |
|                               | START-UP TIME[ms]                  | 200max (ACIN 100V, I <sub>o</sub> =100%)                                                    |                                                                                              |             |             |           |        |
|                               | HOLD-UP TIME[ms]                   | 10typ (ACIN 85V, I <sub>o</sub> =100%) 20typ (ACIN 100V, I <sub>o</sub> =100%)              |                                                                                              |             |             |           |        |
|                               | OUTPUT VOLTAGE ADJUSTMENT RANGE[V] | 2.85 - 3.6                                                                                  | Fixed ("Y"which can be adjusted the output is available as option :5, 12, 15, 24V $\pm$ 10%) |             |             |           |        |
| OUTPUT VOLTAGE SETTING[V]     | —                                  | 4.9 - 5.3                                                                                   | 11.5 - 12.5                                                                                  | 14.4 - 15.6 | 23.0 - 25.0 |           |        |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION             | Works over 105% of rating and recovers automatically                                        |                                                                                              |             |             |           |        |
|                               | OVERVOLTAGE PROTECTION             | 4.00 - 5.25V                                                                                | Works at 115 - 140% of rating                                                                |             |             |           |        |
|                               | OPERATING INDICATION               | Not provided                                                                                |                                                                                              |             |             |           |        |
|                               | REMOTE SENSING                     | Not provided                                                                                |                                                                                              |             |             |           |        |
|                               | REMOTE ON/OFF                      | Not provided                                                                                |                                                                                              |             |             |           |        |
| ISOLATION                     | INPUT-OUTPUT                       | AC3.000V 1minute, Cutoff current = 10mA, DC500V 50M $\Omega$ min (At Room Temperature)      |                                                                                              |             |             |           |        |
|                               | INPUT-FG                           | AC2.000V 1minute, Cutoff current = 10mA, DC500V 50M $\Omega$ min (At Room Temperature)      |                                                                                              |             |             |           |        |
|                               | OUTPUT-FG                          | AC500V 1minute, Cutoff current = 100mA, DC500V 50M $\Omega$ min (At Room Temperature)       |                                                                                              |             |             |           |        |
| ENVIRONMENT                   | OPERATING TEMP.,HUMID.AND ALTITUDE | -10 to +60°C, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE) 3,000m (10,000feet) max |                                                                                              |             |             |           |        |
|                               | STORAGE TEMP.,HUMID.AND ALTITUDE   | -20 to +75°C, 20 - 90%RH (Non condensing) 9,000m (30,000feet) max                           |                                                                                              |             |             |           |        |
|                               | VIBRATION                          | 10 - 55Hz, 19.6m/s <sup>2</sup> (2G), 3minutes period, 60minutes each along X, Y and Z axis |                                                                                              |             |             |           |        |
|                               | IMPACT                             | 196.1m/s <sup>2</sup> (20G), 11ms, once each X, Y and Z axis                                |                                                                                              |             |             |           |        |
| SAFETY AND NOISE REGULATIONS  | AGENCY APPROVALS                   | UL60950-1, EN60950-1, EN50178, CSA C22.2 No.60950-1 Complies with DEN-AN and IEC60950-1     |                                                                                              |             |             |           |        |
|                               | CONDUCTED NOISE                    | Complies with FCC-B, CISPR22-B, EN55022-B, VCCI-B                                           |                                                                                              |             |             |           |        |
| OTHERS                        | CASE SIZE/WEIGHT                   | 55×26×133mm (W×H×D) /200g max (without chassis and cover)                                   |                                                                                              |             |             |           |        |
|                               | COOLING METHOD                     | Convection                                                                                  |                                                                                              |             |             |           |        |

\*1 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.

\*2 Please contact us about safety approvals for the model with option.

\* Avoid prolonged use under over-load.

\* Series/Parallel operation with other model is not possible.

\* Derating is required when operated with chassis and cover.

## External view



| I/O Connector | Mating Connector | Terminal           |
|---------------|------------------|--------------------|
| CN1           | B3P5-VH          | VHR-5N             |
|               |                  | Chain:SVH-21T-P1.1 |
|               |                  | Loose:BVH-21T-P1.1 |
| CN2           | B4P-VH           | VHR-4N             |
|               |                  | Chain:SVH-21T-P1.1 |
|               |                  | Loose:BVH-21T-P1.1 |

(Mfr : J.S.T.)

## &lt;PIN CONNECTION&gt;

| Pin No. | Input |
|---------|-------|
| 1       | AC(L) |
| 2       | AC(N) |
| 3       | AC(N) |
| 4       | AC(N) |
| 5       | FG    |

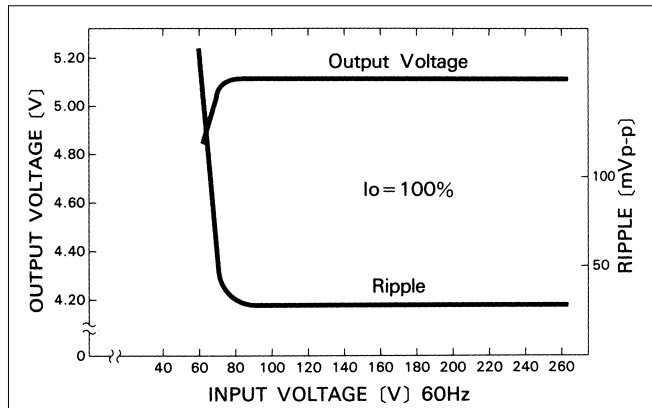
| Pin No. | Output |
|---------|--------|
| 1       | -V     |
| 2       | -V     |
| 3       | +V     |
| 4       | +V     |

- ※ Weight : 200g or less (Without chassis and cover)
- ※ Tolerance :  $\pm 1$
- ※ Dimensions in mm.
- ※ PCB Material : Glass composite (CEM3)
- ※ Chassis and cover is optional.
- ※ Mounting torque : 0.6N·m (6.3kgf·cm) max
- ※ Keep drawing current per pin below 5A for CN2.

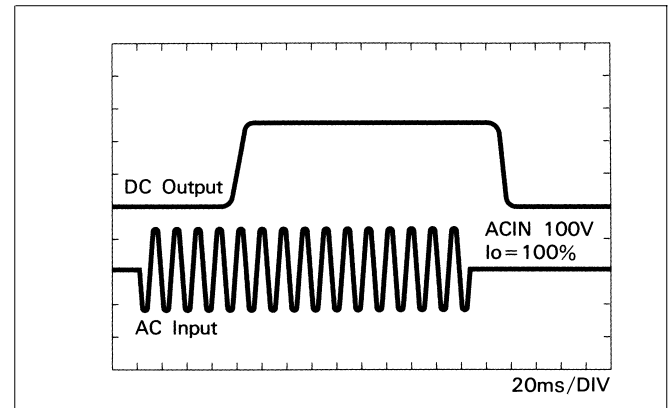
LDA

## Performance data

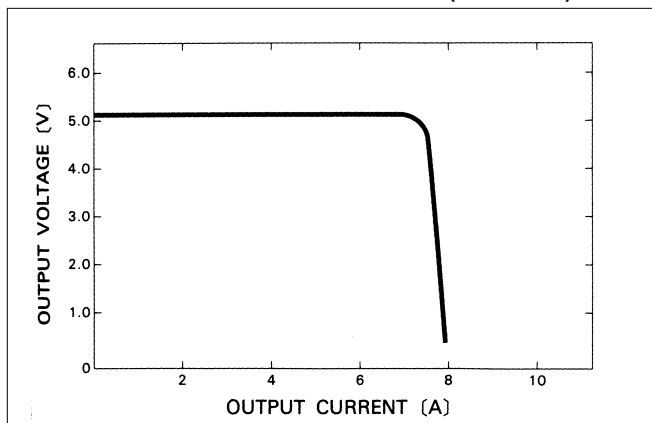
## ■ STATIC CHARACTERISTICS (LDA30F-5)



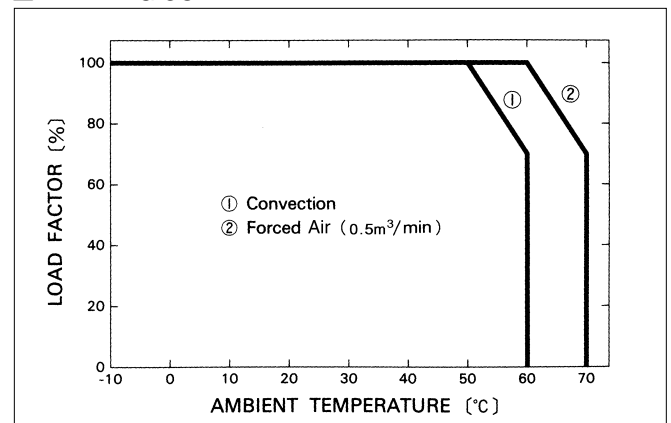
## ■ RISE TIME &amp; FALL TIME (LDA30F-5)



## ■ OVERCURRENT CHARACTERISTICS (LDA30F-5)



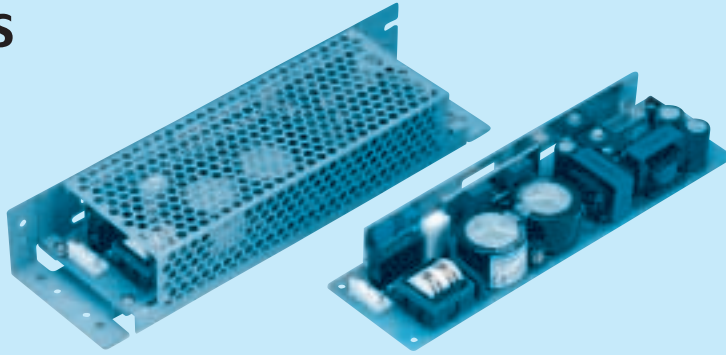
## ■ DERATING CURVE



# LDA50F

LDA 50 F -5 -□

① ② ③ ④ ⑤



Recommended EMI/EMC Filter  
NAC-06-472



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

- ① Series name
- ② Output wattage
- ③ Universal input
- ④ Output voltage
- ⑤ Optional \*4
- C :with Coating
- G :Low leakage current
- R :with Remote ON/OFF
- S :with Chassis
- SN :with Chassis & cover
- Y :with Potentiometer

| MODEL                 | LDA50F-3  | LDA50F-5 | LDA50F-9 | LDA50F-12 | LDA50F-15 | LDA50F-18 | LDA50F-24 | LDA50F-24-H | LDA50F-24-HR | LDA50F-30 |
|-----------------------|-----------|----------|----------|-----------|-----------|-----------|-----------|-------------|--------------|-----------|
| MAX OUTPUT WATTAGE[W] | 30        | 50       | 50.4     | 51.6      | 52.5      | 50.4      | 50.4      | 50.4        | 50.4         | 51        |
| DC OUTPUT             | *3 3V 10A | 5V 10A   | 9V 5.6A  | 12V 4.3A  | 15V 3.5A  | 18V 2.8A  | 24V 2.1A  | 24V 2.1(3)A | 24V 2.1(3)A  | 30V 1.7A  |

