



# ZWD-PAF Series

## 100W to 440W Dual Output Power Supplies



- ◆ Universal Input (85 - 265VAC)
- ◆ Power factor Corrected
- ◆ 200% Peak Power capability on 24V output
- ◆ Individual output adjustment
- ◆ 2 year warranty

**RoHS**

### Key Market Segments & Applications

Factory Automation  
Printers and motor drives  
Kiosks

### Features and Benefits

| Feature                      | Benefit  |
|------------------------------|--|
| ◆ Input Transient Protected  | ◆ Withstands harsh environments                  |
| ◆ Power Factor Corrected     | ◆ Supports Global Use                            |
| ◆ 200% Peak Power capability | ◆ Can drive high current start up or pulse loads |

### Specifications

| MODEL                      |     | ZWD100PAF-0524   | ZWD150PAF-0524       | ZWD225PAF-0524        |
|----------------------------|-----|--|----------------------|-----------------------|
| ITEMS                      |     |  |                      |                       |
| Input Voltage              | -   | 85-265VAC (47-63Hz), 120-370VDC  |                      |                       |
| Input Current (1)          | A   | 1.3 / 0.65   | 1.9 / 0.97           | 2.81 / 1.43           |
| Inrush Current (1)(2)      | A   | 15 / 30  |                      |                       |
| Power Factor               | -   | 0.99 at 100VAC, 0.95 at 200VAC, Meets EN61000-3-2                                      |                      |                       |
| Leakage Current            | mA  | 0.75mA max   |                      |                       |
| Temperature Coefficient    | -   | <0.02%/°C  |                      |                       |
| Overcurrent Protection (3) | -   | 5V output: >105%, 24V output: >205%  |                      |                       |
| Overvoltage Protection (4) | V   | 120- 145%  |                      |                       |
| Hold Up Time (Typ) (1)     | ms  | 5V output: 40ms, 24V output: 20ms  |                      |                       |
| Efficiency (2)             | %   | 79 / 81  | 80 / 82              | 81 / 83               |
| Remote On/Off              | -   | On 24V output only, remove jumper to shutdown  |                      |                       |
| Line Regulation            | mV  | 5V output: 20mV, 24V output: 96mV  |                      |                       |
| Load Regulation            | mV  | 5V output: 40mV, 24V output: 150mV   |                      |                       |
| Ripple & Noise             | mV  | 5V output: 120mV, 24V output: 100W, 150mV; 150/225W, 240mV                             |                      |                       |
| Operating Temperature      | -   | (Open frame or L bracket) -10°C to +70°C, derate linearly to 0% load from 50°C to 70°C |                      |                       |
| Operating Temperature      | -   | (With /A cover option) -10°C to +60°C, derate linearly to 0% load from 40°C to 60°C    |                      |                       |
| Storage Temperature        | -   | -30 to +85°C   |                      |                       |
| Humidity (non condensing)  | -   | Operating: 20 - 90%RH, Non-operating: 10 - 95% RH                                      |                      |                       |
| Cooling                    | -   | Convection cooled  |                      |                       |
| Withstand Voltage          | -   | I/P to Gnd 2kVAC (20mA), I/P to O/P 3kVAC (20mA), O/P to Gnd 500VAC (100mA) for 1 min. |                      |                       |
| Isolation Resistance       | -   | >100M at 25°C & 70%RH, Output to Ground 500VDC   |                      |                       |
| Vibration (non operating)  | -   | 10 - 55Hz (1 minute sweep), 19.6m/s <sup>2</sup> constant X, Y, Z 1 hour               |                      |                       |
| Shock                      | -   | < 196.1 m/s <sup>2</sup>   |                      |                       |
| Safety Agency Approvals    | -   | UL60950-1, CSA60950-1, EN60950-1, EN50178, CE Mark                                     |                      |                       |
| Conducted & Radiated EMI   | -   | EN55022-B, FCC Class B, VCCI-B   |                      |                       |
| Recommended EMI Filter     | -   | MAW1203-22   | MAW1205-22           | MAW1205-22            |
| Immunity                   | -   | EN61000-4-2, -3, -4, -5, -6, -8, -11   |                      |                       |
| Weight (Typ)               | g   | 460 (780 with cover)   | 530 (885 with cover) | 670 (1065 with cover) |
| Size (WxHxD)               | in  | 2.95 x 8.74 x 1.38   | 3.35 x 8.74 x 1.57   | 3.74 x 8.74 x 1.77    |
| Warranty                   | yrs | Two Years  |                      |                       |

