



## ECCO Electronics Technology Co.,Ltd

30W DC/DC converter

### Typical Performance

#### FEATURES

- Wide Input voltage range (2:1)
- Typical Efficiency:80%
- Switching frequency: 300KHz
- Output Short Circuit Protection,Self-furbish,Over Current Protection
- Input-output isolate 1500VDC
- PCB Board in-line type installs
- Metal Case



3-Years Product Warranty

**Technology parameter** Test condition:General Nominal Line,Tc=25°C , Rated resistant load unless other wisespecified

| Input Feature      | Min | Nom | Max | Notes                              |
|--------------------|-----|-----|-----|------------------------------------|
| Input voltage(Vdc) | 72  | 110 | 144 | W 2:1                              |
| REMOTE(ON/OFF)     | ON  |     |     | Open Circuit or High level(8~+Vin) |
|                    | OFF |     |     | Connect to FG or Low level(0~0.4V) |

#### Output Feature

|                               |  |             |                  |
|-------------------------------|--|-------------|------------------|
| Voltage accuracy              |  | Vo1;Vo2,Vo3 | ±1.0%, ±3.0%     |
| Line regulation               | Nominal Load,full voltage input range  | Vo1;Vo2,Vo3 | ±0.2%, ±1.5%     |
| Load regulation               | Nominal Input Voltage,20% ~ 100% Nominal Load  | Vo1;Vo2,Vo3 | ±0.5%, ±3.0%     |
| Ripple and noise              | 20MHz BM full load Vo≤5.0V, ≤50mVp-p; Vo≥48V, ≤180mVp-p; Other, ≤100mVp-p;test by 20M oscillograph |             |                  |
| Voltage adjust                | Standard output voltage  | TRIM        | ±10%(adjustable) |
| Peak Deviation                | 25% Rated Load Vary  | ΔVo1/ Vo1   | ≤±5.0%           |
| Dynamic Response Setting Time |  |             | ≤200us           |

#### General Feature

|                     |  |  |             |
|---------------------|--|--|-------------|
| Efficiency          |  |  | 80% typical |
| Switching Frequency |  |  | 300KHz      |

|                         |                        |                  |                       |
|-------------------------|------------------------|------------------|-----------------------|
| Operating temperature   | Free air               | Industrial level | -25°C ~ +55°C         |
| Storage temperature     |                        |                  | -40°C ~ +105°C        |
| Max case temperature    |                        |                  | +90°C                 |
| Relative humidity       |                        |                  | 10%~90%               |
| case material           |                        |                  | Metal case            |
| Isolation Voltage       | Input-Output           |                  | 1500VDC               |
|                         | Input-Case             |                  | 1500VDC               |
|                         | Output-Case            |                  | 500VDC                |
| Isolation Resistance    |                        |                  | 10MΩ                  |
| Temperature Coefficient |                        |                  | ≤±0.02%/°C            |
| Cooling                 |                        |                  | Natural Convection    |
| MTBF                    | BELLCORE TR332, (25°C) |                  | 2X10 <sup>5</sup> Hrs |

#### NOTE:

(1)The module working environment temperature more than 55 °C need derating use (- 0.15W/°C), but the max shell temperature shall not be more than 90 °C.

(2)Capacitive load:

The output of the module can be applied electrolytic capacitor, but too much capacity and low ESR may cause the module instability, or cause current limiting point become low,we recommend 100 uF/A of the output capacitance , the current is rated output current.

#### Product Nomination Method

|         |   |   |                             |
|---------|---|---|-----------------------------|
| example | L D 25 - 48 S 05 I<br>① ② ③ ④ ⑤ ⑥ ⑦   |   |                             |
| ①       | Wide input voltage: 2: 1  | ⑥ | output voltage              |
| ②       | Power adaptation mode: D (DC-DC)  | ⑦ | I:Dual Route output Isolate |
| ③       | Output power(W)   |   | W:Super Wide input voltage  |
| ④       | Normal input voltage  |   |                             |
| ⑤       | S=Single route output, D=Dual route output, T=Triple route output, Q=Quadruple output |   |                             |
|         |   |   |                             |

