

INSTALLATION AND OPERATING INSTRUCTIONS 安裝使用說明書

Nano Generator nanoe X 納米離子機

Model No. **FV-15CSD1H**
型號

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Warranty card attached | 附保證書

Thank you for purchasing this Panasonic product.

Please read these instructions carefully before attempting to install, operate or service the Panasonic product. Please carefully read "INSTALLATION INSTRUCTIONS" (P.3~4) of this instructions before installation. Failure to comply with instructions could result in personal injury or property damage. Please explain to users how to operate and maintain the product after installation, and this booklet should be presented to users. Please carefully read "USE AND MAINTENANCE INSTRUCTIONS" (P.7~9) of this instructions before operation. Please retain this booklet for future reference.

Make sure that the correct information is written on the warranty card, including the date of purchase and the name of the distributor. Keep the warranty card in a safe place along with the instructions for future reference.

感謝您選購Panasonic產品。

安裝、使用和維護Panasonic產品前，請仔細閱讀本安裝使用說明書。安裝前，請務必先閱讀“安裝注意事項”（第3~4頁）。不遵照本說明書進行操作有可能導致人員受傷或財產損失。安裝完成後，請向顧客說明如何使用和維護Panasonic產品，並將此說明書交給顧客保管。使用前，請務必先閱讀“使用及維護注意事項”（第7~9頁）。請妥善保管好此說明書以備日後參考。請確認保證書中已填寫“購買日期、經銷商名稱”等信息後，將其與此說明書一同進行妥善保管。

- Disconnect power supply before maintenance.
維護保養前先斷電。
- This product is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the product by a person responsible for the safety. Children should be supervised to ensure that they do not play with the product.
本產品不適合有殘疾、智障或精神障礙的人士或缺乏經驗、常識者(包括兒童)維護使用，除非在負責他們安全的人士的看護或指導下使用。兒童應該有人進行看護，以防將產品當作玩具。

The following instructions should be strictly observed in order to prevent injury to the users and other people, or damage to property.

為避免給您或其他人造成傷害，這裡我們列出了以下安全注意事項，請務必遵守，各種標誌的含義請參考以下內容。

- The degrees of injury or damage that can occur when the instructions are ignored and if the product is not used properly have been classified and described by the following indications.
對無視表示內容，錯誤地使用時，會引起的危險或損傷的程度，用下列符號進行分類、說明。



WARNING
警告

This indication means: Must be treated seriously that this may result in death or serious injury.

本標誌所表示的內容為“不遵守的話可能造成人員死亡或重傷”。



CAUTION
注意

This indication means: Must be treated seriously that this may result in injury or physical damage.

本標誌所表示的內容為“不遵守的話可能造成人身輕傷或其他財產損害”。

- Types of instructions that should be observed have been classified and described by the following pictorial symbols.



This symbol indicates the item is “PROHIBITED” to do.

此標誌表示禁止事項。



This symbol indicates the “COMPULSORY” item that must be followed without failure.

此標誌表示強制事項。



This symbol indicates the item is “CAUTION”.

此標誌表示為提示注意事項。



WARNING 警告

- The product must be grounded.
必須接地。



Otherwise, it may cause electric shock when there is any trouble or electric leakage.
否則當出現故障或漏電時，可能會觸電。

- Don't install the product with the method which is not approved in the instructions.

禁止使用本說明書指定以外的方法進行安裝。



Otherwise, unreliable installation may be caused and thus the product may fall off, resulting in injuries.
否則可能會安裝不牢固，導致產品掉落受傷。

- Don't operate the product other than the rated voltage (220 V~ 50 Hz).

禁止使用額定電壓(220 V~ 50 Hz)以外的電源。



Otherwise, it may cause damages to the product or a fire.
否則可能會損壞本產品或導致火災。

- The product must be installed by professionals or trained personnel with equivalent expertise and skills according to the national wiring rules.

必須由專業人員或經培訓等具備同等專業知識和技能的人員按照國家佈線規則進行安裝。



Otherwise, electric leakage, electric shock or a fire may be caused due to wrong wiring, twisted wiring or wire clamping.

