

## UNIVERSAL INPUT HARMONIC CORRECTION AC-DC MEDICAL AND IEC APPLICATION OPEN FRAME SINGLE & MULTI-OUTPUT 150 WATTS INTERNAL SWITCHING POWER SUPPLIES HIMP151 SERIES



### FEATURES:

- 5" X 3" X 1.38" COMPACT SIZE
- ACCOMMODATE UNIVERSAL AC SOURCES
- MEET IEC 61000-3-2 HARMONIC CORRECTION
- MEET UNIVERSAL SAFETY STANDARDS
- EMI MEET CISPR EN 55022/EN 55011 & FCC CLASS B CONDUCTED
- CE MARKING COMPLIANCE

### SPECIFICATION

#### INPUT SPECIFICATION

**Input Voltage:** Typ. 90-264Vac with PFC.  
**Input Connector:** V-M connector.  
**Input Frequency:** 47-63Hz.  
**Inrush Current:** 9.3-11.3Arms @230Vac.  
**Input Current:** Typ. 2.2A @115Vac, 0.9A @230Vac.  
**Dielectric Withstand:** Meet IEC 60950-1.  
**EMI:** Meet CISPR EN 55022 & FCC Class B conducted.  
Meet CISPR EN 55011 & FCC Class B conducted.  
**Hold-up Time:** Typ. 90mS @115Vac & 230Vac.  
**Power Factor & Harmonic Correction:**  
Meet IEC 61000-3-2, PF typ. 0.99 @ full load.  
**Over Temperature Protection:** Installed.  
**Leakage Current:** 0.40-0.50mA @230Vac touch current.

#### OUTPUT SPECIFICATION

**Output Voltage:** See Ratings Chart.  
**Output Current:** See Ratings Chart.  
**Output Connector:** V-M connector.  
**Output Wattage:** Max. 150 watts.  
**Line Regulation:** Typ. 1.0%.  
**Load Regulation:** Single O/P VO1  $\pm 3.0\%$ .  
Dual O/P VO1  $\pm 3.0\%$  VO2  $\pm 1.0\%$   
Triple O/P VO1  $\pm 3.0\%$  ( $\pm 8\%$  for 3.3V), VO2/VO3  $\pm 3.0\%$ .  
Quad O/P VO1/VO2/VO3/VO4  $\pm 3.0\%$   
**Noise & Ripple:** Typ. 1.0-2.0% peak to peak.  
**OVP:** Built-in at VO1 and VO2.  
**Adjustability:** Available at VO1 and VO2.  
**Overload Protection (OLP):**  
Fully protected against output overload and short circuit.  
OLP set at about 125-150% rating output wattage.  
Consult the factory for OLP setting.

#### GENERAL SPECIFICATION

**Efficiency:** Typ. 76-80% various with output.  
**Switching Frequency:** 68K Hz.  
**Circuit Topology:** Single Fixed frequency forward circuit.  
Dual/Triple/Quad: Fixed freq. flyback circuit.  
**Transient Response:** Output voltage returns in less than  
14.8-25.2mS following a 25% load change.  
**Safety Standard:** IEC 60950-1 Class I for IEC use.  
IEC 60601-1 Class I for Medical use.  
**Operating Temperature:** 0 to +50°C under 30 CFM  
forced air cooling for full load.  
**Storage Temperature:** -20 to +85°C.  
**Temperature Coefficient:** Typ. 0.04% /°C.  
**Cooling:** Requested 30 CFM forced air flow for full load.  
**Construction:** U-bracket format.  
**Power Density:** 6.52-7.24 Watts / Cubic Inch .

Note: Due to requests in market and advances in technology, specifications subject to change without notification.



For the details of safety approval, please consult the factory.