#### Product Program

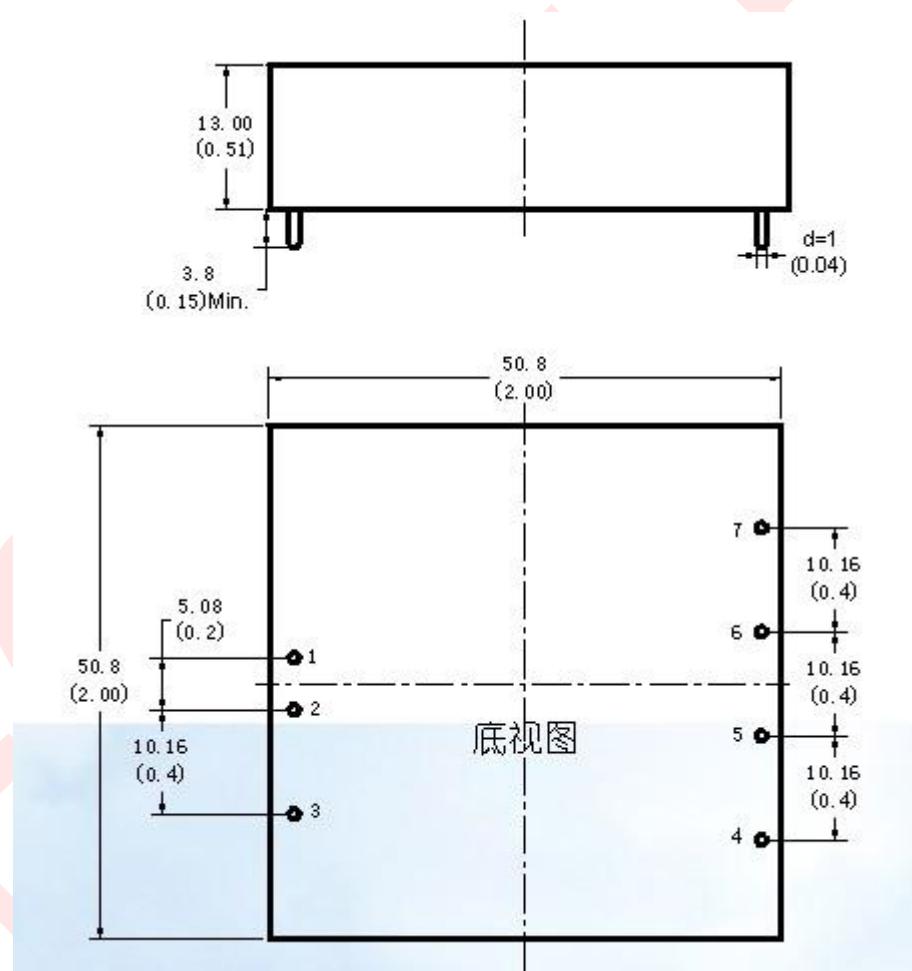
| PART #       | Input voltage range | Output voltage / current |        |     |    |     |    |
|--------------|---------------------|--------------------------|--------|-----|----|-----|----|
|              |                     | VO1                      |        | VO2 |    | VO3 |    |
|              |                     | V                        | mA     | V   | mA | V   | mA |
| LD30-110S05E | 110V(72~144V)       | 5V                       | 6000mA |     |    |     |    |
| LD30-110S09E |                     | 9V                       | 3333mA |     |    |     |    |
| LD30-110S12E |                     | 12V                      | 2500mA |     |    |     |    |

|              |      |        |      |        |  |  |
|--------------|------|--------|------|--------|--|--|
| LD30-110S15E | 15V  | 2000mA |      |        |  |  |
| LD30-110S18E | 18V  | 1667mA |      |        |  |  |
| LD30-110S24E | 24V  | 1250mA |      |        |  |  |
| LD30-110S28E | 28V  | 893mA  |      |        |  |  |
| LD30-110S48E | 48V  | 625mA  |      |        |  |  |
| LD30-110D05E | +5V  | 3000mA | -5V  | 3000mA |  |  |
| LD30-110D12E | +12V | 1250mA | -12V | 1250mA |  |  |

\*NOTE:

- (1)This series, if the nominal input is 12V,the module does not support long time short circuit protection, short time should be controlled within 20 S.
- (2)The output ripple noise (peak value) measurement, please reference module test instructions.

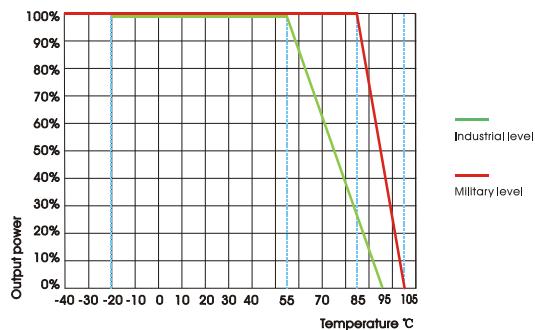
### Mechanical Dimension



BOTTON VIEW

UNIT:mm(inch)

### Temperature Curve



## Mechanical Data

| WATT | L x W x H                            | Packing No. |
|------|--------------------------------------|-------------|
| 30W  | 50.80 x 50.80 x 12.70mm(2*2*0.5inch) |             |

## Pin Assignment

| PIN        | 1    | 2    | 3   | 4    | 5    | 6    | 7    |  |  |  |
|------------|------|------|-----|------|------|------|------|--|--|--|
| Single O/P | +Vin | -Vin | REM | TRIM | GND  | Vo1  | NP   |  |  |  |
| Dual O/P   | +Vin | -Vin | REM | TRIM | -V02 | COM  | -Vo1 |  |  |  |
| Triple O/P | +Vin | -Vin | REM | Vo3  | COM  | +Vo1 | -Vo2 |  |  |  |

\*Note: The power modules such as the definition of the pin does not match with the hand book,please refer to the actual item.