## SPECIFICATIONS

|                                    | MODEL                                                                                                         | LDA50F-3                                                                                    | LDA50F-5                        | LDA50F-9    | LDA50F-12   | LDA50F-15   | LDA50F-18   | LDA50F-24   | LDA50F-24-H | LDA50F-24-HR | LDA50F-30 |        |
|------------------------------------|---------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-----------|--------|
| INPUT                              | VOLTAGE[V]                                                                                                    | AC85 - 264 1 φ or DC110 - 370                                                               |                                 |             |             |             |             |             |             |              |           |        |
|                                    | CURRENT[A]                                                                                                    | ACIN 100V                                                                                   | 1.3typ (Io=100%)                |             |             |             |             |             |             |              |           |        |
|                                    |                                                                                                               | ACIN 200V                                                                                   | 0.7typ (Io=100%)                |             |             |             |             |             |             |              |           |        |
|                                    | FREQUENCY[Hz]                                                                                                 | 47 - 440 or DC                                                                              |                                 |             |             |             |             |             |             |              |           |        |
|                                    | EFFICIENCY[%]                                                                                                 | 73typ                                                                                       | 77typ                           | 78typ       | 80typ       | 81typ       | 81typ       | 82typ       | 82typ       | 82typ        | 82typ     |        |
|                                    | INRUSH CURRENT[A]                                                                                             | ACIN 100V                                                                                   | 15typ (Io=100%) (At cold start) |             |             |             |             |             |             |              |           |        |
|                                    |                                                                                                               | ACIN 200V                                                                                   | 30typ (Io=100%) (At cold start) |             |             |             |             |             |             |              |           |        |
| LEAKAGE CURRENT[ma]                | 0.75max (60Hz, According to UL, CSA, VDE and DEN-AN)                                                          |                                                                                             |                                 |             |             |             |             |             |             |              |           |        |
| OUTPUT                             | VOLTAGE[V]                                                                                                    | 3                                                                                           | 5                               | 9           | 12          | 15          | 18          | 24          | 24          | 24           | 30        |        |
|                                    | CURRENT[A]                                                                                                    | *1 10                                                                                       | 10                              | 5.6         | 4.3         | 3.5         | 2.8         | 2.1         | 2.1 (3)     | 2.1 (3)      | 1.7       |        |
|                                    | LINE REGULATION[mV]                                                                                           | 20max                                                                                       | 20max                           | 36max       | 48max       | 60max       | 72max       | 96max       | 96max       | 96max        | 120max    |        |
|                                    | LOAD REGULATION[mV]                                                                                           | 40max                                                                                       | 40max                           | 100max      | 100max      | 120max      | 120max      | 150max      | 150max      | 150max       | 180max    |        |
|                                    | RIPPLE[mVp-p]                                                                                                 | 0 to +50°C                                                                                  | 80max                           | 80max       | 120max      | 120max      | 120max      | 120max      | 120max      | 120max       | 120max    | 120max |
|                                    |                                                                                                               | -10 - 0°C                                                                                   | 140max                          | 140max      | 160max      | 160max      | 160max      | 160max      | 160max      | 160max       | 160max    | 160max |
|                                    | RIPPLE NOISE[mVp-p]                                                                                           | 0 to +50°C                                                                                  | 120max                          | 120max      | 150max      | 150max      | 150max      | 150max      | 150max      | 250max       | 250max    | 150max |
|                                    |                                                                                                               | -10 - 0°C                                                                                   | 160max                          | 160max      | 180max      | 180max      | 180max      | 180max      | 180max      | 280max       | 280max    | 180max |
|                                    | TEMPERATURE REGULATION[mV]                                                                                    | 60max                                                                                       | 60max                           | 120max      | 150max      | 180max      | 200max      | 290max      | 290max      | 290max       | 360max    |        |
|                                    | DRIFT[mV]                                                                                                     | *2 20max                                                                                    | 20max                           | 36max       | 48max       | 60max       | 72max       | 96max       | 96max       | 96max        | 120max    |        |
|                                    | START-UP TIME[ms]                                                                                             | 200max (ACIN 100V, 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 option :5, 9, 12, 15, 18, 24, 30V ±10%) |                                                                                             |                                 |             |             |             |             |             |             |              |           |        |
| OUTPUT VOLTAGE SETTING[V]          | —                                                                                                             | 4.9 - 5.3                                                                                   | 8.6 - 9.4                       | 11.5 - 12.5 | 14.4 - 15.6 | 17.3 - 18.7 | 23.0 - 25.0 | 23.0 - 25.0 | 23.0 - 25.0 | 28.5 - 31.5  |           |        |
| PROTECTION CIRCUIT AND OTHERS      | OVERCURRENT PROTECTION                                                                                        | Works over 105% of rating (-H : peak) and recovers automatically                            |                                 |             |             |             |             |             |             |              |           |        |
|                                    | OVERVOLTAGE PROTECTION                                                                                        | 4.00 - 5.25V                                                                                | Works at 115 - 140% of rating   |             |             |             |             |             |             |              |           |        |
|                                    | OPERATING INDICATION                                                                                          | Not provided                                                                                |                                 |             |             |             |             |             |             |              |           |        |
|                                    | REMOTE SENSING                                                                                                | Not provided                                                                                |                                 |             |             |             |             |             |             |              |           |        |
|                                    | REMOTE ON/OFF                                                                                                 | Option (Refer to Instruction Manual)                                                        |                                 |             |             |             |             |             |             |              |           |        |
| ISOLATION                          | INPUT-OUTPUT                                                                                                  | AC3.000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)              |                                 |             |             |             |             |             |             |              |           |        |
|                                    | 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)               |                                 |             |             |             |             |             |             |              |           |        |
| ENVIRONMENT                        | OPERATING TEMP.,HUMID.AND ALTITUDE                                                                            | -10 to +60°C, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE) 3.000m (10.000feet) max |                                 |             |             |             |             |             |             |              |           |        |
|                                    | STORAGE TEMP.,HUMID.AND ALTITUDE                                                                              | -20 to +75°C, 20 - 90%RH (Non condensing) 9.000m (30.000feet) max                           |                                 |             |             |             |             |             |             |              |           |        |
|                                    | VIBRATION                                                                                                     | 10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis             |                                 |             |             |             |             |             |             |              |           |        |
|                                    | IMPACT                                                                                                        | 196.1m/s² (20G), 11ms, once each X, Y and Z axis                                            |                                 |             |             |             |             |             |             |              |           |        |
| SAFETY AND NOISE REGULATIONS       | AGENCY APPROVALS                                                                                              | UL60950-1, EN60950-1, EN50178, CSA C22.2 No.60950-1 Complies with DEN-AN and IEC60950-1     |                                 |             |             |             |             |             |             |              |           |        |
|                                    | CONDUCTED NOISE                                                                                               | Complies with FCC-B, CISPR22-B, EN55022-B, VCCI-B                                           |                                 |             |             |             |             |             |             |              |           |        |
| OTHERS                             | CASE SIZE/WEIGHT                                                                                              | 55×26×195mm (W×H×D) /250g max (without chassis and cover)                                   |                                 |             |             |             |             |             |             |              |           |        |
|                                    | COOLING METHOD                                                                                                | Convection                                                                                  |                                 |             |             |             |             |             |             |              |           |        |

\*1 Peak load for 10sec. or less is acceptable if the total wattage is less than the rated wattage(24V:50.4W).

\*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 current

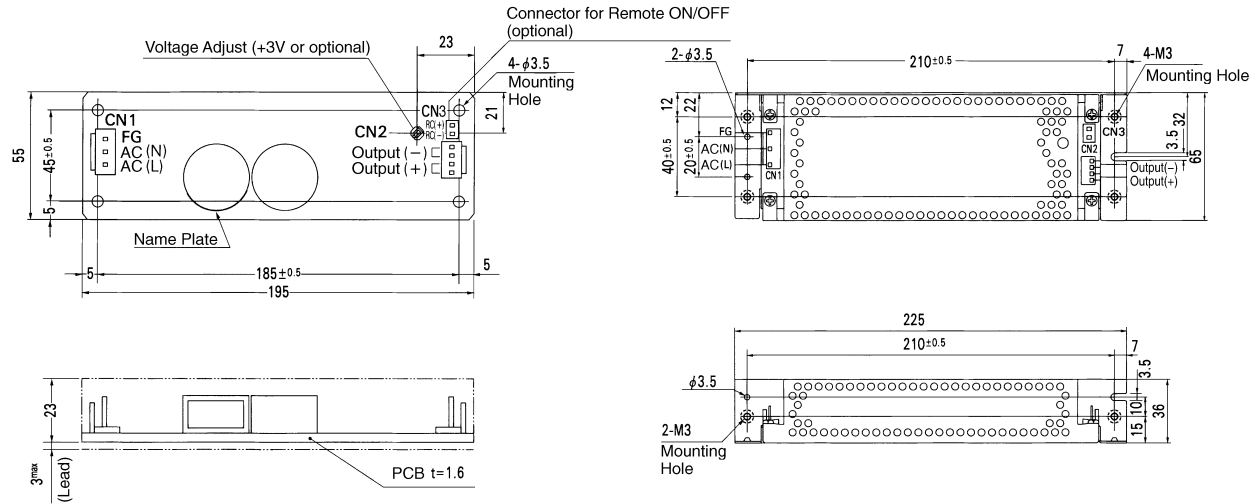
\*4 Please contact us about safety approvals for the model with option.

\* Avoid prolonged use under over-load.

\* Parallel operation with other model is not possible.

\* Derating is required when operated with chassis and cover.

## External view



| I/O Connector | Mating Connector | Terminal             |
|---------------|------------------|----------------------|
| CN1           | B3P5-VH          | VHR-5N               |
|               |                  | Chain: SVH-21T-P1.1  |
|               |                  | Loose: BVH-21T-P1.1  |
| CN2           | B4P-VH           | VHR-4N               |
|               |                  | Chain: SVH-21T-P1.1  |
|               |                  | Loose: BVH-21T-P1.1  |
| CN3           | B2B-XH-A         | XHP-2                |
|               |                  | Chain: SXH-001T-P0.6 |
|               |                  | Loose: BXH-001T-P0.6 |

## &lt;PIN CONNECTION&gt;

| Pin No. | Input |
|---------|-------|
| 1       | AC(L) |
| 2       |       |
| 3       | AC(N) |
| 4       |       |
| 5       | FG    |

| Pin No. | Output |
|---------|--------|
| 1       | -V     |
| 2       | -V     |
| 3       | +V     |
| 4       | +V     |

| Pin No. | Remote ON/OFF |
|---------|---------------|
| 1       | RC(+)         |
| 2       | RC(-)         |

※ Keep drawing current per pin below 5A for CN2.

※ Weight : 250g or less  
(Without chassis and cover)

※ Tolerance :  $\pm 1$

※ Dimensions in mm.

※ PCB Material : Glass composite (CEM3)

※ Chassis and cover is optional.

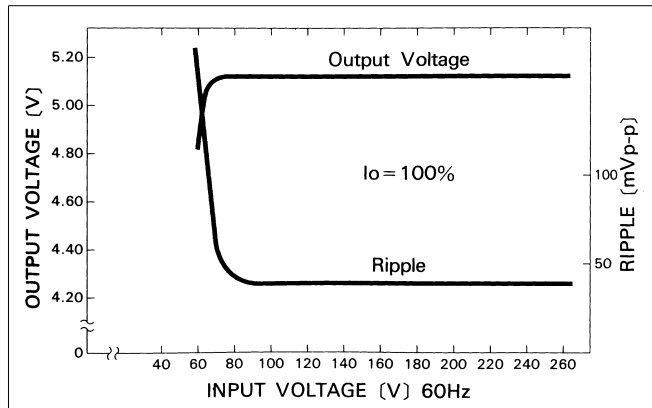
※ Mounting torque : 0.6N·m (6.3kgf·cm) max

(Mfr : J.S.T.)