# OUTPUT VOLTAGE / CURRENT RATINGS CHART

2008/02/18

## SINGLE OUTPUT (Under air cooling)

| MODEL NO.       | MAIN VO1 ★@ |       |       |
|-----------------|-------------|-------|-------|
|                 | Typ.        | Volt. | Max.  |
| HIMP151-S050270 | 27A         | 5V    | 30A   |
| HIMP151-S120125 | 12.5A       | 12V   | 12.5A |
| HIMP151-S150100 | 10.0A       | 15V   | 10.0A |
| HIMP151-S240063 | 6.3A        | 24V   | 6.3A  |

## DUAL OUTPUT (Under forced air cooling)

| MODEL NO.     | MAIN VO1 ★@ |       |        | AUX. VO2 ★@ |       |       |
|---------------|-------------|-------|--------|-------------|-------|-------|
|               | Typ.        | Volt. | Max.   | Typ.        | Volt. | Max.  |
| HIMP151-D050I | 15.00A      | +5V   | 15.00A | 6.00A       | +12V  | 6.00A |
| HIMP151-D050M | 15.0A       | +5V   | 15.0A  | 3.00A       | +24V  | 3.00A |
| HIMP151-D120I | 6.25A       | +12V  | 6.25A  | 6.25A       | +12V  | 6.25A |
| HIMP151-D150K | 5.0A        | +15V  | 5.00A  | 5.00A       | +15V  | 5.00A |

## TRIPLE OUTPUT (Under forced air cooling)

| MODEL NO.      | MAIN VO1 ★@ |       |      | AUX. VO2 ★@ |       |      | AUX. VO3 ● |       |      |
|----------------|-------------|-------|------|-------------|-------|------|------------|-------|------|
|                | Typ.        | Volt. | Max. | Typ.        | Volt. | Max. | Typ.       | Volt. | Max. |
| HIMP151-T033EI | 18A         | +3.3V | 20A  | 13.5A       | +5V   | 15A  | 0.8A       | +12V  | 0.8A |
| HIMP151-T050II | 15A         | +5.0V | 15A  | 5.5A        | +12V  | 5.5A | 0.8A       | +12V  | 0.8A |
| HIMP151-T050KK | 15A         | +5.0V | 15A  | 4.5A        | +15V  | 4.5A | 0.5A       | +15V  | 0.5A |

## QUAD OUTPUT (Under forced air cooling)

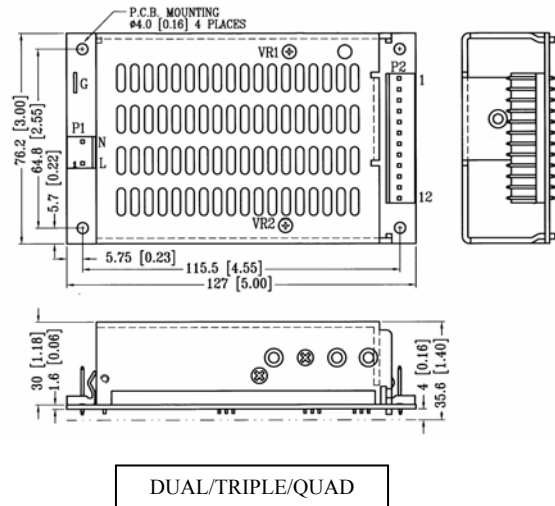
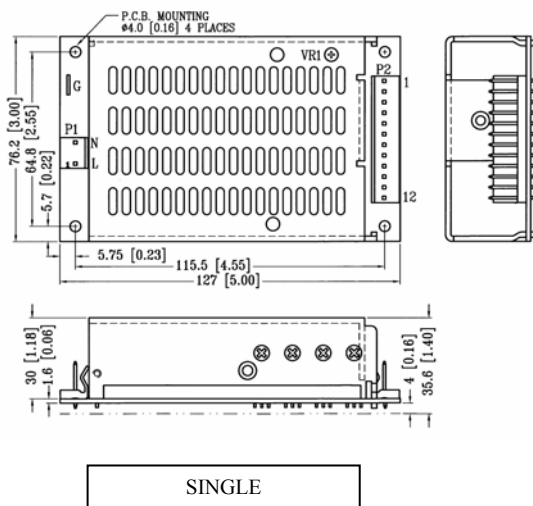
| MODEL NO.       | MAIN VO1 ★@ |       |      | AUX. VO2 ★@ |       |      | AUX. VO3 ● |       |      | AUX. VO4 ● |       |      |
|-----------------|-------------|-------|------|-------------|-------|------|------------|-------|------|------------|-------|------|
|                 | Typ.        | Volt. | Max. | Typ.        | Volt. | Max. | Typ.       | Volt. | Max. | Typ.       | Volt. | Max. |
| HIMP151-Q050KKE | 15A         | +5V   | 15A  | 4A          | +15V  | 4A   | 0.8A       | -15V  | 0.8A | 0.5A       | -5V   | 0.5A |

