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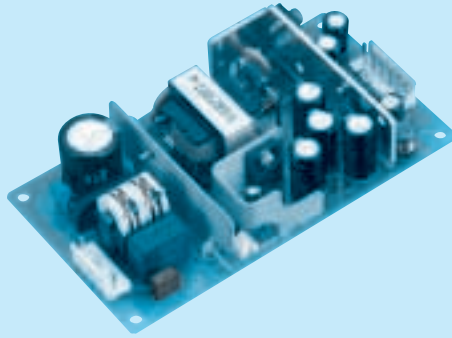
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# LCC30A

LC C 30 A -1 -□  
 ① ② ③ ④ ⑤ ⑥

c **RoHS**



- ① Series name
- ② Multiple output
- ③ Output wattage
- ④ 100/120V input
- ⑤ Output voltage combination
- ⑥ Optional \*6  
 A :G2 - V3 Common  
 C :with Coating  
 G :Low leakage current  
 Y :with Potentiometer

| MODEL     |       | LCC30A-1            | LCC30A-2            | LCC30A-3           | LCC30A-4            |
|-----------|-------|---------------------|---------------------|--------------------|---------------------|
| DC OUTPUT | V1    | 5V 3.0(Peak 4.5)A   | 5V 3.0(Peak 4.5)A   | 5V 3.0(Peak 4.5)A  | 3.3V 4.0(Peak 6.0)A |
|           | V2    | 12V 1.2(Peak 2.0)A  | 15V 1.0(Peak 2.0)A  | 24V 0.5(Peak 1.3)A | 12V 1.2(Peak 2.0)A  |
|           | V3 *1 | 12V 0.3(Peak 0.45)A | 15V 0.3(Peak 0.45)A | 5V 0.5(Peak 0.75)A | 5V 0.5(Peak 0.75)A  |