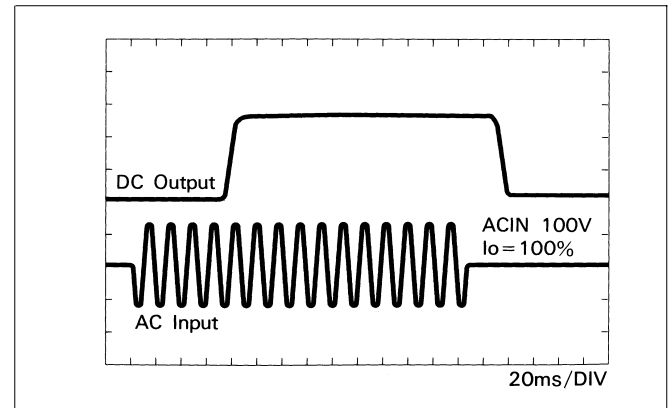
LDA

## Performance data

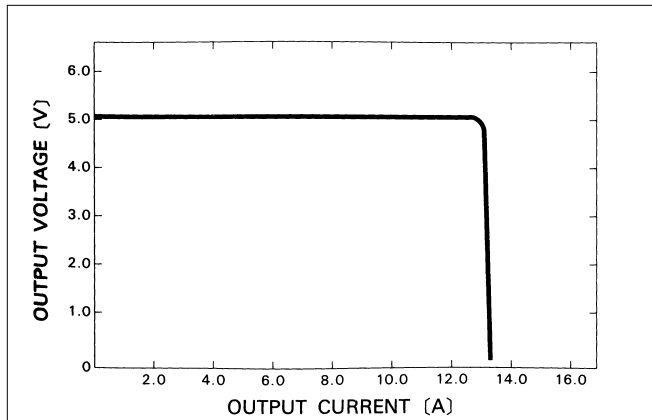
## ■ STATIC CHARACTERISTICS (LDA50F-5)



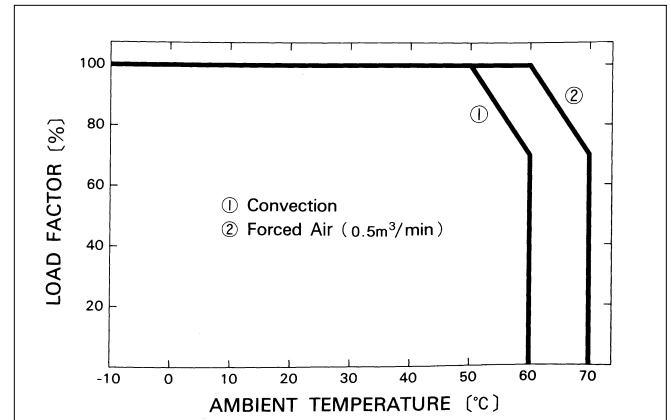
## ■ RISE TIME &amp; FALL TIME (LDA50F-5)



## ■ OVERCURRENT CHARACTERISTICS (LDA50F-5)



## ■ DERATING CURVE



# LDA75F

LDA 75 F -5 -□

① ② ③ ④ ⑤



Recommended EMI/EMC Filter  
NAC-06-472



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

- ① Series name
- ② Output wattage
- ③ Universal input
- ④ Output voltage
- ⑤ Optional \*4
- C : with Coating
- G : Low leakage current
- L : with LED
- R : with Remote ON/OFF
- S : with Chassis
- SN : with Chassis & cover
- Y : with Potentiometer

| MODEL                 | LDA75F-3  | LDA75F-5 | LDA75F-9 | LDA75F-12 | LDA75F-15 | LDA75F-18 | LDA75F-24 | LDA75F-24-H   | LDA75F-24-HR  | LDA75F-30 |
|-----------------------|-----------|----------|----------|-----------|-----------|-----------|-----------|---------------|---------------|-----------|
| MAX OUTPUT WATTAGE[W] | 45        | 75       | 76.5     | 75.6      | 75        | 75.6      | 76.8      | 76.8          | 76.8          | 75        |
| DC OUTPUT             | *3 3V 15A | 5V 15A   | 9V 8.5A  | 12V 6.3A  | 15V 5A    | 18V 4.2A  | 24V 3.2A  | 24V 3.2(4.5)A | 24V 3.2(4.5)A | 30V 2.5A  |

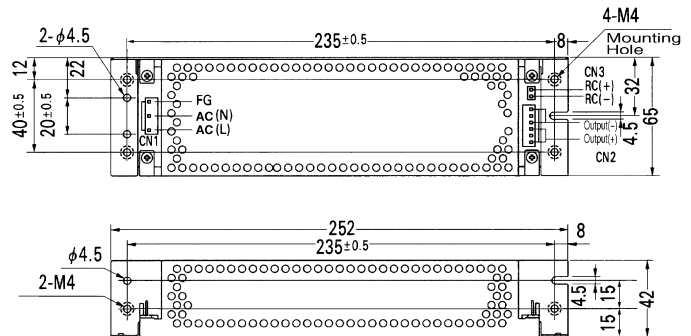
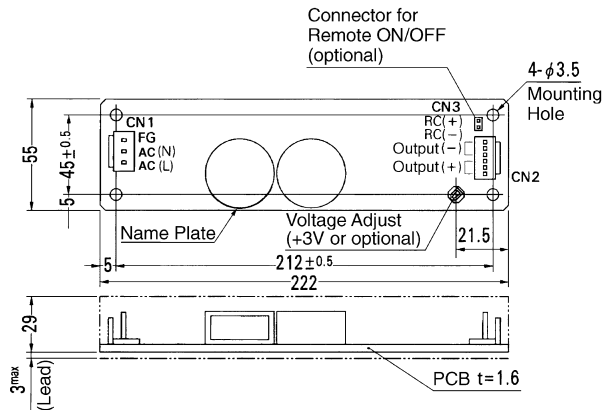
## SPECIFICATIONS

|                                    | MODEL                                                                                                          | LDA75F-3                                                                                    | LDA75F-5                        | LDA75F-9    | LDA75F-12   | LDA75F-15   | LDA75F-18   | LDA75F-24   | LDA75F-24-H | LDA75F-24-HR | LDA75F-30 |
|------------------------------------|----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-----------|
| INPUT                              | VOLTAGE[V]                                                                                                     | AC85 - 264 1 φ or DC110 - 370                                                               |                                 |             |             |             |             |             |             |              |           |
|                                    | CURRENT[A]                                                                                                     | ACIN 100V                                                                                   | 1.8typ (Io=100%)                |             |             |             |             |             |             |              |           |
|                                    |                                                                                                                | ACIN 200V                                                                                   | 1.0typ (Io=100%)                |             |             |             |             |             |             |              |           |
|                                    | FREQUENCY[Hz]                                                                                                  | 47 - 440                                                                                    |                                 |             |             |             |             |             |             |              |           |
|                                    | EFFICIENCY[%]                                                                                                  | 73typ                                                                                       | 79typ                           | 79typ       | 80typ       | 81typ       | 81typ       | 82typ       | 82typ       | 82typ        | 82typ     |
|                                    | INRUSH CURRENT[A]                                                                                              | ACIN 200V                                                                                   | 30typ (Io=100%) (At cold start) |             |             |             |             |             |             |              |           |
|                                    | LEAKAGE CURRENT[mA]                                                                                            | 0.75max (60Hz, According to UL, CSA, VDE and DEN-AN)                                        |                                 |             |             |             |             |             |             |              |           |
| OUTPUT                             | VOLTAGE[V]                                                                                                     | 3                                                                                           | 5                               | 9           | 12          | 15          | 18          | 24          | 24          | 24           | 30        |
|                                    | CURRENT[A]                                                                                                     | *1 15                                                                                       | 15                              | 8.5         | 6.3         | 5           | 4.2         | 3.2         | 3.2 (4.5)   | 3.2 (4.5)    | 2.5       |
|                                    | LINE REGULATION[mV]                                                                                            | 20max                                                                                       | 20max                           | 36max       | 48max       | 60max       | 72max       | 96max       | 96max       | 96max        | 120max    |
|                                    | LOAD REGULATION[mV]                                                                                            | 40max                                                                                       | 40max                           | 100max      | 100max      | 120max      | 120max      | 150max      | 150max      | 150max       | 180max    |
|                                    | RIPPLE[mVp-p]                                                                                                  | 0 to +50℃                                                                                   | 80max                           | 80max       | 120max      | 120max      | 120max      | 120max      | 120max      | 120max       | 120max    |
|                                    |                                                                                                                | -10 - 0℃                                                                                    | 140max                          | 140max      | 160max      | 160max      | 160max      | 160max      | 160max      | 160max       | 160max    |
|                                    | RIPPLE NOISE[mVp-p]                                                                                            | 0 to +50℃                                                                                   | 120max                          | 120max      | 150max      | 150max      | 150max      | 150max      | 150max      | 250max       | 250max    |
|                                    |                                                                                                                | -10 - 0℃                                                                                    | 160max                          | 160max      | 180max      | 180max      | 180max      | 180max      | 180max      | 280max       | 280max    |
|                                    | TEMPERATURE REGULATION[mV]                                                                                     | 60max                                                                                       | 60max                           | 120max      | 150max      | 180max      | 200max      | 290max      | 290max      | 290max       | 360max    |
|                                    | DRIFT[mV]                                                                                                      | *2 20max                                                                                    | 20max                           | 36max       | 48max       | 60max       | 72max       | 96max       | 96max       | 96max        | 120max    |
|                                    | START-UP TIME[ms]                                                                                              | 200max (ACIN 100V, 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 option : 5, 9, 12, 15, 18, 24, 30V ±10%) |                                                                                             |                                 |             |             |             |             |             |             |              |           |
| OUTPUT VOLTAGE SETTING[V]          | —                                                                                                              | 4.9 - 5.3                                                                                   | 8.6 - 9.4                       | 11.5 - 12.5 | 14.4 - 15.6 | 17.3 - 18.7 | 23.0 - 25.0 | 23.0 - 25.0 | 23.0 - 25.0 | 28.5 - 31.5  |           |
| PROTECTION CIRCUIT AND OTHERS      | OVERCURRENT PROTECTION                                                                                         | Works over 105% of rating (-H : peak) and recovers automatically                            |                                 |             |             |             |             |             |             |              |           |
|                                    | OVERVOLTAGE PROTECTION                                                                                         | 4.00 - 5.25V Works at 115 - 140% of rating                                                  |                                 |             |             |             |             |             |             |              |           |
|                                    | OPERATING INDICATION                                                                                           | Not provided                                                                                |                                 |             |             |             |             |             |             |              |           |
|                                    | REMOTE SENSING                                                                                                 | Not provided                                                                                |                                 |             |             |             |             |             |             |              |           |
|                                    | REMOTE ON/OFF                                                                                                  | Option (Refer to Instruction Manual)                                                        |                                 |             |             |             |             |             |             |              |           |
| ISOLATION                          | INPUT-OUTPUT                                                                                                   | AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)              |                                 |             |             |             |             |             |             |              |           |
|                                    | 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)               |                                 |             |             |             |             |             |             |              |           |
| ENVIRONMENT                        | OPERATING TEMP.,HUMID.AND ALTITUDE                                                                             | -10 to +60℃, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE) 3,000m (10,000feet) max  |                                 |             |             |             |             |             |             |              |           |
|                                    | STORAGE TEMP.,HUMID.AND ALTITUDE                                                                               | -20 to +75℃, 20 - 90%RH (Non condensing) 9,000m (30,000feet) max                            |                                 |             |             |             |             |             |             |              |           |
|                                    | VIBRATION                                                                                                      | 10 - 55Hz, 19.6m/s <sup>2</sup> (2G), 3minutes period, 60minutes each along X, Y and Z axis |                                 |             |             |             |             |             |             |              |           |
|                                    | IMPACT                                                                                                         | 196.1m/s <sup>2</sup> (20G), 11ms, once each X, Y and Z axis                                |                                 |             |             |             |             |             |             |              |           |
| SAFETY AND NOISE REGULATIONS       | AGENCY APPROVALS                                                                                               | UL60950-1, EN60950-1, EN50178, CSA C22.2 No.60950-1 Complies with DEN-AN and IEC60950-1     |                                 |             |             |             |             |             |             |              |           |
|                                    | CONDUCTED NOISE                                                                                                | Complies with FCC-B, CISPR22-B, EN55022-B, VCCI-B                                           |                                 |             |             |             |             |             |             |              |           |
| OTHERS                             | CASE SIZE/WEIGHT                                                                                               | 55 x 32 x 222mm (W x H x D) /320g max (without chassis and cover)                           |                                 |             |             |             |             |             |             |              |           |
|                                    | COOLING METHOD                                                                                                 | Convection                                                                                  |                                 |             |             |             |             |             |             |              |           |

