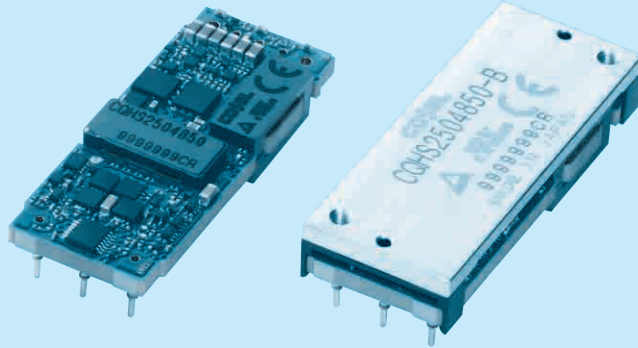
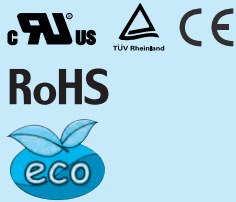


# CQHS250

CQH S 250 48 50 -□

① ② ③ ④ ⑤ ⑥



- ① Series name
- ② Single output
- ③ Output wattage
- ④ Input voltage  
48:DC36 - 76V
- ⑤ Output voltage
- ⑥ Optional
- R :with Remote ON/OFF  
Positive logic control
- N :Auto restart in protection  
circuit working
- B :Base plate option with  
Mounting hole M3
- L2:Pin length 5.3mm

|                       |             |             |
|-----------------------|-------------|-------------|
| MODEL                 | CQHS2504832 | CQHS2504850 |
| MAX OUTPUT WATTAGE[W] | 252.8       | 250         |
| DC OUTPUT             | 32V 7.9A    | 50V 5.0A    |