否則可能會因錯誤接線、扭絞接線、夾線等而導致漏電、觸電、火災。

- Please install an all-pole switch which the contact separation is more than 3 mm to control the power of the product.

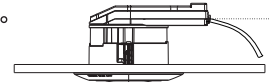
安裝時，須在供電線路中安裝其觸點開距不小於3 mm的“電源全極開關”以用於接通或斷開主機電源。



Otherwise, it may cause a short circuit, thus resulting a fire.
否則可能會導致短路，導致火災。

- The power cord must be fixed to lower than cord exit.

安裝及維護時，電源軟線的位置應低於接線盒的出線口。



Water may flow into product through the power cord, which will cause electric shock or result in fire.

否則可能導致水沿電源軟線流入接線盒導致觸電、火災。

- Please select 60227 IEC 53 (RVV) ordinary polyvinyl chloride sheathed cord. Nominal cross-sectional area of conductors is $3 \times 0.75 \text{ mm}^2$.

電源線請選用60227 IEC 53 (RVV) 型軟線，導線的面積為 $3 \times 0.75 \text{ mm}^2$ 。

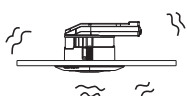


Otherwise, it may be on fire.
否則可能會導致起火。



CAUTION 注意

- Product must be installed tightly.
機體安裝必須牢固。



Otherwise, product may fall off to cause personal injury.
否則產品可能會掉落，導致受傷。

- Components must be installed tightly.
部品安裝必須牢固。



Otherwise, components may fall off to cause personal injury.
否則部品可能會掉落，導致受傷。



CAUTION 注意

- Do not install the product on the window or wall.

禁止安裝於窗戶或牆壁上。



Otherwise, product may fall off to cause personal injury.

否則產品可能會掉落，導致受傷。

- Do not reconstruct this product.

禁止對產品進行改造。



Otherwise, it may cause damage to the product.

否則可能會導致產品損壞。

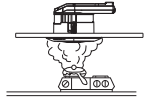
- Do not install the product where is exposed to oil mist.

禁止安裝在油煙過多的場所。



Otherwise, short circuit may result in fire.

否則可能會短路導致火災。



INSTALLATION REQUESTS

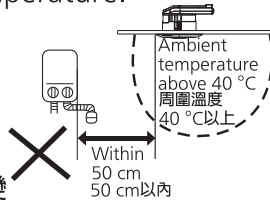
安裝要求

- Do not install the product in places with high temperature.

請勿安裝在高溫場所。

Otherwise, it may cause the product deformation or the motor life shorten. Otherwise it may cause the product abnormal.

否則可能會導致產品變形或縮短電動機壽命。

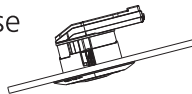


- Do not install product on a slanting ceiling.

請勿安裝在傾斜的天花板上。

Otherwise, it may cause the product abnormal.

否則可能導致產品不能正常運轉。



- Use a wall switch (supply on market) as the power switch for product (Turning ON/OFF to control the product).

連接一個牆壁開關(市場上有售)作為本產品的電源開關(通過啟動或關閉該開關來控制產品)。

- Install the product over 1.5 m apart from the fire annunciator. Otherwise it may cause false action of the fire annunciator. For detail, please confirm the fire annunciator instructions.

請把產品安裝到離火災報警器 1.5 m 以上的位置，否則可能會導致火災報警器誤動作。具體請確認火災報警器的說明書。

- Do not install product where is exposed to humidity.

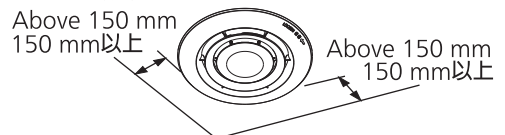
請勿安裝在高濕的地方。

Otherwise, it may cause the product abnormal.

否則可能導致產品不能正常運轉。

- Install the product at the position as the figure show below.

請把產品安裝到下圖所示的位置。



Otherwise, it may cause the wall dirty. Otherwise it may cause the wall dirty.

否則可能引起牆壁髒污。

- Suggest to install the product over 1.5 m apart from the vent.

推薦把產品安裝到離排氣口 1.5 m 以上的位置。

Otherwise, it may affect the performance of the product.

