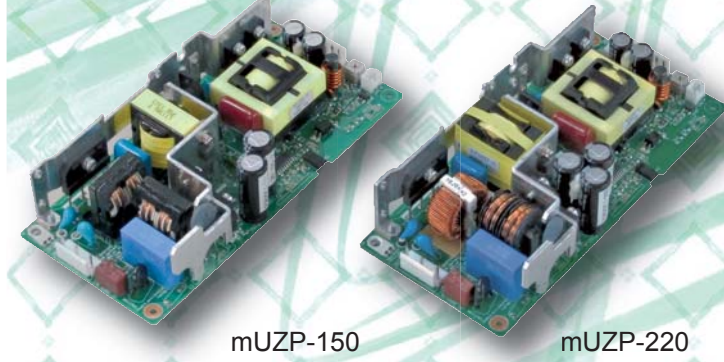


The medical safety approved model of high power and high efficiency UZP series is released



Small but ultimate functionality

Based on the circuit technology of "OZP-350", ultrahigh efficiency switching mode power supply which has gained good reputation from many customers, a compact and high efficiency model, UZP series was developed as 150-200W range model. The UZP series was released in Dec. 2013 and we already had many inquiries from customers. mUZP series is the medical standard approved version of the UZP series.

High efficiency/Advanced type

mUZP-220 Series

Continuous: 180/220W Peak: 400W
Output voltage: 12/18/24/48V

Efficiency (at 24V output voltage)	
At 100VAC:	91.5%
At 230VAC:	94.0%

*An example of actual measurements

Economy type

mUZP-150 Series

Continuous: 150W Peak: 400W
Output voltage: 12/18/24/48V

Efficiency (at 24V output voltage)	
At 100VAC:	88.5%
At 230VAC:	92.0%

*An example of actual measurements

Medical standard IEC60601-1 2nd and 3rd (MOPP) approved

What is the medical standard?

Standard which intend to medical electrical system. Requirements about electric systems used in medical practice are contained. Also contained is technical requirements which exceed general information processing system about basic requirement of safety such as electrification, insulation.

Means of protections

-MOOP (Means of Operator Protection)

⇒ The means of protection for reducing the non-operator's risk of electrical shock

-MOPP (Means of Patient Protection)

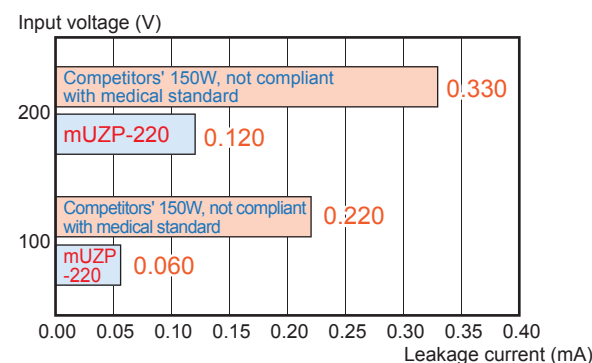
⇒ The means of protection for reducing the operator's risk of electrical shock

The criteria for certification is harder than MOOP

Low leakage current and low noise

The leakage current achieved to be 0.060mA typ. at 100VAC and 0.120mA typ. at 200VAC. Furthermore, conducted emission VCCI Class B without an external noise filter. It enables cost reduction and reduces man-hour at user's side. Both low noise and low leakage current are achieved.

Leakage current comparison, actual measurement value



Advantages of medical standard approved power supply

Not compliant

Fuses are required to be equipped on both L and N line.

Insulating transformer for medical use are required for reason of leakage current, creepage distance, dielectric strength. (a IEC60601-1 compliant insulating transformer is needed.)

These series are all done to be double and reinforced insulation. That is why we are able to satisfy this requirement. You will not need to prepare for extra fuses or insulating transformer. Also, it is compact and inexpensive rather than using power supplies those are not complying with the standards.