Notes: See installation manual for full specification.

(1) 100/200VAC

(2) 25°C ambient (cold start)

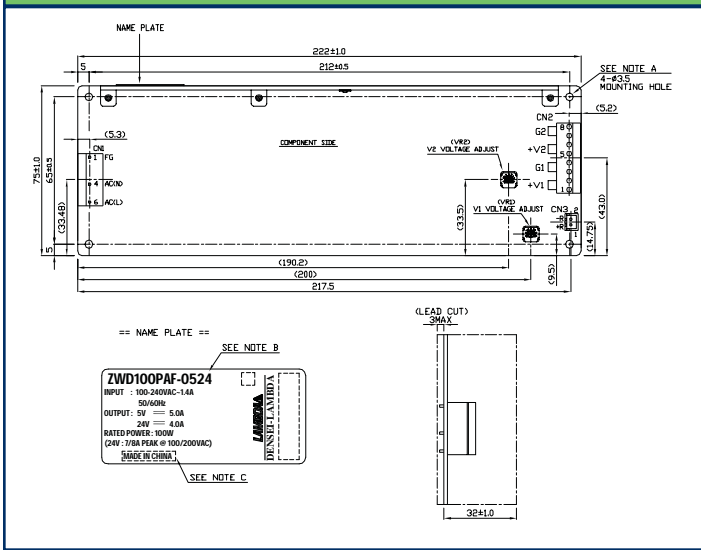
(3) Avoid prolonged operation in overload