## SPECIFICATIONS

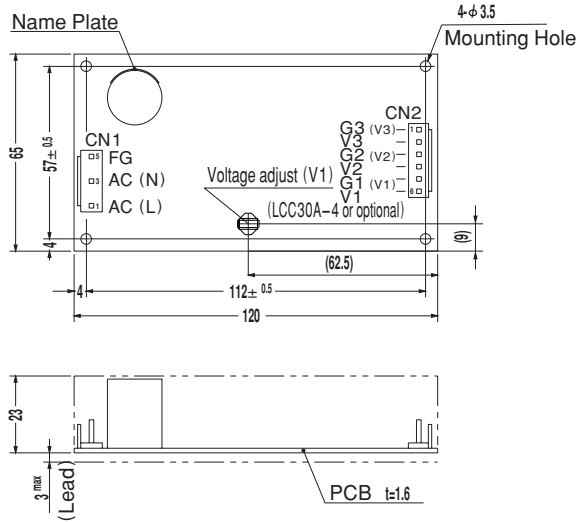
|                                       | MODEL                               | LCC30A-1  |                                 |                  | LCC30A-2        |                 |                  | LCC30A-3        |                 |                  | LCC30A-4        |                 |                  |        |
|---------------------------------------|-------------------------------------|---|---------------------------------|------------------|-----------------|-----------------|------------------|-----------------|-----------------|------------------|-----------------|-----------------|------------------|--------|
| INPUT                                 | VOLTAGE[V]                          | AC85 - 132 1 φ or DC110 - 170   |                                 |                  |                 |                 |                  |                 |                 |                  |                 |                 |                  |        |
|                                       | CURRENT[A]                          | ACIN 100V   | 0.8typ (Io=100%)                |                  |                 |                 |                  |                 |                 |                  |                 |                 |                  |        |
|                                       | FREQUENCY[Hz]                       | 47 - 440 or DC  |                                 |                  |                 |                 |                  |                 |                 |                  |                 |                 |                  |        |
|                                       | EFFICIENCY[%]                       | ACIN 100V   | 72typ (Io=100%)                 |                  |                 |                 |                  |                 |                 |                  |                 | 67typ (Io=100%) |                  |        |
|                                       | INRUSH CURRENT[A]                   | ACIN 100V   | 25typ (Io=100%) (At cold start) |                  |                 |                 |                  |                 |                 |                  |                 |                 |                  |        |
|                                       | LEAKAGE CURRENT[ma]                 | 0.5 max (60Hz, by UL and DEN-AN)  |                                 |                  |                 |                 |                  |                 |                 |                  |                 |                 |                  |        |
| OUTPUT                                | VOLTAGE[V]                          | 5   | 12                              | 12               | 5               | 15              | 15               | 5               | 24              | 5                | 3.3             | 12              | 5                |        |
|                                       | CURRENT[A]                          | *2 0-3.0(Peak 4.5)  | 0-1.2(Peak 2.0)                 | 0-0.3(Peak 0.45) | 0-3.0(Peak 4.5) | 0-1.0(Peak 2.0) | 0-0.3(Peak 0.45) | 0-3.0(Peak 4.5) | 0-0.5(Peak 1.3) | 0-0.5(Peak 0.75) | 0-4.0(Peak 6.0) | 0-1.2(Peak 2.0) | 0-0.5(Peak 0.75) |        |
|                                       | LINE REGULATION[mV]                 | 20max   | 48max                           | 48max            | 20max           | 60max           | 60max            | 20max           | 100max          | 20max            | 20max           | 48max           | 20max            |        |
|                                       | LOAD REGULATION[mV]                 | 100max  | 120max                          | 150max           | 100max          | 120max          | 150max           | 100max          | 150max          | 100max           | 40max           | 120max          | 100max           |        |
|                                       | RIPPLE[mVp-p]                       | 0 to +50°C *3   | 100max                          | 120max           | 120max          | 100max          | 120max           | 120max          | 100max          | 120max           | 120max          | 80max           | 120max           | 120max |
|                                       |                                     | -10 - 0°C *3  | 150max                          | 160max           | 160max          | 150max          | 160max           | 160max          | 150max          | 160max           | 160max          | 140max          | 160max           | 160max |
|                                       | RIPPLE NOISE[mVp-p]                 | 0 to +50°C *3   | 120max                          | 150max           | 150max          | 120max          | 150max           | 150max          | 120max          | 150max           | 150max          | 120max          | 150max           | 150max |
|                                       |                                     | -10 - 0°C *3  | 170max                          | 180max           | 180max          | 170max          | 180max           | 180max          | 170max          | 180max           | 180max          | 160max          | 180max           | 180max |
|                                       | TEMPERATURE REGULATION[mV]          | 0 to +50°C  | 50max                           | 350max           | 350max          | 50max           | 350max           | 350max          | 50max           | 480max           | 350max          | 50max           | 350max           | 350max |
|                                       |                                     | -10 to +50°C  | 60max                           | 420max           | 420max          | 60max           | 420max           | 420max          | 60max           | 580max           | 420max          | 60max           | 420max           | 420max |
|                                       | DRIFT[mV]                           | *4  | 20max                           | —                | —               | 20max           | —                | —               | 20max           | —                | —               | 20max           | —                | —      |
|                                       | START-UP TIME[ms]                   | 100max (ACIN 85V, Io=100%)  |                                 |                  |                 |                 |                  |                 |                 |                  |                 |                 |                  |        |