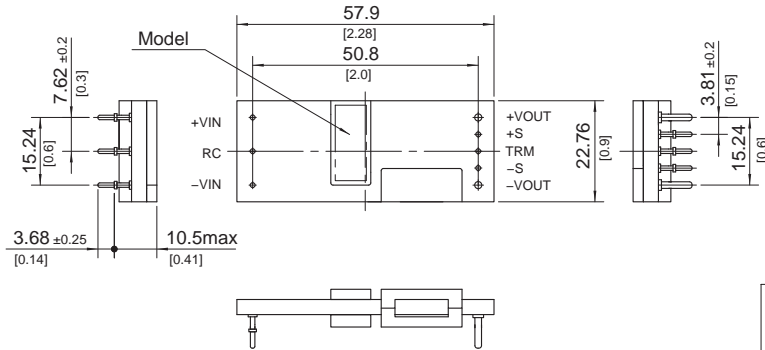
## SPECIFICATIONS

|                                       | MODEL   | CQHS2504832   | CQHS2504850   |         |
|---------------------------------------|---|---|---------------|---------|
| INPUT                                 | VOLTAGE[V]  | DC36 - 76   |               |         |
|                                       | CURRENT[A]  | *1 5.60typ  | 5.54typ       |         |
|                                       | EFFICIENCY[%]   | *1 94typ  | 94typ         |         |
|                                       | START-UP VOLTAGE[V]                                   | DC32 - 36   |               |         |
|                                       | HYSTERESIS VOLTAGE[V]                                 | DC2 min   |               |         |
| OUTPUT                                | VOLTAGE[V]  | 32  | 50            |         |
|                                       | CURRENT[A]  | 7.9   | 5.0           |         |
|                                       | LINE REGULATION[mV]                                   | 64max   | 100max        |         |
|                                       | LOAD REGULATION[mV]                                   | 64max   | 100max        |         |
|                                       | RIPPLE[mVp-p]   | -20 to +85°C<br>Vin=36-60V *2   | 255max        | 400max  |
|                                       |   | -20 to +85°C<br>Vin=60-76V *2   | 320max        | 500max  |
|                                       |   | -40 to -20°C *2   | 320max        | 500max  |
|                                       | RIPPLE NOISE[mVp-p]                                   | -20 to +85°C *2   | 320max        | 500max  |
|                                       |   | -40 to -20°C *2   | 410max        | 650max  |
|                                       | TEMPERATURE REGULATION[mV]                            | -40 to +85°C  | 640max        | 1000max |
| DRIFT[mV]                             | *3  | 120max  | 185max        |         |
| START-UP TIME[ms]                     | 200max (DCIN 48V, Io=100%)                            |   |               |         |
| OUTPUT VOLTAGE ADJUSTMENT RANGE[V] *4 | Fixed (TRM pin open), adjustable by external resistor |   |               |         |
|                                       | 26.88 - 35.20   | 45.0 - 55.0   |               |         |
| OUTPUT VOLTAGE SETTING[V] *1          | 31.68 - 32.32   | 49.50 - 50.50   |               |         |
| PROTECTION CIRCUIT AND OTHERS         | OVERCURRENT PROTECTION                                | Works over 105% of rating, low voltage protection (shut down) function is built-in.           |               |         |
|                                       | OVERVOLTAGE PROTECTION[V]                             | 36.80 - 44.80   | 56.50 - 67.50 |         |
|                                       | REMOTE SENSING  | Provided  |               |         |
|                                       | REMOTE ON/OFF   | Provided (Negative Logic L : ON, H :OFF)  |               |         |
| ISOLATION                             | INPUT-OUTPUT  | DC1,500V or AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15°C)                  |               |         |
|                                       | INPUT-BASE PLATE *5                                   | DC1,500V or AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15°C)                  |               |         |
|                                       | OUTPUT-BASE PLATE *5                                  | AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (20±15°C)                             |               |         |
| ENVIRONMENT                           | OPERATING TEMP.,HUMID.AND ALTITUDE                    | -40 to +85°C, 20 - 95%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000 feet) max |               |         |
|                                       | STORAGE TEMP.,HUMID.AND ALTITUDE                      | -40 to +100°C, 20 - 95%RH (Non condensing), 9,000m (30,000 feet) max                          |               |         |
|                                       | VIBRATION   | 10 - 55Hz, 49.0m/s <sup>2</sup> (5G), 3minutes period, 60minutes each along X, Y and Z axis   |               |         |
|                                       | IMPACT  | 196.1m/s <sup>2</sup> (20G), 11ms, once each along X, Y and Z axis                            |               |         |
| SAFETY                                | AGENCY APPROVALS                                      | UL60950-1, C-UL (CSA60950-1), EN60950-1   |               |         |
| OTHERS                                | CASE SIZE/WEIGHT                                      | 57.9 × 10.5 × 22.76mm [2.28 × 0.41 × 0.9 inches] (W × H × D) / 30g max                        |               |         |
|                                       |   | 58.4 × 12.7 × 23.26mm [2.3 × 0.5 × 0.92 inches] (W × H × D) / 45g max *5                      |               |         |
|                                       | COOLING METHOD  | Convection / Forced air / Conduction  |               |         |

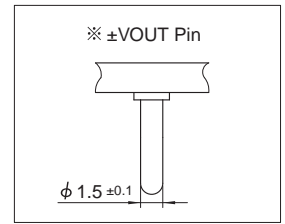
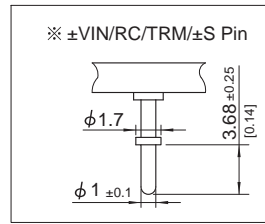
\*1 At rated input(DC48V), rated load. Ta= 25°C, 2m/s.  
 \*2 Ripple and ripple noise is measured by using measuring board. Refer to the manual.  
 \*3 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C, with the input voltage held constant at the rated input/output.  
 \*4 When the input voltage is in the range of DC36-40V, output voltage is limited. Refer to the manual.  
 \*5 Base Plate Option.

External view

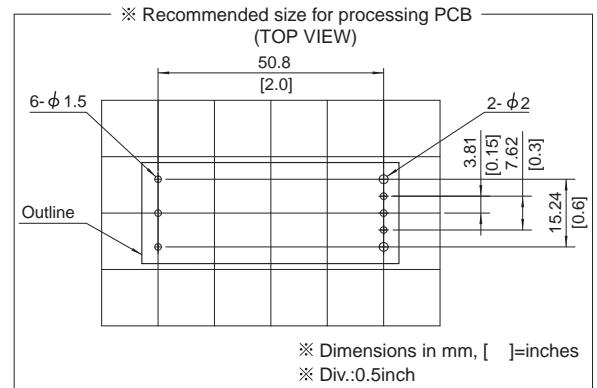
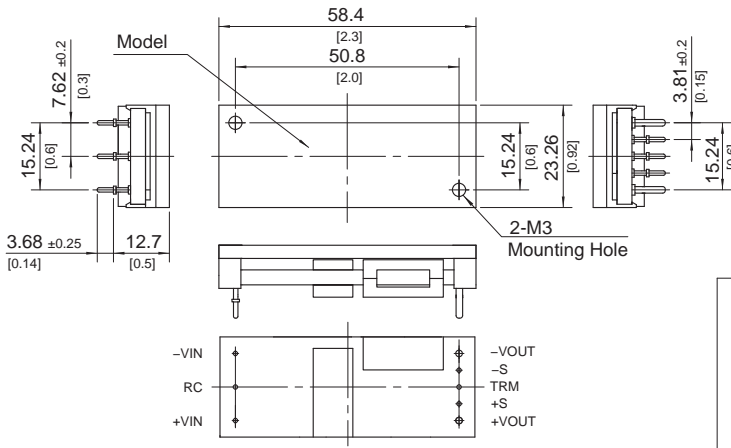
1. DIP