Compliant

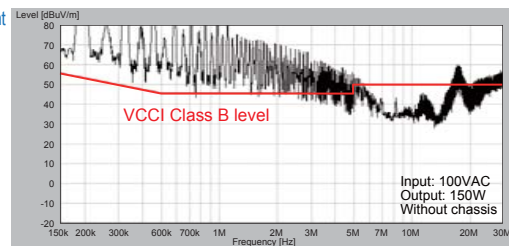
Fuses are mounted on both L and N line.

Creepage distance and dielectric strength are also compliant with medical standard.

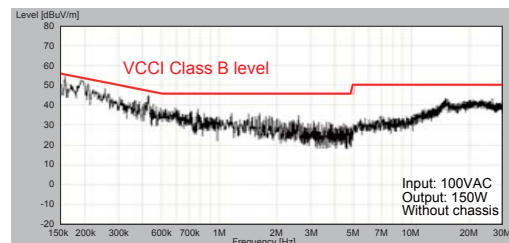
Conducted emission

*An example of actual measurement with mUZP-220 series

Competitors' equivalent 150W power supply



Nipron mUZP-220

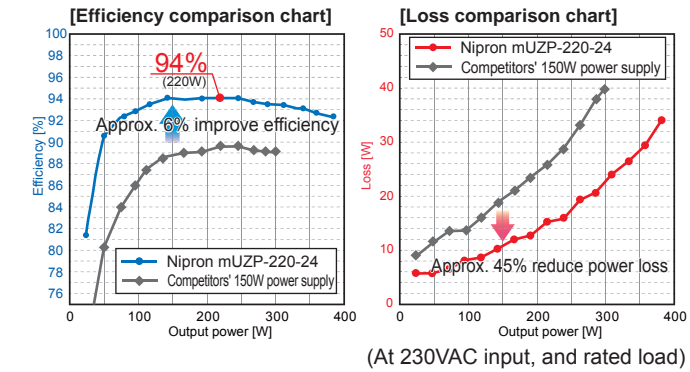


Eco-friendly design

High efficiency

*An example of actual measurement with mUZP-220-24 series
Approx. 6% improve efficiency, compared with a competitors' equivalent

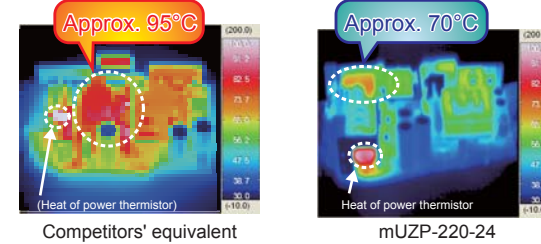
Energy-saving power supply reducing approx. 45% power loss



Reducing temperature rise with ultrahigh efficiency

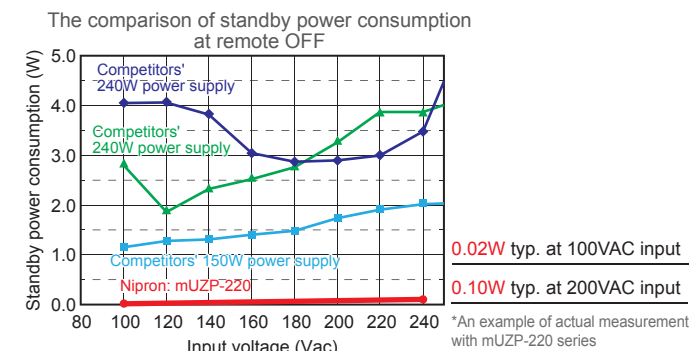
mUZP-220 achieved large capacity and long lifetime, reducing the heat generation with its high efficiency.