(4) OVP on 24V output will shutdown 24V output only

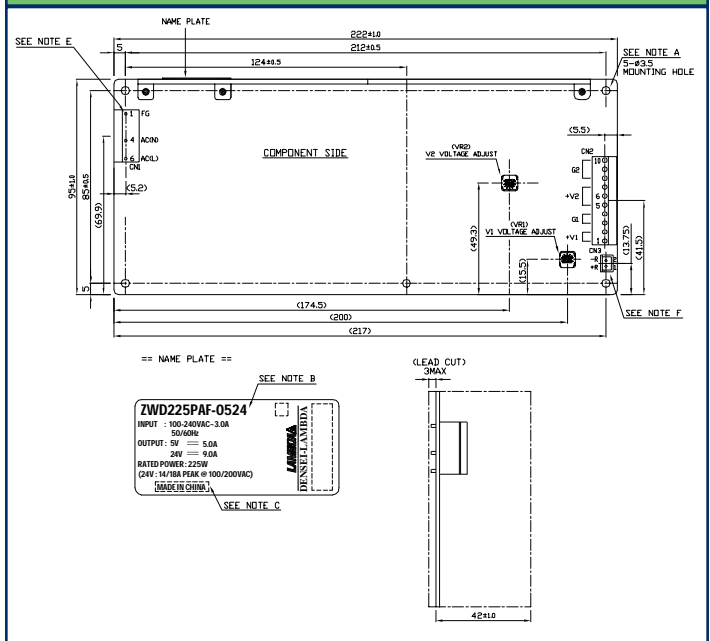
## Model Selector

| Model          | Output Voltage | Output Voltage Accuracy | Output Adjust Range | Max Current | Peak <sup>1,5</sup> Current | Peak <sup>1,5</sup> Power | Max Average Power | Total <sup>1,5</sup> Peak Power |
|----------------|----------------|-------------------------|---------------------|-------------|-----------------------------|---------------------------|-------------------|---------------------------------|
| ZWD100PAF-0524 | 5V             | 4.9 - 5.1V              | 4.5 - 5.5V          | 5A          | -                           | -                         | 100W              | 172 / 196W                      |
|                | 24V            | 23.52 - 24.48V          | 22.8 - 27.6V        | 4A          | 7 / 8A                      | 168 / 192W                |                   |                                 |
| ZWD150PAF-0524 | 5V             | 4.9 - 5.1V              | 4.5 - 5.5V          | 5A          | -                           | -                         | 150W              | 246 / 294W                      |
|                | 24V            | 23.52 - 24.48V          | 22.8 - 27.6V        | 6A          | 10 / 12A                    | 240 / 288W                |                   |                                 |
| ZWD225PAF-0524 | 5V             | 4.9 - 5.1V              | 4.5 - 5.5V          | 5A          | -                           | -                         | 225W              | 344 / 440W                      |
|                | 24V            | 23.52 - 24.48V          | 22.8 - 27.6V        | 9A          | 14 / 18A                    | 336 / 432W                |                   |                                 |

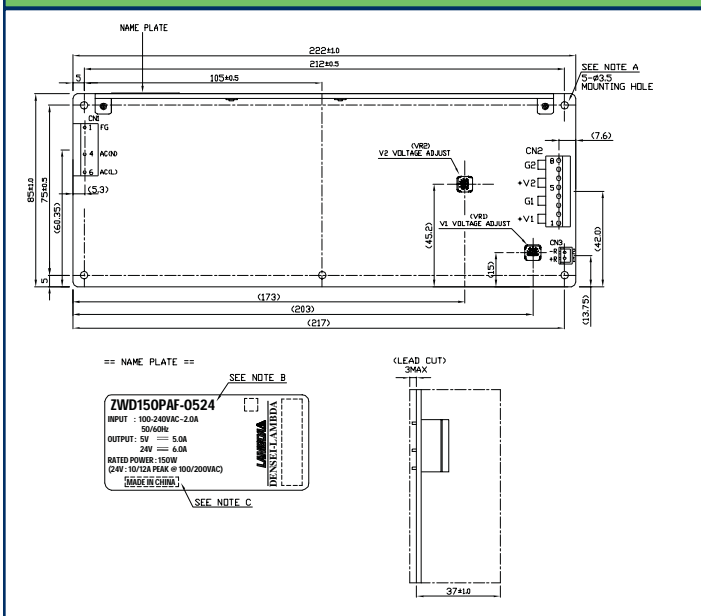
### ZWD100 Outline Drawing



### ZWD225 Outline Drawing



### ZWD150 Outline Drawing



### Options

| Suffix   | Description                    |
|--|--------------------------------|
| blank  | Molex Input & Output Connector |
| /L   | L Bracket                      |
| /A   | Cover & L Bracket              |
| /J   | JST Input & Output Connector   |
| /T   | Vertical Mount Screw Terminals |
| Preferred option combination: blank, /L, /TL, or /TA |                                |
| Example: ZWD100PAF-0524/TA                           |                                |

### Other Lambda Industrial Products

|               |  |
|---------------|--|
| ZWS, ZWSPAF   | 5-480W Single output, 115/230VAC input |
| HWS           | 15-1500W Single output                 |
| SWS           | 50-600W Single output low cost         |
| VSb, VSc, VSP | 10-288W Single output 115VAC input     |

For Additional Information, please visit  
[www.lambdapower.com/products/zwd-paf-series.htm](http://www.lambdapower.com/products/zwd-paf-series.htm)

#### Notes:

- (5) ZWS100PAF: For <10s max, duty cycle ≤0.35  
 ZWS150PAF: Up to 10A peak, <10s max, duty cycle ≤0.35; from 10-12A, <5s, duty cycle ≤0.2  
 ZWS225PAF: Up to 14A peak, <10s max, duty cycle ≤0.35; from 14-18A, <5s, duty cycle ≤0.2