\*1 Peak load for 10sec. or less is acceptable if the total wattage is less than the rated wattage(24V:76.8W).  
 \*2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃, with the input voltage held constant at the rated input/output.  
 \*3 ( ) : peak current  
 \*4 Please contact us about safety approvals for the model with option.

\* Avoid prolonged use under over-load.  
 \* Parallel operation with other model is not possible.  
 \* Derating is required when operated with chassis and cover.

## External view



| I/O Connector |          | Mating Connector | Terminal                                     |
|---------------|----------|------------------|----------------------------------------------|
| CN1           | B3P5-VH  | VHR-5N           | Chain: SVH-21T-P1.1<br>Loose: BVH-21T-P1.1   |
| CN2           | B6P-VH   | VHR-6N           | Chain: SVH-21T-P1.1<br>Loose: BVH-21T-P1.1   |
| CN3           | B2B-XH-A | XHP-2            | Chain: SXH-001T-P0.6<br>Loose: BXH-001T-P0.6 |

| Pin No. | Input |
|---------|-------|
| 1       | AC(L) |
| 2       |       |
| 3       | AC(N) |
| 4       |       |
| 5       | FG    |

|     |         |        |
|-----|---------|--------|
| CN2 | Pin No. | Output |
|     | 1~3     | -V     |
|     | 4~6     | +V     |

|            |         |             |
|------------|---------|-------------|
| <b>CN3</b> | Pin No. | Remote CNOR |
|            | 1       | RC(+)       |
|            | 2       | RC(-)       |

※Keep drawing current per pin below 5A for CN2.

※ Weight : 320g or less  
(Without chassis and cover)

※ Tolerance :  $\pm 1$

※ Dimensions in mm.

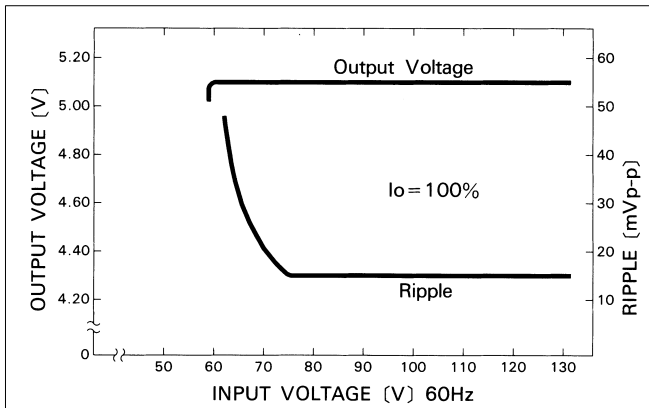
※ PCB Material : Glass composite (CEM3)

※ Chassis and cover is optional.

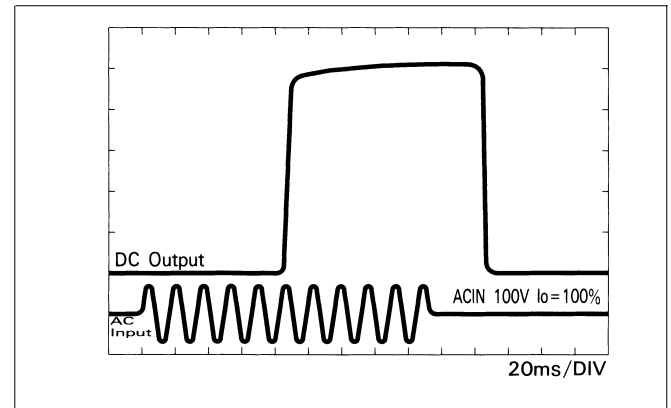
※Mounting torque : 1.5 N·m (16 kgf·cm) max

## Performance data

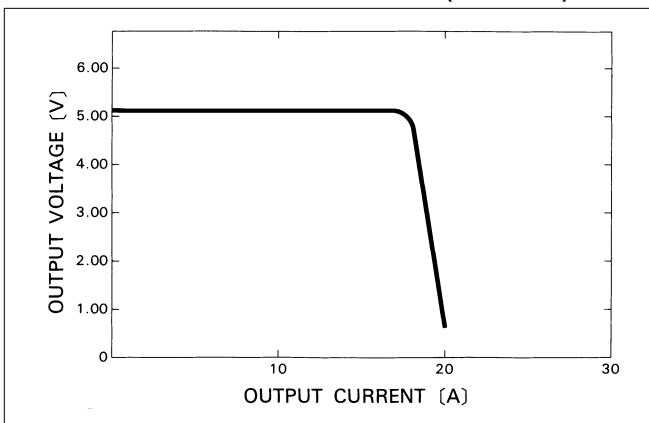
## ■ STATIC CHARACTERISTICS (LDA75F-5)



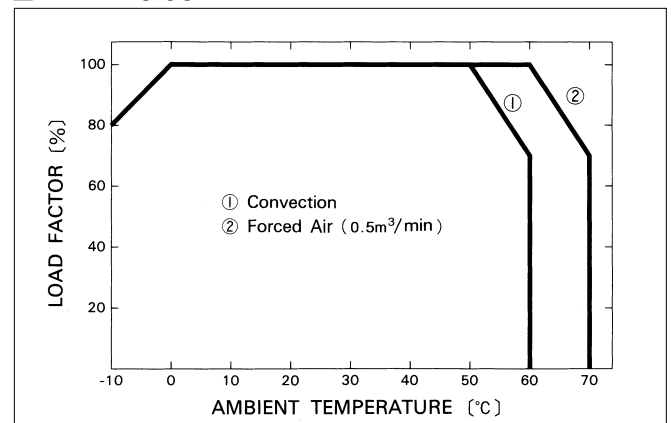
### ■RISE TIME & FALL TIME (LDA75F-5)



## ■ OVERCURRENT CHARACTERISTICS (LDA75F-5)



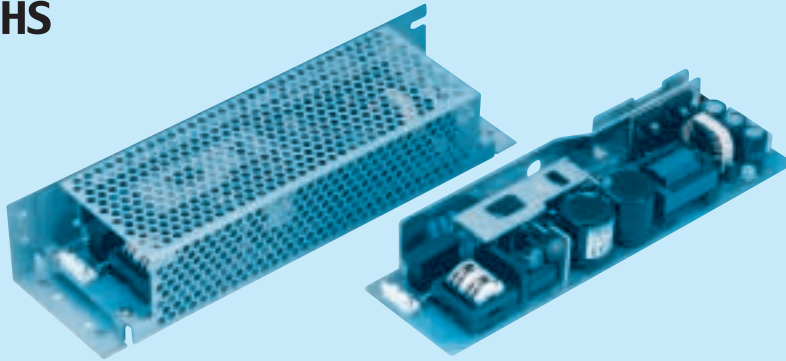
## ■ DERATING CURVE



# LDA100W

LDA 100 W -5 -□

① ② ③ ④ ⑤



Recommended EMI/EMC Filter  
NAC-06-472



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

- ① Series name
- ② Output wattage
- ③ Autoranging input
- ④ Output voltage
- ⑤ Optional \*4
- C : with Coating
- G : Low leakage current
- R : with Remote ON/OFF
- S : with Chassis
- SN : with Chassis & cover
- Y : with Potentiometer

| MODEL                 | LDA100W-3 | LDA100W-5 | LDA100W-9 | LDA100W-12 | LDA100W-15 | LDA100W-18 | LDA100W-24 | LDA100W-24-H  | LDA100W-30 | LDA100W-48 |
|-----------------------|-----------|-----------|-----------|------------|------------|------------|------------|---------------|------------|------------|
| MAX OUTPUT WATTAGE[W] | 60        | 100       | 103.5     | 102        | 100.5      | 100.8      | 103.2      | 103.2         | 105        | 96         |
| DC OUTPUT             | *3 3V 20A | 5V 20A    | 9V 11.5A  | 12V 8.5A   | 15V 6.7A   | 18V 5.6A   | 24V 4.3A   | 24V 4.3(6.5)A | 30V 3.5A   | 48V 2.0A   |