Temperature rise comparison [Measurement condition: 100VAC input, and 24V 150W output]

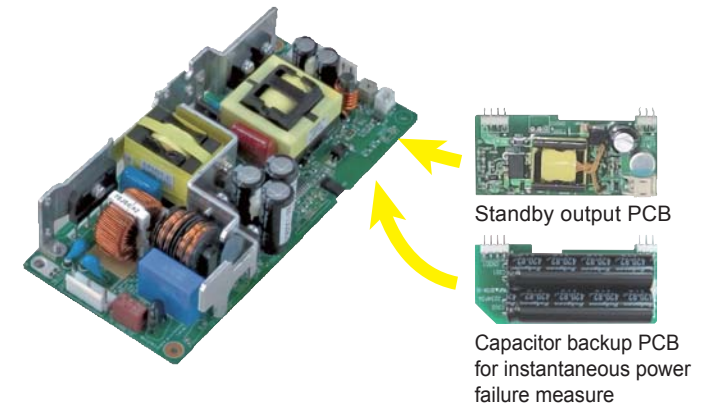


The low standby power consumption is compliant with ErP directive Lot6

By reducing the standby power consumption at remote OFF, it meets ErP directive lot6 if the 5VSB output power is under approx. 0.3W (at 100VAC input) with the standby output PCB shown at right.



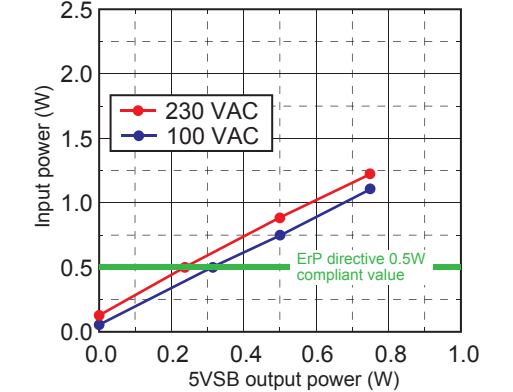
Standby output PCB achieves various usages!!



Standby output PCB equipped model (5VSB/12VSB) is also added to the line-up

Remote ON/OFF control available without extra power supply. Also, it is complied with ErP directive Lot6 by reducing the standby power consumption at light load. With the standby output PCB equipped, it meets ErP directive if the 5VSB output power is under approx. 0.2W at 230VAC input or approx. 0.3W at 100VAC input.

"mUZP-220" + "Standby output PCB (5VSB)" Power consumption at remote OFF (An example of actual measurement)



Capacitor backup PCB available for instantaneous power failure measure

With the capacitor backup PCB, it holds the output voltage at instantaneous power failure of AC input! It can be safely used even in a bad electrical power condition.

Hold-up time: Approx. 80m sec. (at 130W output)

Capacitor package is also connectable for longer hold-up time. (only mUZP-220 series)



Product Summary

Output Specification

mUZP-220 series

Model name (mUZP-220-)	12	18	24	48
Output voltage	+12V	+18V	+24V	+48V
Max. current/power (Natural air cooling)	15A / 180W	10A / 180W	9.2A / 220.8W	4.6A / 220.8W
Max. current/power (Forced air cooling)	21A / 252W	14A / 252W	13.8A / 331.2W	6.9A / 331.2W
Peak current/power (10sec. max.)	33.4A / 400.8W	22.3A / 401.4W	16.7A / 400.8W	8.35A / 400.8W
Input voltage	85-264 VAC (PFC, worldwide range)			

mUZP-150 series

Model name (mUZP-150-)	12	18	24	48
Output voltage	+12V	+18V	+24V	+48V
Max. current/power (Natural air cooling)	12.5A / 150W	8.4A / 151.2W	6.3A / 151.2W	3.2A / 153.6W
Max. current/power (Forced air cooling)	21A / 252W	14A / 252W	11.3A / 271.2W	5.7A / 273.6W
Peak current/power (10sec. max.)	33.4A / 400.8W	22.3A / 401.4W	16.7A / 400.8W	8.35A / 400.8W
Input voltage	85-264 VAC (PFC, worldwide range)			

Selectable Chassis/Cover

Terminal block type for input/output will be added to the line-up.