Symbol: "★" OVP built-in. "@" Adjustable. "●" Post-Regulated

Remark: Please refer to the derating chart depending on ambient temperature and fan cooling.

## MECHANICAL DIMENSIONS: MM [INCHES]

WEIGHT: 385.0g (13.4 Oz.)



## INPUT & OUTPUT CONNECTORS PIN ASSIGNMENT

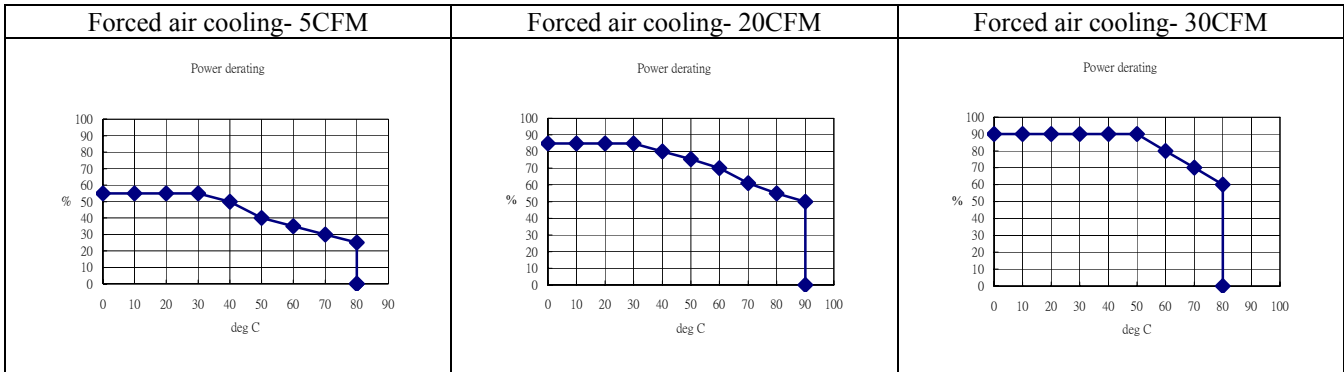
| ASSIGNMENT  | AC INPUT |      |      | SINGLE O/P     |                   |            | DUAL O/P |            |            | TRIPLE O/P |       |            |            | QUAD O/P |       |       |            |
|-------------|----------|------|------|----------------|-------------------|------------|----------|------------|------------|------------|-------|------------|------------|----------|-------|-------|------------|
|             | AC-L     | AC-N | AC-G | VO1            | DC-COM            | VO1        | VO2      | DC-COM     | VO1        | VO2        | VO3   | DC-COM     | VO1        | VO2      | VO3   | +VO4  | DC COM     |
| CNTR & PIN# | P1-L     | P1-N | P1-G | P2-1,2,3,4,5,6 | P2-7,8,9,10,11,12 | P2-1,2,3,4 | P2-9,10  | P2-5,6,7,8 | P2-1,2,3,4 | P2-9,10    | P2-11 | P2-5,6,7,8 | P2-1,2,3,4 | P2-9,10  | P2-11 | P2-12 | P2-5,6,7,8 |

Mating connector: Moles 5195 or 5239 series.