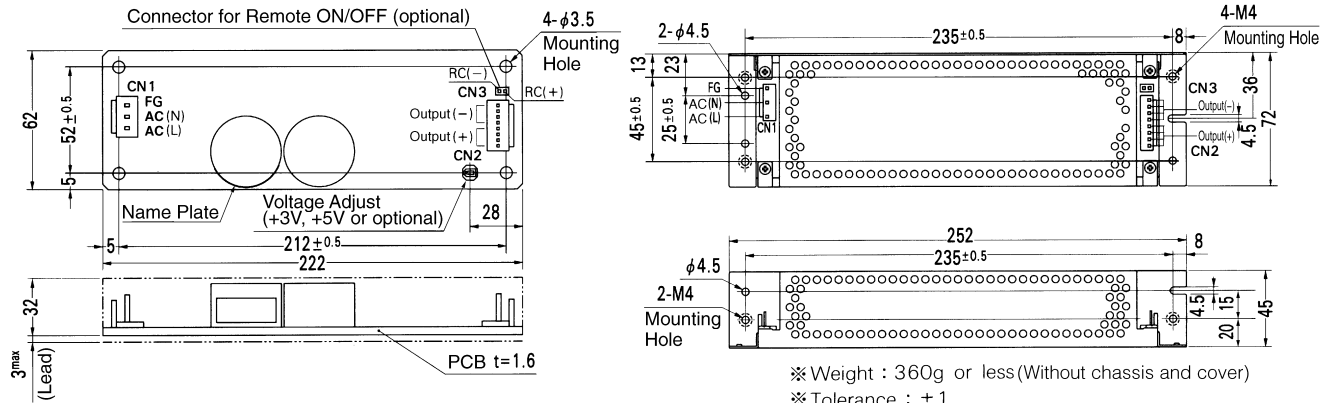
## SPECIFICATIONS

|                                    | MODEL                                                | LDA100W-3                                                                                  | LDA100W-5                                                                                           | LDA100W-9   | LDA100W-12  | LDA100W-15  | LDA100W-18  | LDA100W-24  | LDA100W-24-H | LDA100W-30  | LDA100W-48 |        |
|------------------------------------|------------------------------------------------------|--------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|------------|--------|
| INPUT                              | VOLTAGE[V]                                           | AC 85 - 132 / 170 - 264 1 ϕ                                                                |                                                                                                     |             |             |             |             |             |              |             |            |        |
|                                    | CURRENT[A]                                           | ACIN 100V                                                                                  | 2.4typ (Io=100%)                                                                                    |             |             |             |             |             |              |             |            |        |
|                                    |                                                      | ACIN 200V                                                                                  | 1.2typ (Io=100%)                                                                                    |             |             |             |             |             |              |             |            |        |
|                                    | FREQUENCY[Hz]                                        | 47 - 440                                                                                   |                                                                                                     |             |             |             |             |             |              |             |            |        |
|                                    | EFFICIENCY[%]                                        | 75typ                                                                                      | 79typ                                                                                               | 80typ       | 81typ       | 82typ       | 82typ       | 83typ       | 83typ        | 83typ       | 82typ      |        |
|                                    | INRUSH CURRENT[A]                                    | ACIN 200V                                                                                  | 30typ (Io=100%) (At cold start)                                                                     |             |             |             |             |             |              |             |            |        |
|                                    | LEAKAGE CURRENT[ma]                                  | 0.75max (60Hz, According to UL, CSA, VDE and DEN-AN)                                       |                                                                                                     |             |             |             |             |             |              |             |            |        |
| OUTPUT                             | VOLTAGE[V]                                           | 3                                                                                          | 5                                                                                                   | 9           | 12          | 15          | 18          | 24          | 24           | 30          | 48         |        |
|                                    | CURRENT[A]                                           | *1 20                                                                                      | 20                                                                                                  | 11.5        | 8.5         | 6.7         | 5.6         | 4.3         | 4.3 (6.5)    | 3.5         | 2.0        |        |
|                                    | LINE REGULATION[mV]                                  | 20max                                                                                      | 20max                                                                                               | 36max       | 48max       | 60max       | 72max       | 96max       | 96max        | 120max      | 192max     |        |
|                                    | LOAD REGULATION[mV]                                  | 40max                                                                                      | 40max                                                                                               | 100max      | 100max      | 120max      | 120max      | 150max      | 150max       | 180max      | 240max     |        |
|                                    | RIPPLE[mVp-p]                                        | 0 to +50℃                                                                                  | 80max                                                                                               | 80max       | 120max      | 120max      | 120max      | 120max      | 120max       | 120max      | 150max     |        |
|                                    |                                                      | -10 - 0℃                                                                                   | 140max                                                                                              | 140max      | 160max      | 160max      | 160max      | 160max      | 160max       | 160max      | 200max     |        |
|                                    | RIPPLE NOISE[mVp-p]                                  | 0 to +50℃                                                                                  | 120max                                                                                              | 120max      | 150max      | 150max      | 150max      | 150max      | 150max       | 250max      | 150max     | 400max |
|                                    |                                                      | -10 - 0℃                                                                                   | 160max                                                                                              | 160max      | 180max      | 180max      | 180max      | 180max      | 180max       | 280max      | 180max     | 600max |
|                                    | TEMPERATURE REGULATION[mV]                           | 60max                                                                                      | 60max                                                                                               | 120max      | 150max      | 180max      | 200max      | 290max      | 290max       | 360max      | 560max     |        |
|                                    | DRIFT[mV]                                            | *2 20max                                                                                   | 20max                                                                                               | 36max       | 48max       | 60max       | 72max       | 96max       | 96max        | 120max      | 192max     |        |
|                                    | START-UP TIME[ms]                                    | 200max (ACIN 100V, 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 adjusted the output is available as option :9, 12, 15, 18, 24, 30, 48V ±10%) |             |             |             |             |             |              |             |            |        |
| OUTPUT VOLTAGE SETTING[V]          | —                                                    | —                                                                                          | 8.6 - 9.4                                                                                           | 11.5 - 12.5 | 14.4 - 15.6 | 17.3 - 18.7 | 23.0 - 25.0 | 23.0 - 25.0 | 28.8 - 31.2  | 46.0 - 50.0 |            |        |
| PROTECTION CIRCUIT AND OTHERS      | OVERCURRENT PROTECTION                               | Works over 105% of rating (-H : peak) and recovers automatically                           |                                                                                                     |             |             |             |             |             |              |             |            |        |
|                                    | OVERVOLTAGE PROTECTION                               | 4.00 - 5.25V Works at 115 - 140% of rating                                                 |                                                                                                     |             |             |             |             |             |              |             |            |        |
|                                    | OPERATING INDICATION                                 | Not provided                                                                               |                                                                                                     |             |             |             |             |             |              |             |            |        |
|                                    | REMOTE SENSING                                       | Not provided                                                                               |                                                                                                     |             |             |             |             |             |              |             |            |        |
|                                    | REMOTE ON/OFF                                        | Option (Refer to Instruction Manual)                                                       |                                                                                                     |             |             |             |             |             |              |             |            |        |
| ISOLATION                          | INPUT-OUTPUT                                         | AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)             |                                                                                                     |             |             |             |             |             |              |             |            |        |
|                                    | 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)              |                                                                                                     |             |             |             |             |             |              |             |            |        |
| ENVIRONMENT                        | OPERATING TEMP.,HUMID.AND ALTITUDE                   | -10 to +60℃, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE) 3,000m (10,000feet) max |                                                                                                     |             |             |             |             |             |              |             |            |        |
|                                    | STORAGE TEMP.,HUMID.AND ALTITUDE                     | -20 to +75℃, 20 - 90%RH (Non condensing) 9,000m (30,000feet) max                           |                                                                                                     |             |             |             |             |             |              |             |            |        |
|                                    | VIBRATION                                            | 10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis            |                                                                                                     |             |             |             |             |             |              |             |            |        |
|                                    | IMPACT                                               | 196.1m/s² (20G), 11ms, once each X, Y and Z axis                                           |                                                                                                     |             |             |             |             |             |              |             |            |        |
| SAFETY AND NOISE REGULATIONS       | AGENCY APPROVALS                                     | UL60950-1, EN60950-1, EN50178, CSA C22.2 No.234 Complies with DEN-AN and IEC60950-1        |                                                                                                     |             |             |             |             |             |              |             |            |        |
|                                    | CONDUCTED NOISE                                      | Complies with FCC-B, CISPR22-B, EN55022-B, VCCI-B                                          |                                                                                                     |             |             |             |             |             |              |             |            |        |
| OTHERS                             | CASE SIZE/WEIGHT                                     | 62 x 35 x 222mm (W x H x D) /360g max (without chassis and cover)                          |                                                                                                     |             |             |             |             |             |              |             |            |        |
|                                    | COOLING METHOD                                       | Convection                                                                                 |                                                                                                     |             |             |             |             |             |              |             |            |        |

- \*1 Peak load for 20sec. or less is acceptable if the total wattage is less than the rated wattage(24V:103.2W).
- \*2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃, with the input voltage held constant at the rated input/output.
- \*3 ( ) : peak current
- \*4 Please contact us about safety approvals for the model with option.

- \* Avoid prolonged use under over-load.
- \* Parallel operation with other model is not possible.
- \* Derating is required when operated with chassis and cover.

## External view



※ Weight : 360g or less (Without chassis and cover)

※ Tolerance :  $\pm 1$

※ Dimensions in mm.

※ PCB Material : Glass composite (CEM3)

※ Chassis and cover is optional.

※ Mounting torque : 1.5 N·m (16 kgf·cm) max

| I/O Connector | Mating Connector | Terminal             |
|---------------|------------------|----------------------|
| CN1           | B3P5-VH          | VHR-5N               |
|               |                  | Chain: SVH-21T-P1.1  |
|               |                  | Loose: BVH-21T-P1.1  |
| CN2           | B8P-VH           | VHR-8N               |
|               |                  | Chain: SVH-21T-P1.1  |
|               |                  | Loose: BVH-21T-P1.1  |
| CN3           | B2B-XH-A         | XHP-2                |
|               |                  | Chain: SXH-001T-P0.6 |
|               |                  | Loose: BXH-001T-P0.6 |

(Mfr : J.S.T.)

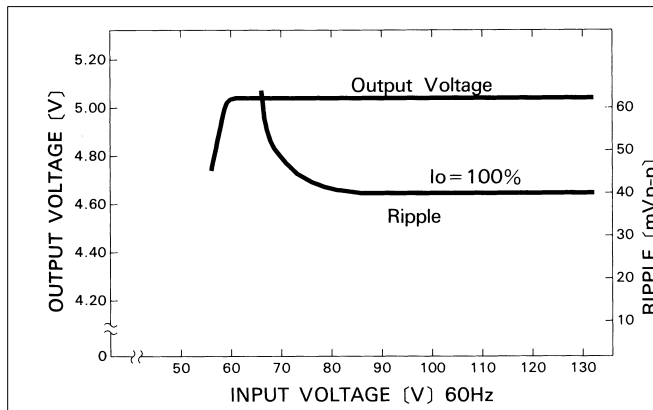
## &lt;PIN CONNECTION&gt;

| Pin No. | Input | Pin No. | Output | Pin No. | Remote ON/OFF |
|---------|-------|---------|--------|---------|---------------|
| 1       | AC(L) | 1~4     | -V     | 1       | RC(+)         |
| 2       |       |         |        | 2       | RC(-)         |
| 3       | AC(N) |         |        |         |               |
| 4       |       | 5~8     | +V     |         |               |
| 5       | FG    |         |        |         |               |

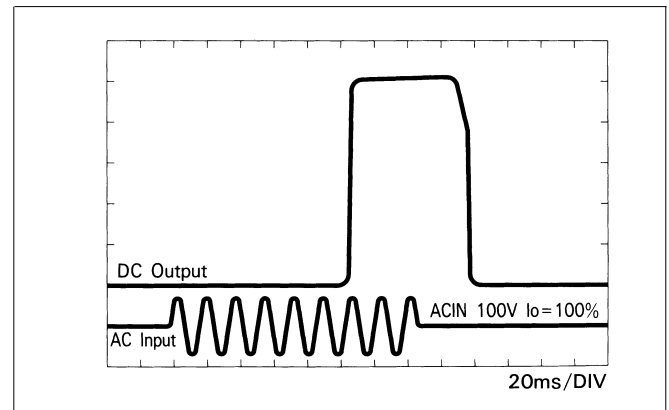
※ Keep drawing current per pin below 5A for CN2.