否則可能導致效果的下降。

SUPPLIED ACCESSORIES

包裝附件清單

The following accessories are provided with the product in the package. When you unpack, check if the accessories are all included. If not, please contact your dealer.

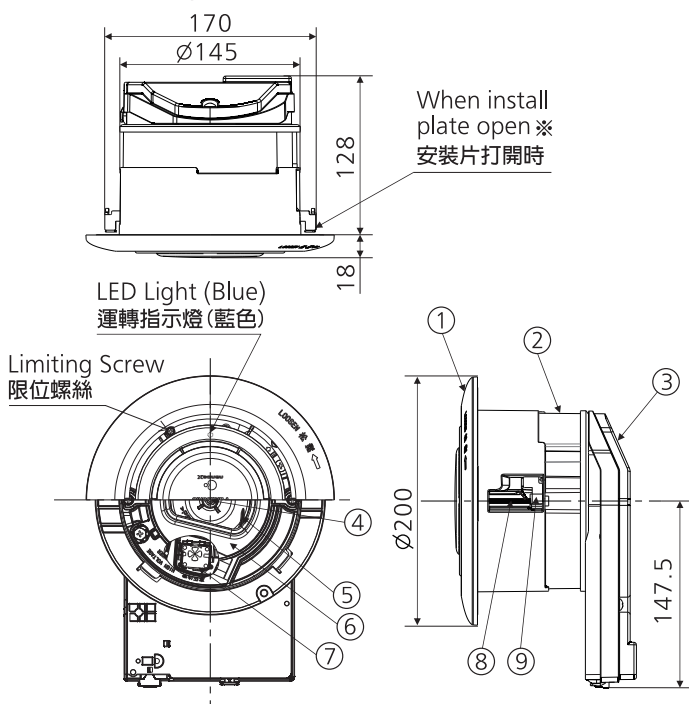
隨產品包裝箱有以下附件，開箱後請清點是否齊全，若不齊全，請與經銷商聯繫。

No. 代號	Drawing 圖樣	Name 名稱	Qty 數量
①		Installation and operating instructions 安裝使用說明書	1
②		Warranty card 保證書	1

PARTS NAME AND DIMENSIONS

部件名稱及尺寸

Unit: mm 單位: mm



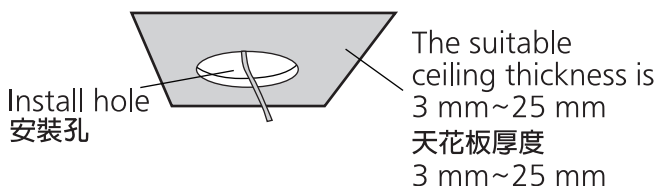
No. 序號	Part name 部件名稱	Qty 數量
①	Louver 百葉	1
②	Frame 框架	1
③	Electric Case Assy 電源盒組合	1
④	Motor 電動機	1
⑤	Fan 扇葉	1
⑥	Orifice Assy 面罩組合	1
⑦	nanoe® X unit nanoe® X單元	1
⑧	Install Screw 安裝螺絲	2
⑨	Install Plate 安裝片	2

※ Initial position of install plate is closed.
安裝片初始位置為閉合。

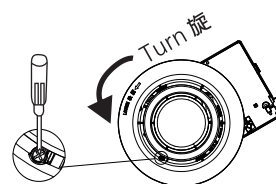
HOW TO INSTALL

安裝方法

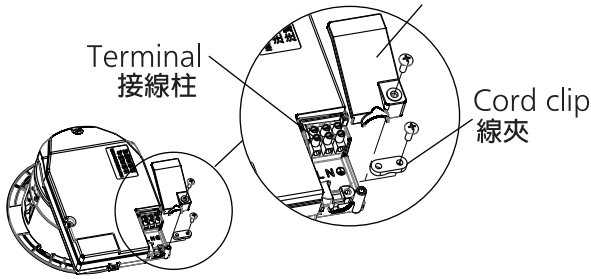
- ① Make a $\varnothing 150 \text{ mm} \pm 3 \text{ mm}$ ($\varnothing 147 \text{ mm} \sim 153 \text{ mm}$) install hole on the ceiling and take out the power cord.
在天花板上開出 $\varnothing 150 \text{ mm} \pm 3 \text{ mm}$ ($\varnothing 147 \text{ mm} \sim 153 \text{ mm}$) 的安裝孔，抽出電源軟線。