|                                       | HOLD-UP TIME[ms]                    | 10typ (ACIN 85V, Io=100%) , 20typ (ACIN 100V, Io=100%)                                      |                                 |                  |                 |                 |                  |                 |                 |                  |                 |                 |                  |        |
| OUTPUT VOLTAGE ADJUSTMENT RANGE[V] *5 | Fixed                               | Fixed   | Fixed                           | Fixed            | Fixed           | Fixed           | Fixed            | Fixed           | Fixed           | Fixed            | 3.00 - 3.60     | Fixed           | Fixed            |        |
| OUTPUT VOLTAGE SETTING[V]             | 4.9 to 5.3                          | 11.4 to 12.6  | 11.4 to 12.6                    | 4.9 to 5.3       | 14.25 to 15.75  | 14.25 to 15.75  | 4.9 to 5.3       | 22.8 to 25.2    | 4.75 to 5.25    | —                | 11.4 to 12.6    | 4.75 to 5.25    |                  |        |
| PROTECTION CIRCUIT AND OTHERS         | OVERCURRENT PROTECTION              | Works over 105% of rating and recovers automatically  |                                 |                  |                 |                 |                  |                 |                 |                  |                 |                 |                  |        |
|                                       | OVERVOLTAGE PROTECTION              | Works at 115 - 140% of rating (V1 only)   |                                 |                  |                 |                 |                  |                 |                 |                  |                 |                 |                  |        |
|                                       | OPERATING INDICATION                | Not provided  |                                 |                  |                 |                 |                  |                 |                 |                  |                 |                 |                  |        |
|                                       | REMOTE SENSING                      | Not provided  |                                 |                  |                 |                 |                  |                 |                 |                  |                 |                 |                  |        |
| ISOLATION                             | REMOTE ON/OFF                       | Not provided  |                                 |                  |                 |                 |                  |                 |                 |                  |                 |                 |                  |        |
|                                       | INPUT-OUTPUT                        | AC2,000V 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                           | OUTPUT-OUTPUT(V1,V2,V3)             | AC100V 1minute, Cutoff current = 100mA, DC100V 10MΩ min (At Room Temperature)               |                                 |                  |                 |                 |                  |                 |                 |                  |                 |                 |                  |        |
|                                       | OPERATING TEMP.,HUMID.AND ALTIITUDE | -10 to +60°C, 20 - 90%RH (Non condensing), 3,000m (10,000feet)                              |                                 |                  |                 |                 |                  |                 |                 |                  |                 |                 |                  |        |
|                                       | STORAGE TEMP.,HUMID.AND ALTIITUDE   | -20 to +75°C, 20 - 90%RH (Non condensing), 9,000m (30,000feet)                              |                                 |                  |                 |                 |                  |                 |                 |                  |                 |                 |                  |        |
|                                       | VIBRATION                           | 10 - 55Hz, 19.6m/s <sup>2</sup> (2G), 3minutes period, 60minutes each along X, Y and Z axis |                                 |                  |                 |                 |                  |                 |                 |                  |                 |                 |                  |        |
| SAFETY AND NOISE REGULATIONS          | IMPACT                              | 196.1m/s <sup>2</sup> (20G), 11ms, once each X, Y and Z axis                                |                                 |                  |                 |                 |                  |                 |                 |                  |                 |                 |                  |        |
|                                       | AGENCY APPROVALS                    | UL60950-1, C-UL Complies with DEN-AN (At only AC input)                                     |                                 |                  |                 |                 |                  |                 |                 |                  |                 |                 |                  |        |
|                                       | CONDUCTED NOISE                     | Complies with FCC-B, VCCI-B   |                                 |                  |                 |                 |                  |                 |                 |                  |                 |                 |                  |        |
| OTHERS                                | CASE SIZE/WEIGHT                    | 65 X 26 X 120mm (W X H X D) / 170g max  |                                 |                  |                 |                 |                  |                 |                 |                  |                 |                 |                  |        |
|                                       | COOLING METHOD                      | Convection  |                                 |                  |                 |                 |                  |                 |                 |                  |                 |                 |                  |        |