## Performance data

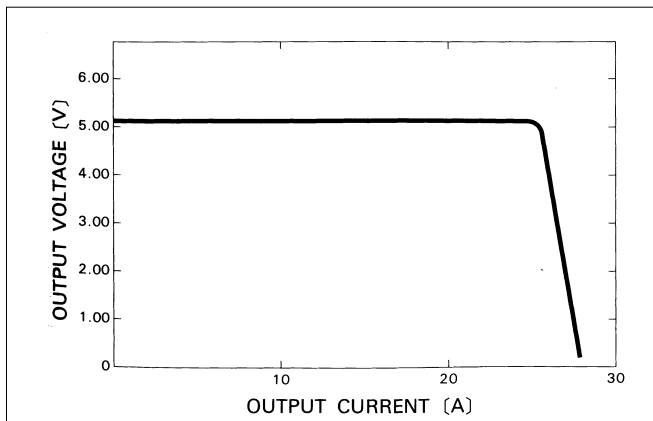
## ■ STATIC CHARACTERISTICS (LDA100W-5)



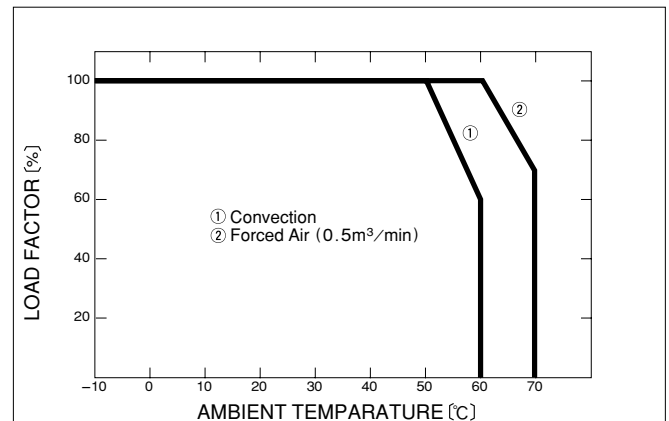
## ■ RISE TIME &amp; FALL TIME (LDA100W-5)



## ■ OVERCURRENT CHARACTERISTICS (LDA100W-5)



## ■ DERATING CURVE



# LDA150W

LDA 150 W -5 -□

① ② ③ ④ ⑤



Recommended EMI/EMC Filter  
NAC-06-472



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

- ① Series name
- ② Output wattage
- ③ Autoranging input
- ④ Output voltage
- ⑤ Optional \*4
- C :with Coating
- G :Low leakage current
- L :with LED
- R :with Remote ON/OFF
- S :with Chassis
- SN :with Chassis & cover
- Y :with Potentiometer

| MODEL                 | LDA150W-3 | LDA150W-5 | LDA150W-9 | LDA150W-12 | LDA150W-15 | LDA150W-18 | LDA150W-24 | LDA150W-24-H | LDA150W-30 | LDA150W-48 |
|-----------------------|-----------|-----------|-----------|------------|------------|------------|------------|--------------|------------|------------|
| MAX OUTPUT WATTAGE[W] | 90        | 150       | 153       | 150        | 150        | 153        | 151.2      | 151.2        | 150        | 144        |
| DC OUTPUT             | *3 3V 30A | 5V 30A    | 9V 17A    | 12V 12.5A  | 15V 10A    | 18V 8.5A   | 24V 6.3A   | 24V 6.3(10)A | 30V 5A     | 48V 3A     |

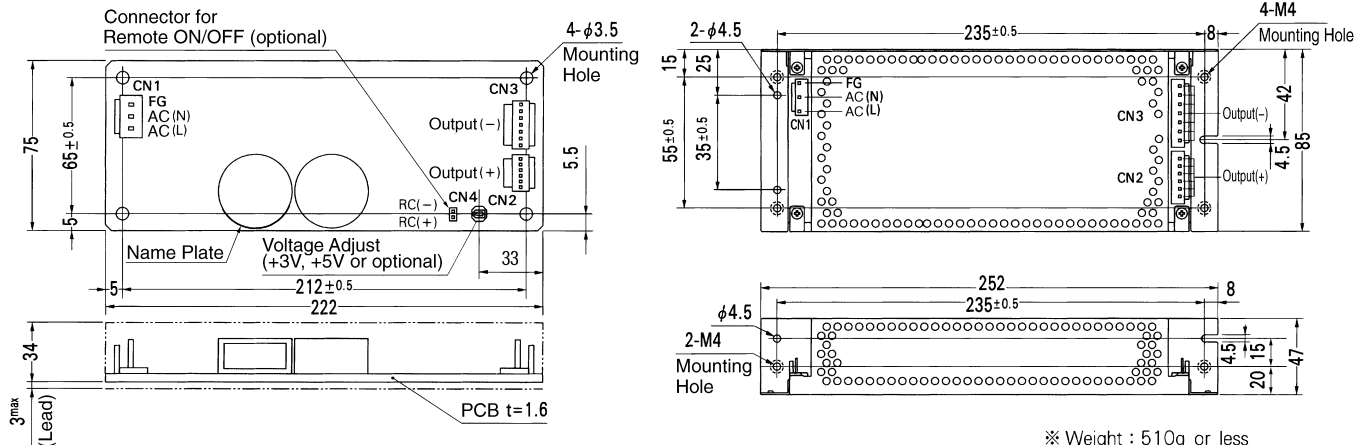
## SPECIFICATIONS

|                                    | MODEL                                                | LDA150W-3                                                                                  | LDA150W-5                                                                                           | LDA150W-9   | LDA150W-12  | LDA150W-15  | LDA150W-18  | LDA150W-24  | LDA150W-24-H | LDA150W-30  | LDA150W-48 |
|------------------------------------|------------------------------------------------------|--------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|------------|
| INPUT                              | VOLTAGE[V]                                           | AC 85 - 132 / 170 - 264 1 ϕ                                                                |                                                                                                     |             |             |             |             |             |              |             |            |
|                                    | CURRENT[A]                                           | ACIN 100V                                                                                  | 3.6typ (Io=100%)                                                                                    |             |             |             |             |             |              |             |            |
|                                    |                                                      | ACIN 200V                                                                                  | 2.0typ (Io=100%)                                                                                    |             |             |             |             |             |              |             |            |
|                                    | FREQUENCY[Hz]                                        | 47 - 440                                                                                   |                                                                                                     |             |             |             |             |             |              |             |            |
|                                    | EFFICIENCY[%]                                        | 75typ                                                                                      | 79typ                                                                                               | 79typ       | 82typ       | 83typ       | 84typ       | 85typ       | 85typ        | 85typ       | 82typ      |
|                                    | INRUSH CURRENT[A]                                    | ACIN 200V                                                                                  | 30typ (Io=100%) (At cold start)                                                                     |             |             |             |             |             |              |             |            |
|                                    | LEAKAGE CURRENT[mA]                                  | 0.75max (60Hz, According to UL, CSA, VDE and DEN-AN)                                       |                                                                                                     |             |             |             |             |             |              |             |            |
| OUTPUT                             | VOLTAGE[V]                                           | 3                                                                                          | 5                                                                                                   | 9           | 12          | 15          | 18          | 24          | 24           | 30          | 48         |
|                                    | CURRENT[A]                                           | *1 30                                                                                      | 30                                                                                                  | 17          | 12.5        | 10          | 8.5         | 6.3         | 6.3(10)      | 5           | 3          |
|                                    | LINE REGULATION[mV]                                  | 20max                                                                                      | 20max                                                                                               | 36max       | 48max       | 60max       | 72max       | 96max       | 96max        | 120max      | 192max     |
|                                    | LOAD REGULATION[mV]                                  | 40max                                                                                      | 40max                                                                                               | 100max      | 100max      | 120max      | 120max      | 150max      | 150max       | 180max      | 240max     |
|                                    | RIPPLE[mVp-p]                                        | 0 to +50℃                                                                                  | 80max                                                                                               | 80max       | 120max      | 120max      | 120max      | 120max      | 120max       | 120max      | 150max     |
|                                    |                                                      | -10 - 0℃                                                                                   | 140max                                                                                              | 140max      | 160max      | 160max      | 160max      | 160max      | 160max       | 160max      | 200max     |
|                                    | RIPPLE NOISE[mVp-p]                                  | 0 to +50℃                                                                                  | 120max                                                                                              | 120max      | 150max      | 150max      | 150max      | 150max      | 150max       | 150max      | 400max     |
|                                    |                                                      | -10 - 0℃                                                                                   | 160max                                                                                              | 160max      | 180max      | 180max      | 180max      | 180max      | 180max       | 180max      | 600max     |
|                                    | TEMPERATURE REGULATION[mV]                           | 60max                                                                                      | 60max                                                                                               | 120max      | 150max      | 180max      | 200max      | 290max      | 290max       | 360max      | 560max     |
|                                    | DRIFT[mV]                                            | *2 20max                                                                                   | 20max                                                                                               | 36max       | 48max       | 60max       | 72max       | 96max       | 96max        | 120max      | 192max     |
|                                    | START-UP TIME[ms]                                    | 200max (ACIN 100V, 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 adjusted the output is available as option :9, 12, 15, 18, 24, 30, 48V ±10%) |             |             |             |             |             |              |             |            |
| OUTPUT VOLTAGE SETTING[V]          | —                                                    | —                                                                                          | 8.6 - 9.4                                                                                           | 11.5 - 12.5 | 14.4 - 15.6 | 17.3 - 18.7 | 23.0 - 25.0 | 23.0 - 25.0 | 28.5 - 31.5  | 46.0 - 50.0 |            |
| PROTECTION CIRCUIT AND OTHERS      | OVERCURRENT PROTECTION                               | Works over 105% of rating (-H : peak) and recovers automatically                           |                                                                                                     |             |             |             |             |             |              |             |            |
|                                    | OVERVOLTAGE PROTECTION                               | 4.00 - 5.25V                                                                               | Works at 115 - 140% of rating                                                                       |             |             |             |             |             |              |             |            |
|                                    | OPERATING INDICATION                                 | Not provided                                                                               |                                                                                                     |             |             |             |             |             |              |             |            |
|                                    | REMOTE SENSING                                       | Not provided                                                                               |                                                                                                     |             |             |             |             |             |              |             |            |
|                                    | REMOTE ON/OFF                                        | Option (Refer to Instruction Manual)                                                       |                                                                                                     |             |             |             |             |             |              |             |            |
| ISOLATION                          | INPUT-OUTPUT                                         | AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)             |                                                                                                     |             |             |             |             |             |              |             |            |
|                                    | 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)              |                                                                                                     |             |             |             |             |             |              |             |            |
| ENVIRONMENT                        | OPERATING TEMP.,HUMID.AND ALTITUDE                   | -10 to +60℃, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE) 3,000m (10,000feet) max |                                                                                                     |             |             |             |             |             |              |             |            |
|                                    | STORAGE TEMP.,HUMID.AND ALTITUDE                     | -20 to +75℃, 20 - 90%RH (Non condensing) 9,000m (30,000feet) max                           |                                                                                                     |             |             |             |             |             |              |             |            |
|                                    | VIBRATION                                            | 10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis            |                                                                                                     |             |             |             |             |             |              |             |            |
|                                    | IMPACT                                               | 196.1m/s² (20G), 11ms, once each X, Y and Z axis                                           |                                                                                                     |             |             |             |             |             |              |             |            |
| SAFETY AND NOISE REGULATIONS       | AGENCY APPROVALS                                     | UL60950-1, EN60950-1, EN50178, CSA C22.2 No.234 Complies with DEN-AN and IEC60950-1        |                                                                                                     |             |             |             |             |             |              |             |            |
|                                    | CONDUCTED NOISE                                      | Complies with FCC-B, CISPR22-B, EN55022-B, VCCI-B                                          |                                                                                                     |             |             |             |             |             |              |             |            |
| OTHERS                             | CASE SIZE/WEIGHT                                     | 75 x 37 x 222mm (W x H x D) /510g max (without chassis and cover)                          |                                                                                                     |             |             |             |             |             |              |             |            |
|                                    | COOLING METHOD                                       | Convection                                                                                 |                                                                                                     |             |             |             |             |             |              |             |            |

- \*1 Peak load for 10sec. or less is acceptable if the total wattage is less than the rated wattage(24V:151.2W).
- \*2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃, with the input voltage held constant at the rated input/output.
- \*3 ( ) : peak current
- \*4 Please contact us about safety approvals for the model with option.