- ※ Tolerance : ±0.5 [±0.02]
- ※ Weight : 30g max(DIP)  
45g max(Base Plate)
- ※ Dimensions in mm, [ ]=inches

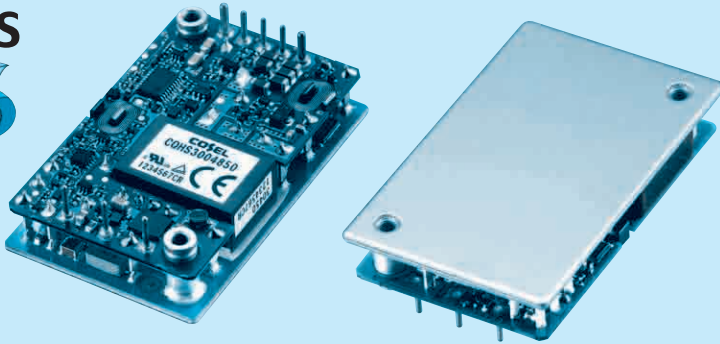
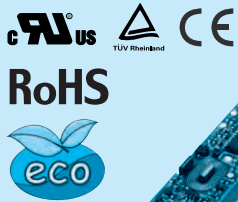


2. Base Plate (option B)

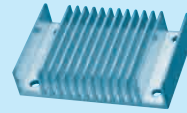


# CQHS300

CQH S 300 48 50 -□  
 ① ② ③ ④ ⑤ ⑥



\*Providing heat sink as option



- ① Series name
- ② Single output
- ③ Output wattage
- ④ Input voltage  
48:DC36 - 76V
- ⑤ Output voltage
- ⑥ Optional
- R :with Remote ON/OFF  
Positive logic control
- T :with Mounting hole  
φ 3.4 thru