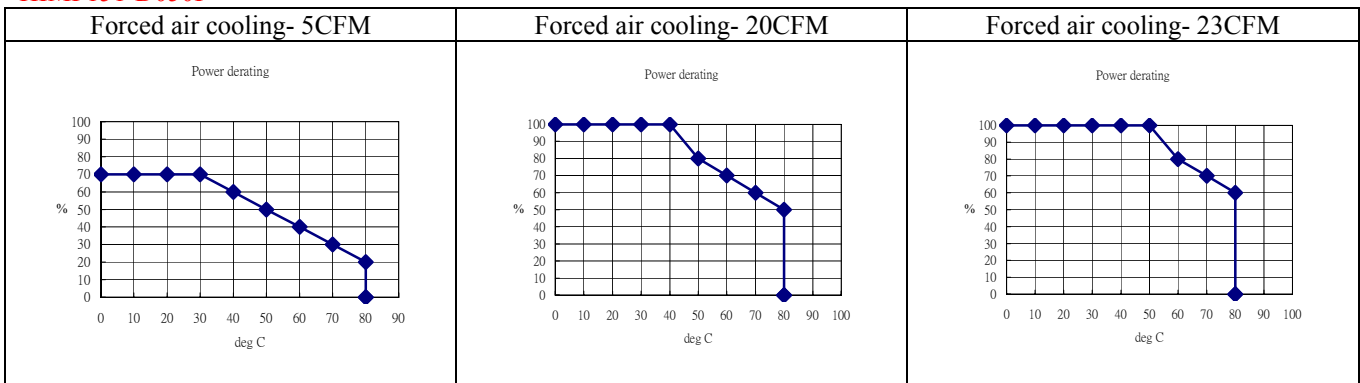
# DERATING CHART

2008/2/18

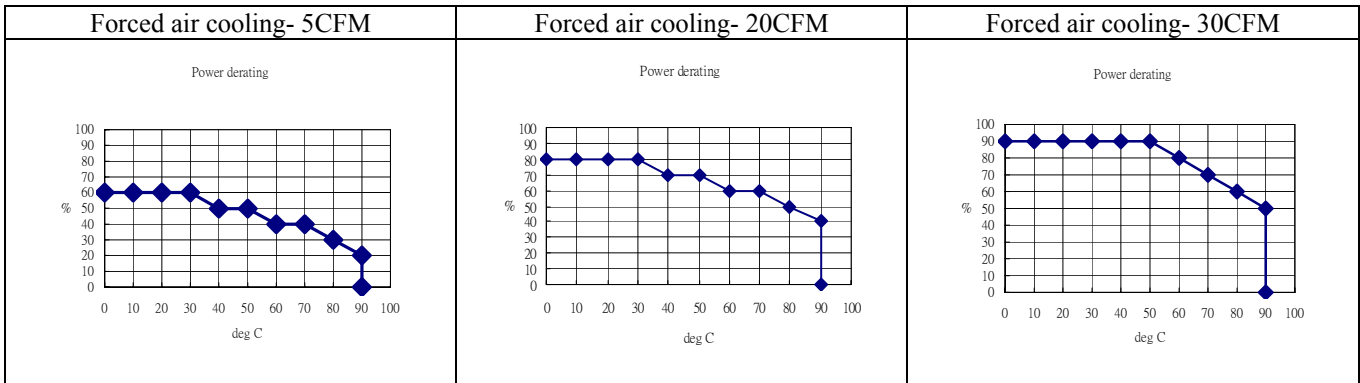
## HIMP151-S050270



## HIMP151-D0501



## HIMP151-T033EI



## HIMP151-Q050KKE