- \* Avoid prolonged use under over-load.
- \* Parallel operation with other model is not possible.
- \* Derating is required when operated with chassis and cover.

## External view



| I/O Connector | Mating Connector | Terminal             |
|---------------|------------------|----------------------|
| CN1           | B3P5-VH          | VHR-5N               |
|               |                  | Chain: SVH-21T-P1.1  |
|               |                  | Loose: BVH-21T-P1.1  |
| CN2           | B6P-VH           | VHR-6N               |
|               |                  | Chain: SVH-21T-P1.1  |
|               |                  | Loose: BVH-21T-P1.1  |
| CN3           | B7P-VH           | VHR-7N               |
|               |                  | Chain: SVH-21T-P1.1  |
|               |                  | Loose: BVH-21T-P1.1  |
| CN4           | B2B-XH-A         | XHP-2                |
|               |                  | Chain: SXH-001T-P0.6 |
|               |                  | Loose: BXH-001T-P0.6 |

(Mfr : J.S.T.)

## &lt;PIN CONNECTION&gt;

| Pin No. | Input |
|---------|-------|
| 1       | AC(L) |
| 2       |       |
| 3       | AC(N) |
| 4       |       |
| 5       | FG    |

※ Keep drawing current per pin below 5A for CN2, CN3.

| Pin No. | Output |
|---------|--------|
| 1~6     | +V     |
| 1~7     | -V     |

| Pin No. | Remote ON/OFF |
|---------|---------------|
| 1       | RC(+)         |
| 2       | RC(-)         |

※ Weight : 510g or less  
(Without chassis and cover)

※ Tolerance :  $\pm 1$ 

※ Dimensions in mm.

※ PCB Material : Glass composite  
(CEM3)

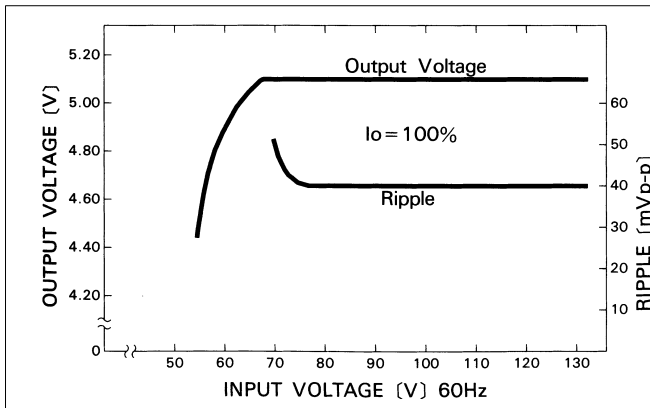
※ Chassis and cover is optional.

※ Chassis and cover is not available  
to remote ON/OFF unit.

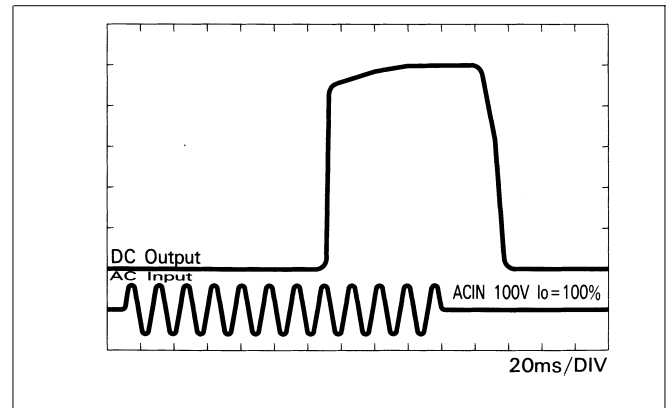
※ Mounting torque : 1.5 N·m (16 kgf·cm) max

## Performance data

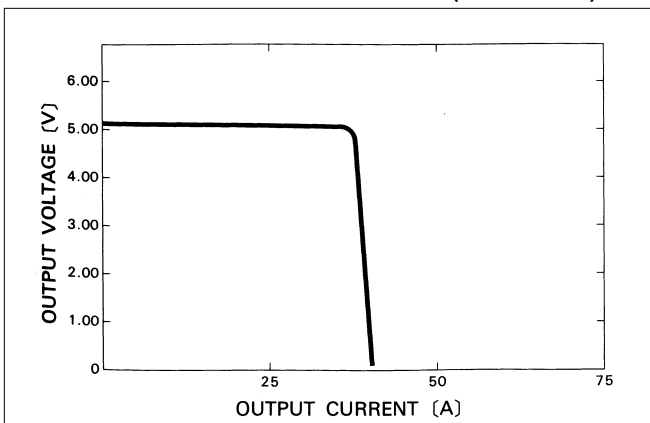
## ■ STATIC CHARACTERISTICS (LDA150W-5)



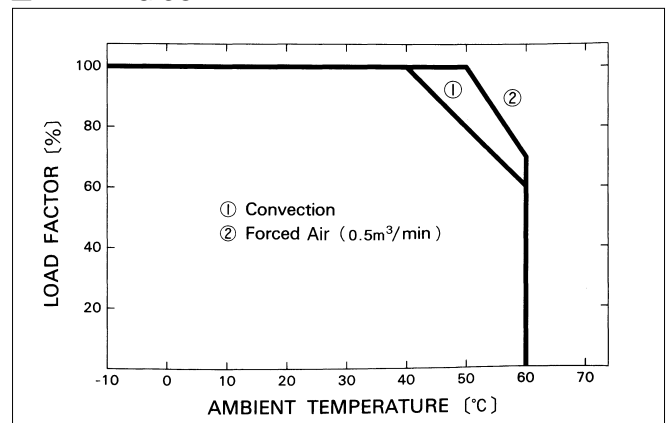
## ■ RISE TIME &amp; FALL TIME (LDA150W-5)



## ■ OVERCURRENT CHARACTERISTICS (LDA150W-5)



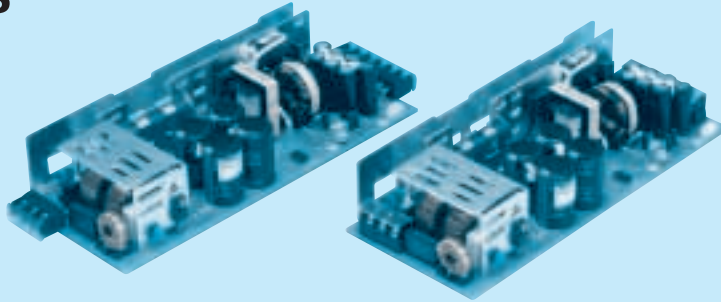
## ■ DERATING CURVE



# LDA300W

LDA 300 W -5 -□

① ② ③ ④ ⑤



Recommended EMI/EMC Filter  
NAC-16-472



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

- ① Series name
- ② Output wattage
- ③ Autoranging input
- ④ Output voltage
- ⑤ Optional \*4
- C :with Coating
- G :Low leakage current
- L :with LED
- R :with Remote ON/OFF
- S :with Chassis
- SNF :with Chassis & cover & fan
- T :Vertical terminal block

| MODEL                 | LDA300W-3 | LDA300W-5 | LDA300W-9 | LDA300W-12 | LDA300W-15 | LDA300W-18 | LDA300W-24 | LDA300W-30 | LDA300W-48 |
|-----------------------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|
| MAX OUTPUT WATTAGE[W] | 180       | 300       | 306       | 324        | 330        | 306        | 336        | 300        | 302.4      |
| DC OUTPUT             | 3V 60A    | 5V 60A    | 9V 34A    | 12V 27A    | 15V 22A    | 18V 17A    | 24V 14A    | 30V 10A    | 48V 6.3A   |