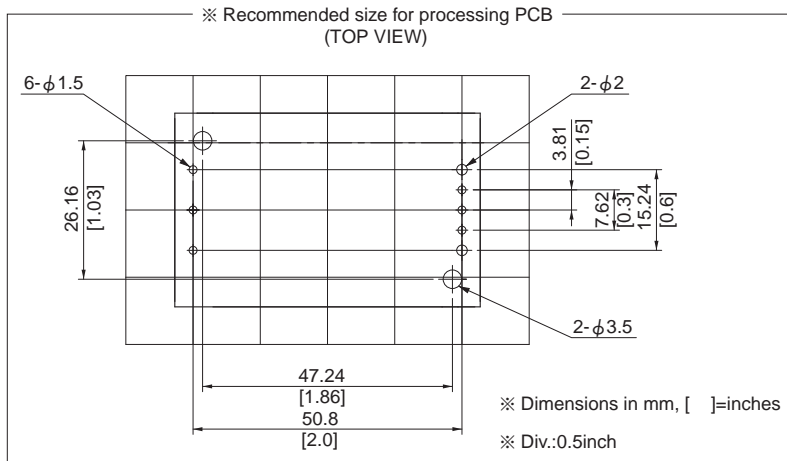
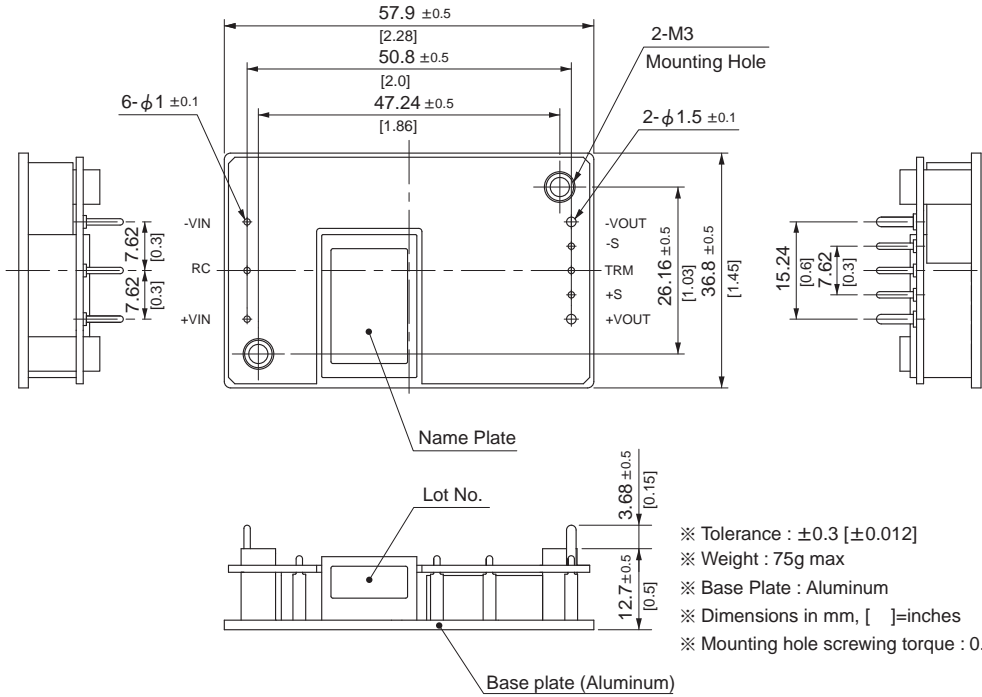
|                       |             |             |
|-----------------------|-------------|-------------|
| MODEL                 | CQHS3004832 | CQHS3004850 |
| MAX OUTPUT WATTAGE[W] | 300.8       | 300         |
| DC OUTPUT             | 32V 9.4A    | 50V 6A      |

## SPECIFICATIONS

|                                       | MODEL                                | CQHS3004832   | CQHS3004850   |         |
|---------------------------------------|--------------------------------------|---|---------------|---------|
| INPUT                                 | VOLTAGE[V]                           | DC36 - 76   |               |         |
|                                       | CURRENT[A]                           | 6.67typ   | 6.65typ       |         |
|                                       | EFFICIENCY[%]                        | 94typ   | 94typ         |         |
|                                       | START-UP VOLTAGE[V]                  | DC32 - 36   |               |         |
|                                       | HYSTERESIS VOLTAGE[V]                | DC2 min   |               |         |
| OUTPUT                                | VOLTAGE[V]                           | 32  | 50            |         |
|                                       | CURRENT[A]                           | 9.4   | 6.0           |         |
|                                       | LINE REGULATION[mV]                  | 64max   | 100max        |         |
|                                       | LOAD REGULATION[mV]                  | 64max   | 100max        |         |
|                                       | RIPPLE[mVp-p]                        | -20 to +100°C *2  | 255max        | 400max  |
|                                       |                                      | -40 to -20°C<br>Vin=36-60V *2   | 320max        | 500max  |
|                                       |                                      | -40 to -20°C<br>Vin=60-76V *2   | 400max        | 500max  |
|                                       | RIPPLE NOISE[mVp-p]                  | -20 to +100°C *2  | 320max        | 500max  |
|                                       |                                      | -40 to -20°C *2   | 410max        | 650max  |
|                                       | TEMPERATURE REGULATION[mV]           | 0 to +65°C  | 320max        | 500max  |
|                                       |                                      | -40 to +100°C   | 640max        | 1000max |
|                                       | DRIFT[mV]                            | *3  | 120max        | 185max  |
| START-UP TIME[ms]                     |                                      | 200max (DCIN 48V, Io=100%)  |               |         |
| OUTPUT VOLTAGE ADJUSTMENT RANGE[V] *4 |                                      | Fixed (TRM pin open), adjustable by external resistor   |               |         |
|                                       |                                      | 27.2 - 35.2   | 45.0 - 55.0   |         |
|                                       | OUTPUT VOLTAGE SETTING[V]*           | 31.68 - 32.32   | 49.50 - 50.50 |         |
| PROTECTION CIRCUIT AND OTHERS         | OVERCURRENT PROTECTION               | Works over 105% of rating, low voltage protection (shut down) function is built-in.                                     |               |         |
|                                       | OVERVOLTAGE PROTECTION[V]            | 36.80 - 44.80   | 56.50 - 67.50 |         |
|                                       | REMOTE SENSING                       | Provided  |               |         |
|                                       | REMOTE ON/OFF                        | Provided (Negative Logic L : ON, H :OFF)  |               |         |
| ISOLATION                             | INPUT-OUTPUT                         | DC1,500V or AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15°C)  |               |         |
|                                       | INPUT-BASE PLATE                     | DC1,500V or AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15°C)  |               |         |
|                                       | OUTPUT-BASE PLATE                    | AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (20±15°C)   |               |         |
| ENVIRONMENT                           | OPERATING TEMP., HUMID. AND ALTITUDE | -40 to +100°C (On aluminum base plate), 20 - 95%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000 feet) max |               |         |
|                                       | STORAGE TEMP., HUMID. AND ALTITUDE   | -40 to +100°C, 20 - 95%RH (Non condensing), 9,000m (30,000 feet) max  |               |         |
|                                       | VIBRATION                            | 10 - 55Hz, 49.0m/s <sup>2</sup> (5G), 3minutes period, 60minutes each along X, Y and Z axis                             |               |         |
|                                       | IMPACT                               | 196.1m/s <sup>2</sup> (20G), 11ms, once each along X, Y and Z axis  |               |         |
| SAFETY                                | AGENCY APPROVALS                     | UL60950-1, C-UL (CSA60950-1), EN60950-1   |               |         |
| OTHERS                                | CASE SIZE/WEIGHT                     | 57.9×12.7×36.8mm [2.28×0.5×1.45 inches] (W×H×D) / 75g max   |               |         |
|                                       | COOLING METHOD                       | Conduction cooling (e.g. heat radiation from the aluminum base plate to the attached heat sink)                         |               |         |