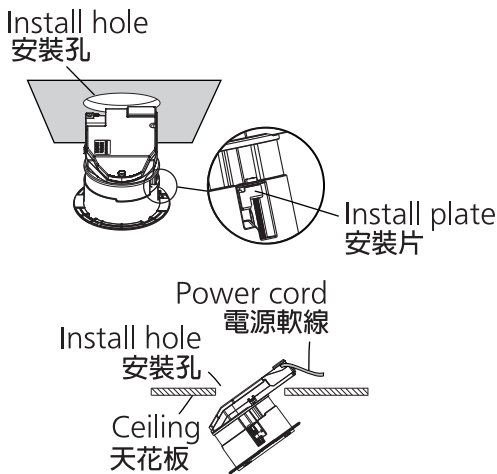
- ② Take off the limiting screw, turn the louver along the arrow to take it out.
拆下限位螺絲，按箭頭指示的方向旋轉，然後取出百葉。



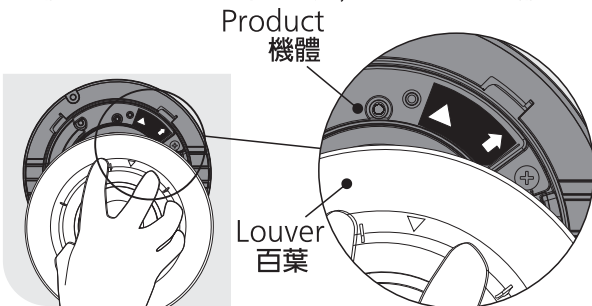
- ③ Remove the terminal cover and cord clip.
拆下接線盒蓋和線夾。 Terminal cover
接線盒蓋



- ⑤ Ensure each install plate is at the initial position (shown as below) and insert product into ceiling inclined.
請確認每個安裝片處於初始位置(如下圖所示), 然後把產品傾斜地裝進天花板。

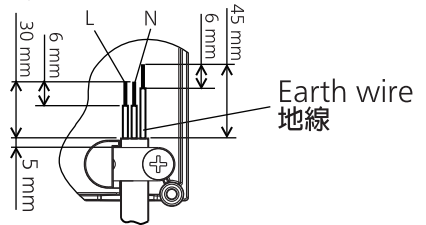


- ⑦ Find the “▽” mark on louver, place louver to product aligning the “▽” to “△” on product.
找到百葉上的“▽”標誌, 按“▽”與機體上“△”對齊的角度, 將百葉嵌入機體。



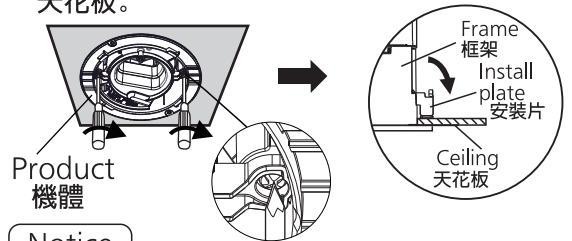
- ④ Set the power cord as below, connect the power cord to terminal and tight it with cord clip, assemble the terminal cover.

按下圖長度將電源軟線連接到接線柱, 並用線夾固定後, 裝回接線盒蓋。



- ⑥ Turn the install screw of product clockwise till the install plate clamping to ceiling.

順時針旋轉機體上的安裝螺絲至安裝片壓緊天花板。



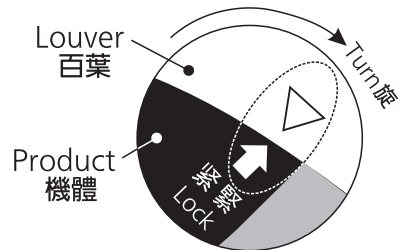
Notice 提示事項

Ensure the tighten torque in the range of 60 cN·m to 120 cN·m. Product may fall off when torque not enough, may damage when torque too large.

確保螺絲扭緊力在60 cN·m至120 cN·m之間。如果扭緊力不足可能會導致產品掉落, 如果扭緊力過大, 可能會損壞產品。

- ⑧ Turn the louver until “▽” align to “△” of product and it sounds “Da” means locked.