\*1 Because V2 - V3 is isolated, V3 can be as used -VOUT.  
 \*2 Peak load for 10sec. or less is acceptable if the peak total wattage is less than the rated wattage(-1: 33W, -2: 34.5W, -3: 34.5W, -4: 34.5W).When the load of V1 is 0A, other output can be drawn by 80% of rated current.  
 \*3 Measured by 20MHz oscilloscope or Ripple-Noise meter (equivalent to KEISOKU-GIKEN:RM101).

\*4 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.  
 \*5 Adjustment of output voltage for V1 (+5V+5%) is possible (Optional). Please refer to 2.5 minimum output current and 4.2 derating.  
 \*6 Please contact us about safety approvals for the model with option.  
 \* Avoid prolonged use under over-load.



## 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 |

(Mft:J.S.T.)

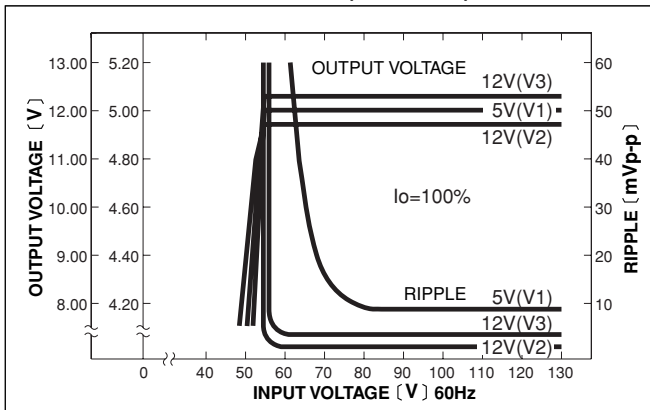
### <PIN CONNECTION>

| CN1    |       | CN2    |       |
|--------|-------|--------|-------|
| Pin No | Input | Pin No | Input |
| 1      | AC(L) | 1      | G3    |
| 2      |       | 2      | V3    |
| 3      | AC(N) | 3      | G2    |
| 4      |       | 4      | V2    |
| 5      | FG    | 5      | G1    |
|        |       | 6      | V1    |

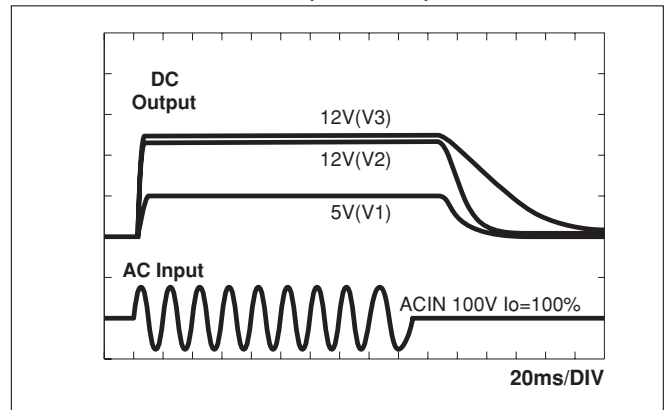
- ※Tolerance : ±1
- ※Weight : 170g or less
- ※PCB Material : Glass composite (CEM3)
- ※Dimensions in mm
- ※Mounting torque : 0.6N·m (6.3kgf·cm) max
- ※All output isolated

## Performance data

### ■STATIC CHARACTERISTICS (LCC30A-1)

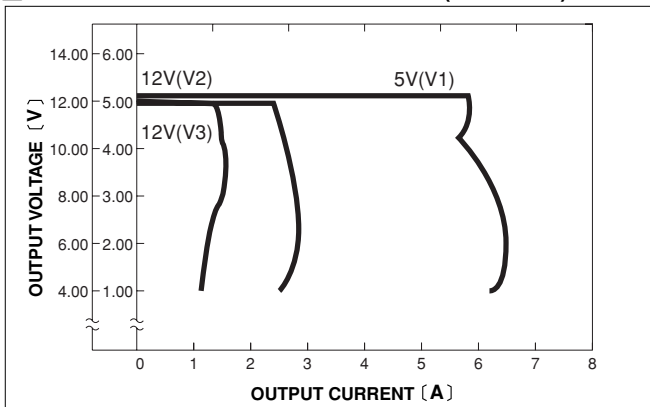


### ■RISE TIME & FALL TIME (LCC30A-1)



LCC

### ■OVERCURRENT CHARACTERISTICS (LCC30A-1)



### ■DERATING CURVE