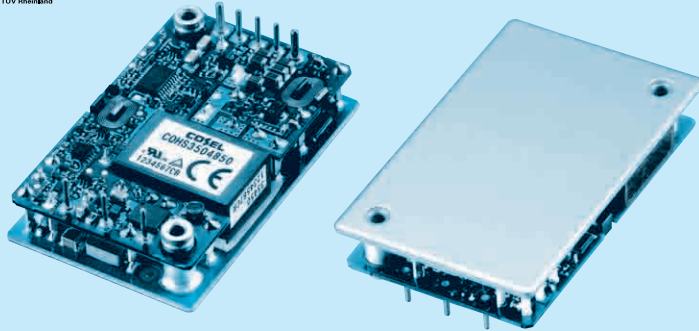
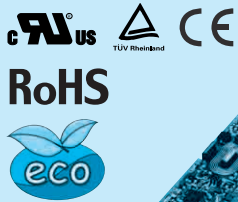
\*1 At rated input(DC48V), rated load, and aluminum base plate temperature 25°C.  
 \*2 Ripple and ripple noise is measured by using measuring board with recommended capacitor Co & the film capacitor 0.1 μF.  
 \*3 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C, with the input voltage held constant at the rated input/output.  
 \*4 When the input voltage is in the range of DC36-40V, output voltage is limited. Refer to the manual.

External view

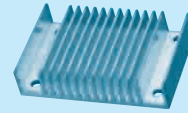


# CQHS350

CQH S 350 48 50 -□  
 ① ② ③ ④ ⑤ ⑥



\*Providing heat sink as option



- ① Series name
- ② Single output
- ③ Output wattage
- ④ Input voltage  
48:DC36 - 65V
- ⑤ Output voltage
- ⑥ Optional
- R :with Remote ON/OFF  
Positive logic control
- T :with Mounting hole  
φ 3.4 thru

|                       |             |             |
|-----------------------|-------------|-------------|
| MODEL                 | CQHS3504832 | CQHS3504850 |
| MAX OUTPUT WATTAGE[W] | 352         | 350         |
| DC OUTPUT             | 32V 11A     | 50V 7A      |