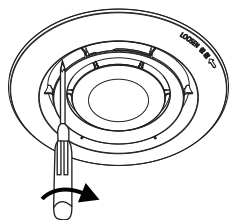
旋轉百葉使百葉上的“▽”與機體上的“△”對齊, 同時聽到“嗒”的一聲表示鎖緊。



HOW TO INSTALL

安裝方法

- ⑨ Fix the limiting screw.
裝上限位螺絲。



Notice 提示事項

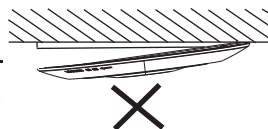
Ensure the tighten torque in the range of 20 cN·m to 40 cN·m. Product may fall off when torque not enough, may damage when torque too large.

確保螺絲扭緊力在20 cN·m至40 cN·m之間。如果扭緊力不足可能會導致產品掉落，如果扭緊力過大，可能會損壞產品。



CAUTION 注意

- Keep the louver close to the ceiling.
確保百葉貼緊天花板。



- Parts may fall off and result in injury.
否則部品可能會掉落導致受傷。

TEST RUN

試運轉

Please check the following items by test run after connecting power.
在接通電源後，請進行試運轉檢查以下事項。

- Does the fan rotate?
扇葉是否旋轉？
- Does the blue LED light light?
藍色的運轉指示燈是否亮燈？
- Does it have abnormal vibration or noise?
是否發生異常的聲音或震動？

USE AND MAINTENANCE INSTRUCTIONS 使用及維護注意事項



WARNING 警告

- Do not inspect and maintain the product by unqualified persons.
禁止非專業人員進行檢查和維修產品。

Otherwise, it may cause electric shock or personal injury.
否則可能會引起觸電或受傷。

- Before touching the product, ensure that the power switch is turned off.

在接觸本產品前，必須確保連接本產品的電源開關處於關閉狀態。

Otherwise, it may result in electric shock.
否則可能會導致觸電。

- The fan may rotate even when power supply is switched off. Please make sure the fan has been stopped before inspection.

檢查時，即使關掉電源，扇葉還會有短時間的旋轉，請確認在產品已完全停止運轉的情況下才進行檢查。



Otherwise, it may cause injury if finger or object is caught into the rotating section.

否則手指或物等可能會被卷進旋轉部分，導致人員受傷。

- If you will not use this product any more, remove the product.

如以後不打算再使用本產品時，不得放置不管，而應予以拆除。



This product may cause injuries once it falls off.

萬一掉落，可能會導致受傷。



WARNING 警告

- Once flammable gas leaks, do not start any function of this product.
當發生煤氣洩漏時，禁止開啟本產品的任何功能。



Otherwise, it may generate spark and thus lead to explosion.
否則可能會產生火花而引起爆炸。

- Do not spray or clean this product directly with water or other liquid.
禁止用水及其他液體直接噴射、清潔本產品。



Otherwise, it may cause short circuit or electric shock.
否則可能會引起短路或觸電。

- Do not disassemble this product for repair or reconstruction.
禁止拆解本產品進行修理或改造。



Doing this may lead to fire and electric shock.
容易導致火災、觸電。



CAUTION 注意

- When you check or clean the product, please wear gloves.
在檢查或清潔時，請佩戴手套等保護工具。



Otherwise, it may result in personal injury.
否則可能會導致人員受傷。

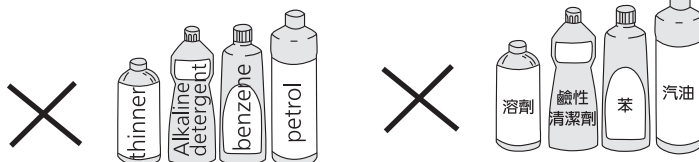
- Do not insert the finger to the lower gap when cleaning the louver.
清潔百葉時，避免手申進百葉夾縫中。