## SPECIFICATIONS

|                               | MODEL                              | LDA300W-3                                                                                   | LDA300W-5                                                                         | LDA300W-9 | LDA300W-12 | LDA300W-15 | LDA300W-18 | LDA300W-24 | LDA300W-30 | LDA300W-48 |           |
|-------------------------------|------------------------------------|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------|------------|------------|------------|------------|------------|------------|-----------|
| INPUT                         | VOLTAGE[V]                         | AC 85 - 132 / 170 - 264 1 φ                                                                 |                                                                                   |           |            |            |            |            |            |            |           |
|                               | CURRENT[A]                         | ACIN 100V                                                                                   | 7.5typ (Io=100%)                                                                  |           |            |            |            |            |            |            |           |
|                               |                                    | ACIN 200V                                                                                   | 4.5typ (Io=100%)                                                                  |           |            |            |            |            |            |            |           |
|                               | FREQUENCY[Hz]                      | 47 - 440                                                                                    |                                                                                   |           |            |            |            |            |            |            |           |
|                               | EFFICIENCY[%]                      | ACIN 100V                                                                                   | 72typ                                                                             | 78typ     | 78typ      | 80typ      | 81typ      | 81typ      | 83typ      | 83typ      | 83typ     |
|                               |                                    | ACIN 200V                                                                                   | 74typ                                                                             | 81typ     | 81typ      | 83typ      | 84typ      | 84typ      | 86typ      | 86typ      | 86typ     |
|                               | INRUSH CURRENT[A]                  | ACIN 100V                                                                                   | 15/30A typ (Primary/Secondary Surge Current) Io=100% (More than 3sec.to re-start) |           |            |            |            |            |            |            |           |
| ACIN 200V                     |                                    | 30/30typ (Primary/Secondary Surge Current) Io=100% (More than 3sec.to re-start)             |                                                                                   |           |            |            |            |            |            |            |           |
|                               | LEAKAGE CURRENT[ma]                | 0.75max (60Hz, According to UL, CSA, VDE and DEN-AN)                                        |                                                                                   |           |            |            |            |            |            |            |           |
| OUTPUT                        | VOLTAGE[V]                         | 3                                                                                           | 5                                                                                 | 9         | 12         | 15         | 18         | 24         | 30         | 48         |           |
|                               | CURRENT[A]                         | Forced air                                                                                  | 60                                                                                | 60        | 34         | 27         | 22         | 17         | 14         | 10         | 6.3       |
|                               |                                    | Convection *1                                                                               | 40 (60)                                                                           | 40 (60)   | 23 (34)    | 17 (27)    | 14 (22)    | 12 (17)    | 9 (14)     | 7 (10)     | 4.2 (6.3) |
|                               | LINE REGULATION[mV]                | 20max                                                                                       | 20max                                                                             | 36max     | 48max      | 60max      | 72max      | 96max      | 120max     | 192max     |           |
|                               | LOAD REGULATION[mV]                | 40max                                                                                       | 40max                                                                             | 100max    | 100max     | 120max     | 120max     | 150max     | 180max     | 240max     |           |
|                               | RIPPLE[mVp-p]                      | 0 to +50℃ *2                                                                                | 80max                                                                             | 80max     | 120max     | 120max     | 120max     | 120max     | 120max     | 120max     | 150max    |
|                               |                                    | -10 - 0℃ *2                                                                                 | 140max                                                                            | 140max    | 160max     | 160max     | 160max     | 160max     | 160max     | 160max     | 200max    |
|                               | RIPPLE NOISE[mVp-p]                | 0 to +50℃ *2                                                                                | 120max                                                                            | 120max    | 150max     | 150max     | 150max     | 150max     | 150max     | 150max     | 400max    |
|                               |                                    | -10 - 0℃ *2                                                                                 | 160max                                                                            | 160max    | 180max     | 180max     | 180max     | 180max     | 180max     | 180max     | 600max    |
|                               | TEMPERATURE REGULATION[mV]         | 60max                                                                                       | 60max                                                                             | 120max    | 150max     | 180max     | 200max     | 290max     | 360max     | 560max     |           |
|                               | DRIFT[mV]                          | *3                                                                                          | 20max                                                                             | 20max     | 36max      | 48max      | 60max      | 72max      | 96max      | 120max     | 192max    |
|                               |                                    | START-UP TIME[ms]                                                                           | 200max (ACIN 100V, 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                                                                                  | 5, 9, 12, 15, 18, 24, 30, 48V ±10%                                                |           |            |            |            |            |            |            |           |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION             | Works over 105% of rating and recovers automatically                                        |                                                                                   |           |            |            |            |            |            |            |           |
|                               | OVERVOLTAGE PROTECTION             | 4.00 - 5.25V                                                                                | Works at 115 - 140% of rating                                                     |           |            |            |            |            |            |            |           |
|                               | OPERATING INDICATION               | Not provided                                                                                |                                                                                   |           |            |            |            |            |            |            |           |
|                               | REMOTE SENSING                     | Provided                                                                                    |                                                                                   |           |            |            |            |            |            |            |           |
|                               | REMOTE ON/OFF                      | Option (Refer to Instruction Manual)                                                        |                                                                                   |           |            |            |            |            |            |            |           |
| ISOLATION                     | INPUT-OUTPUT                       | AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)              |                                                                                   |           |            |            |            |            |            |            |           |
|                               | 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)               |                                                                                   |           |            |            |            |            |            |            |           |
| ENVIRONMENT                   | OPERATING TEMP.,HUMID.AND ALTITUDE | -10 to +70℃, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE) 3,000m (10,000feet) max  |                                                                                   |           |            |            |            |            |            |            |           |
|                               | STORAGE TEMP.,HUMID.AND ALTITUDE   | -20 to +75℃, 20 - 90%RH (Non condensing) 9,000m (30,000feet) max                            |                                                                                   |           |            |            |            |            |            |            |           |
|                               | VIBRATION                          | 10 - 55Hz, 19.6m/s <sup>2</sup> (2G), 3minutes period, 60minutes each along X, Y and Z axis |                                                                                   |           |            |            |            |            |            |            |           |
|                               | IMPACT                             | 196.1m/s <sup>2</sup> (20G), 11ms, once each X, Y and Z axis                                |                                                                                   |           |            |            |            |            |            |            |           |
| SAFETY AND NOISE REGULATIONS  | AGENCY APPROVALS                   | UL60950-1, C-UL, EN60950-1, EN50178 Complies with DEN-AN and IEC60950-1                     |                                                                                   |           |            |            |            |            |            |            |           |
|                               | CONDUCTED NOISE                    | Complies with FCC-B, CISPR22-B, EN55022-B, VCCI-B                                           |                                                                                   |           |            |            |            |            |            |            |           |
| OTHERS                        | CASE SIZE/WEIGHT                   | 108×50×255mm (W×H×D) /1kg max (without terminal block)                                      |                                                                                   |           |            |            |            |            |            |            |           |
|                               | COOLING METHOD                     | Convection / Forced air (Refer to DERATING CURVE)                                           |                                                                                   |           |            |            |            |            |            |            |           |

\*1 Peak load for 30sec. or less is acceptable if the total wattage is less than the rated wattage.

\*2 This is the value that measured on measuring board with capacitor of 22 μF within 150mm from output terminal.

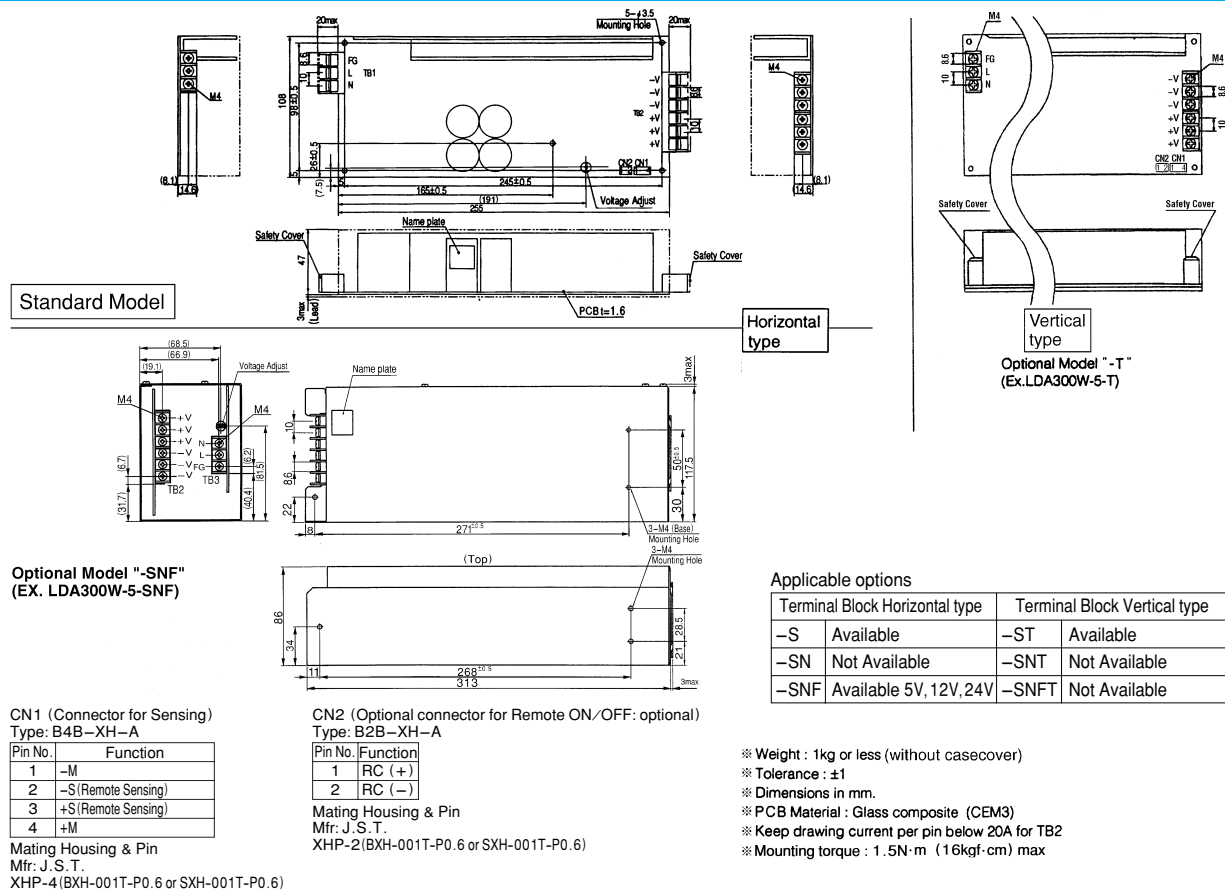
\*3 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃, with the input voltage held constant at the rated input/output.

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

\* Parallel operation with other model is not possible.

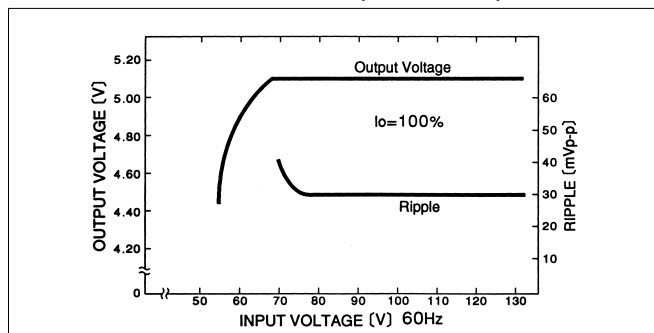
\* Derating is required when operated with chassis and cover.

## External view

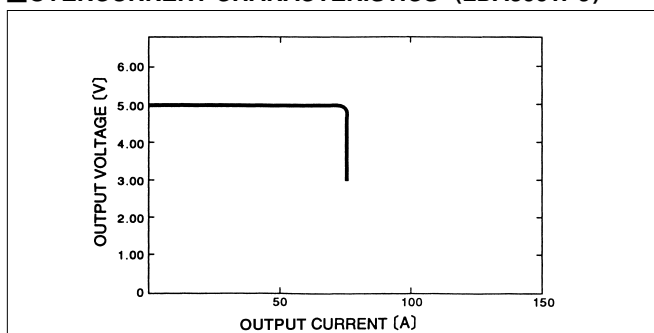


## Performance data

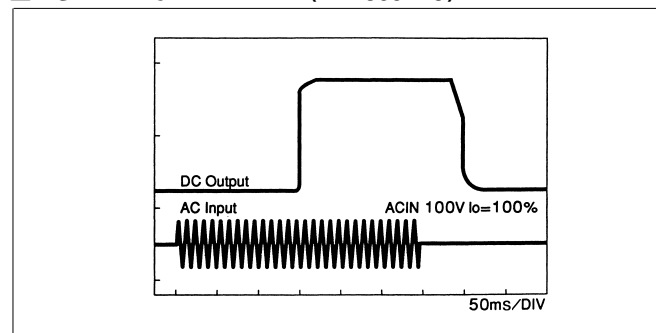
## ■STATIC CHARACTERISTICS (LDA300W-5)



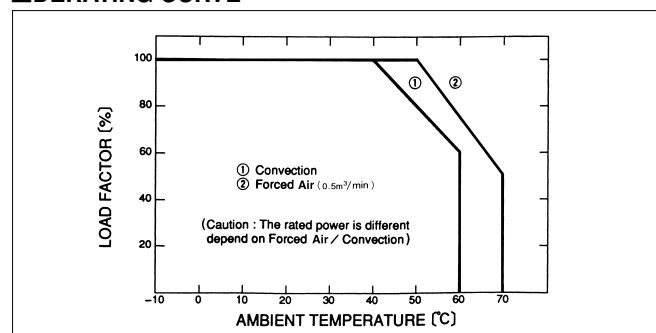
## ■ OVERCURRENT CHARACTERISTICS (LDA300W-5)



### ■ RISE TIME & FALL TIME (LDA300W-5)



## DERATING CURVE



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