## SPECIFICATIONS

|                                       | MODEL   | CQHS3504832   | CQHS3504850   |         |
|---------------------------------------|---|---|---------------|---------|
| INPUT                                 | VOLTAGE[V]  | DC36 - 65   |               |         |
|                                       | CURRENT[A]  | 7.8typ  | 7.76typ       |         |
|                                       | EFFICIENCY[%]   | 94typ   | 94typ         |         |
|                                       | START-UP VOLTAGE[V]                                   | DC32 - 36   |               |         |
|                                       | HYSTERESIS VOLTAGE[V]                                 | DC2 min   |               |         |
| OUTPUT                                | VOLTAGE[V]  | 32  | 50            |         |
|                                       | CURRENT[A]  | 11.0 *5   | 7.0           |         |
|                                       | LINE REGULATION[mV]                                   | 64max   | 100max        |         |
|                                       | LOAD REGULATION[mV]                                   | 64max   | 100max        |         |
|                                       | RIPPLE[mVp-p]   | -20 to +100°C *2  | 255max        | 400max  |
|                                       |   | -40 to -20°C<br>Vin=36-60V *2   | 320max        | 500max  |
|                                       |   | -40 to -20°C<br>Vin=60-65V *2   | 400max        | 500max  |
|                                       | RIPPLE NOISE[mVp-p]                                   | -20 to +100°C *2  | 320max        | 500max  |
|                                       |   | -40 to -20°C *2   | 410max        | 650max  |
|                                       | TEMPERATURE REGULATION[mV]                            | 0 to +65°C  | 320max        | 500max  |
|                                       |   | -40 to +100°C   | 640max        | 1000max |
|                                       | DRIFT[mV]   | *3  | 120max        | 185max  |
|                                       | START-UP TIME[ms]                                     | 200max (DCIN 48V, Io=100%)  |               |         |
| OUTPUT VOLTAGE ADJUSTMENT RANGE[V] *4 | Fixed (TRM pin open), adjustable by external resistor |   |               |         |
|                                       | 26.88 - 35.20   |   |               |         |
|                                       | 45.0 - 55.0   |   |               |         |
| OUTPUT VOLTAGE SETTING[V] *1          | 31.68 - 32.32   | 49.50 - 50.50   |               |         |
| PROTECTION CIRCUIT AND OTHERS         | OVERCURRENT PROTECTION                                | Works over 105% of rating, low voltage protection (shut down) function is built-in.                                     |               |         |
|                                       | OVERVOLTAGE PROTECTION[V]                             | 36.80 - 44.80   | 56.50 - 67.50 |         |
|                                       | REMOTE SENSING  | Provided  |               |         |
|                                       | REMOTE ON/OFF   | Provided (Negative Logic L : ON, H :OFF)  |               |         |
| ISOLATION                             | INPUT-OUTPUT  | DC1,500V or AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15°C)  |               |         |
|                                       | INPUT-BASE PLATE                                      | DC1,500V or AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15°C)  |               |         |
|                                       | OUTPUT-BASE PLATE                                     | AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (20±15°C)   |               |         |
| ENVIRONMENT                           | OPERATING TEMP.,HUMID.AND ALTITUDE                    | -40 to +100°C (On aluminum base plate), 20 - 95%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000 feet) max |               |         |
|                                       | STORAGE TEMP.,HUMID.AND ALTITUDE                      | -40 to +100°C, 20 - 95%RH (Non condensing), 9,000m (30,000 feet) max  |               |         |
|                                       | VIBRATION   | 10 - 55Hz, 49.0m/s <sup>2</sup> (5G), 3minutes period, 60minutes each along X, Y and Z axis                             |               |         |
|                                       | IMPACT  | 196.1m/s <sup>2</sup> (20G), 11ms, once each along X, Y and Z axis  |               |         |
| SAFETY                                | AGENCY APPROVALS                                      | UL60950-1, C-UL (CSA60950-1), EN60950-1   |               |         |
| OTHERS                                | CASE SIZE/WEIGHT                                      | 57.9×12.7×36.8mm [2.28×0.5×1.45 inches] (W×H×D) / 75g max   |               |         |
|                                       | COOLING METHOD  | Conduction cooling (e.g. heat radiation from the aluminum base plate to the attached heat sink)                         |               |         |

\*1 At rated input(DC48V), rated load, and aluminum base plate temperature 25°C.  
 \*2 Ripple and ripple noise is measured by using measuring board with recommended capacitor Co & the film capacitor 0.1 μF.  
 \*3 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.  
 \*4 When the input voltage is in the range of DC36-40V, output voltage is limited. Refer to the manual.  
 \*5 Rated current is increased adjusting output voltage to lower than rated output voltage. Refer to the manual.

External view