Otherwise, it may result in personal injury.
否則可能會導致人員受傷。

Notice 提示事項

1. According to the condition of using environment, routine maintenance is required at least once a year.
根據使用環境的情況，每年至少進行一次常規的維護保養。
2. Do not immerse blade or other resin parts in hot water over 60 °C.
切勿把塑膠部品浸入高於60 °C的水中。
3. Do not use petrol, benzene, thinner or any other such alkaline detergent for cleaning the product.
切勿使用汽油、苯、稀釋劑或其他的鹼性清潔劑擦拭產品。

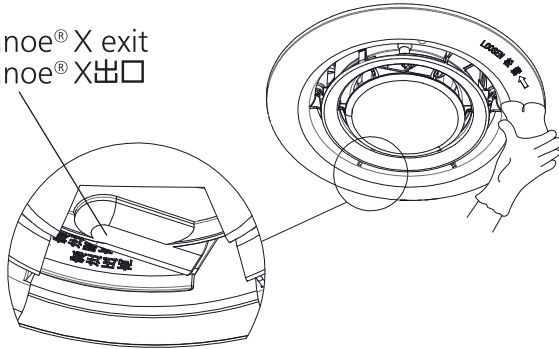


USE AND MAINTENANCE INSTRUCTIONS 使用及維護注意事項

- Clean the dust on surface of louver with a cloth adding neutral cleanser, and then dry the louver with a soft dry cloth.

將抹布放入含有中性洗滌劑的水中浸濕後，把百葉表面的灰塵擦淨，再用乾布擦乾百葉表面。

nanoe® X exit
nanoe® X出口



Do not insert the finger or rarity into the nanoe® X exit. Otherwise, it may cause short circuit or electric shock.
禁止將手指或異物放入nanoe® X出口，否則可能會引起短路或觸電。

TROUBLESHOOTING

常見故障的識別與處理

Check the product according to the table below if a fault occurs. If the error still occurs, disconnect all-poles switch of the product, and contact your dealer.

發生故障時請按下表進行檢查，如果問題仍然未能解決，請確保連接本產品的“電源全極開關”處於斷開狀態，且與經銷商聯繫。

Symptom 癥狀	Cause 原因	Troubleshooting 對策
<ul style="list-style-type: none"> • Fan doesn't rotate 扇葉不旋轉 • No wind blows out 沒有風吹出 • Running LED light (blue) doesn't light 運轉指示燈(藍色)不亮 	Switch is off 開關未閉合	Turn the switch on 閉合開關
	Incorrect wiring 接線錯誤	Contact your dealer 聯繫經銷商修理
Smells peculiarly 產生異味	When nanoe® X is generated, small amount of ozone will be release. However, it will be not harmful to human beings 產生nanoe® X時會有微量臭氧產生，在正常範圍不會對身體產生影響	It is the performance when product is normally running, not function abnormal 這是產品正常工作時的表現，並非功能性異常
Sounds "zi" lightly around the orifice 面罩組合處聽到輕微的“嗞”的聲音	The sound comes with nanoe® X generating. It is hard to detect it is nanoe® X發生時的聲音，很難察覺	It is the performance when product is normally running, not function abnormal 這是產品正常工作時的表現，並非功能性異常
LED light (blue) blinks 運轉指示燈(藍色)閃爍	The product is in abnormal 產品有異常	Contact your dealer 聯繫經銷商修理
Abnormal shaking or noise 產品異常震動或異常噪音	Failure installation of louver or product abnormal 百葉沒有正確地安裝或產品有異常	Contact your dealer 聯繫經銷商修理

Generating environment

產生的環境條件

■ nanoe® X is generated using the air in the room and hence, depending on the temperature and humidity, there can be incidences whereby nanoe® X is not stably generated.

nanoe® X利用室內空氣產生，根據溫度和濕度的不同，有時可能無法穩定產生。

■ Conditions for generated

生成條件

Room temperature: About 5 °C~40 °C (dew-point temperature: more than 2 °C)

Relative humidity: About 30%~85%

室內溫度：約5 °C~40 °C (露點溫度：2 °C以上)

相對濕度：約30%~85%

Small amount of ozone will be generated

發生微量臭氧

■ When nanoe® X ion is generated, small amount of ozone will be release. However, the quantity will be less than the usual level in forest or natural environment, and not harmful to human beings.

產生nanoe® X的同時，也會產生微量臭氧。但其產生量遠遠不及自然森林存在的臭氧量，不會對人體造成傷害。

About nanoe® X

關於nanoe® X

• The so-called nanoe® X are particulate ions containing hydroxyl radicals whose amount is 10 times that of nanoe®.

所謂nanoe® X是含有nanoe® 10倍量的羥自由基的微粒子離子。

• nanoe® X are charged water purification particles generated by applying high voltage to separate water molecules.

nanoe® X，是通過施加高電壓來分離水分子而產生的帶電淨水粒子。

• nanoe® X features: high moisture content, small particles, stability.

nanoe® X特點：水分含量多、小顆粒、穩定性。

1. High moisture content (the moisture content is 1,000 times the moisture content of ordinary anions)

水分含量多(水分含量為一般負離子的含水量的1000倍)。

2. Small particles (about 5 nm - 20 nm in size)

小顆粒(大小約為5 nm~20 nm)。

3. Stability (nanoe® X has a 6 times higher stability than an ordinary anions, with a 10-meter or longer range of coverage)

穩定性(與一般負離子相比，穩定性高達6倍，覆蓋距離高達10 m以上)。

4. High OH hydroxyl amount (up to 4,800 billion of OH ions are generated per second)

OH羥基多(OH離子大量產生，數量是48000億/秒)。

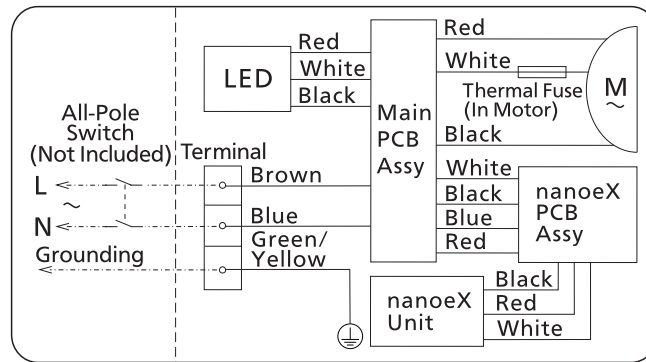
5. Weak acidity (with weak acidity features close to that of hair and skin)

弱酸性(具有與髮質和皮膚接近的弱酸性的特性)。

Note: nanoe® and the nanoe® mark are trademarks of Panasonic Holdings Corporation.

注：nanoe® 和nanoe® 標記為松下控股株式會社商標。





SPECIFICATIONS

規格

Rated Voltage 額定電壓 [V]	Rated Frequency 額定頻率 [Hz]	Power Consumption 額定輸入總功率 [W]	Air Volume 風量 [m ³ /h]	Noise 噪音 [dB(A)]	Net weight 淨重 [kg]
220	50	4.0	15	23.5	1.1

- Value of power consumption, Air volume and noise are measured when the static pressure is 0 Pa.
額定輸入總功率、風量、噪音值等數據是在靜壓為0 Pa狀態下的數值。
 - Air volume is the central value measured by this company with a range of ±10% tolerance.
風量是本公司測試結果的中心值，有±10%的公差範圍。
 - Noise is the A weighted sound pressure level, which is the central value measured by this company, its tolerance range is from +3 dB to -7 dB. The method to measure is as follows: in an anechoic chamber, measure noise value 1 m away from the front, left and beneath of the product, then get the average value.
噪音值為A計權平均聲壓級，是本公司測試結果的中心值，有+3 dB/-7 dB的公差範圍。測試方法為在全消音噪聲測試室內，距樣品前方、左方、下方各1米處測定其噪音值，然後取其平均值。
 - The applicable ambient temperature of this product is in the range of -10 °C~40 °C, using it out of this range may cause a fault.
However, please see page 10 for the generating environment of nanoe[®]X.
本產品適用環境溫度-10 °C~40 °C，否則可能會引起故障。
但是，nanoe[®]X產生的環境條件請見第10頁。
 - This product comply with the IPX2 requirement against the water drop experiment.
本產品機體通過防滴水測試，符合IPX2要求。
- * The above specification may be changed without prior notice.
上述參數 如有變動恕不另行通知。

Panasonic Corporation

Web Site: <http://www.panasonic.com>
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