### SPECIFICATION FOR APPROVAL

**CUSTOMER** : **SUNON** 

MODEL NO : SM316-20001Y

**DESCRIPTION** : Thermal Module

**DIMENSIONS** : 113X78X30.4 mm

**SUNON SPEC. NO. : C02006330F-01** 

**CUSTOMER** 

APPROVAL NO. :

**APPROVED BY** 

**CUSTOMER** :

(AUTHORIZED)

| DRAWN  | CHECKED | APPROVED | SPEC. NO      | C02006330F-01 |
|--------|---------|----------|---------------|---------------|
|        |         |          | ISSUED DATE   | 06. 28. 2021  |
| Sharon | Qian    | Jordan   | EDITION       | 1             |
|        |         |          | REVISION DATE | 08. 18. 2021  |

建準電機工業股份有限公司

SUNONWEALTH ELECTRIC MACHINE INDUSTRY CO., LTD.

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# **SPECIFICATION FOR APPROVAL**

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| SUNONWE      | ALTH | ELEC | TRIC |      |  |  |
|--------------|------|------|------|------|--|--|
| MACHINE      | INDU | STRY | CO., | LTD. |  |  |
| 建進雷機工業职份有限公司 |      |      |      |      |  |  |

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## **MODEL: SM316-20001Y**

## 1.SPECIFICATIONS

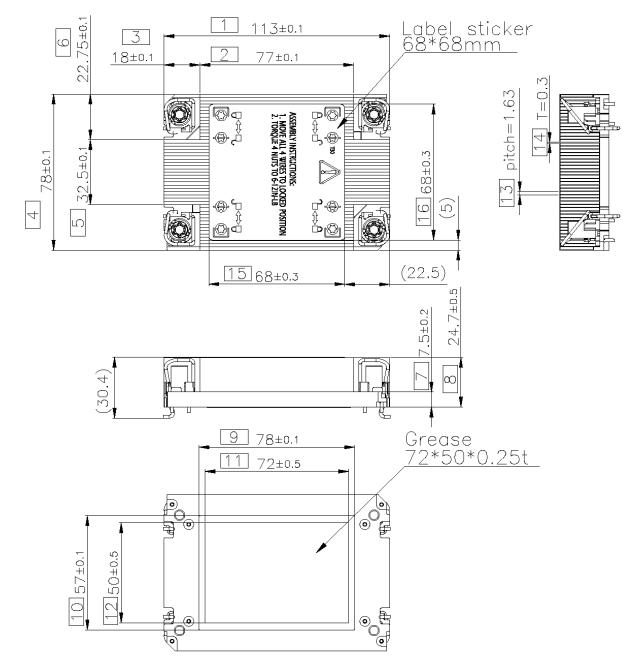
| 1. Application                               | 205W               |
|--|--------------------|
| 2. Heat Sink Dimension                       | 113X78X7.5mm       |
| 3. Heat Sink Material                        | ADC10              |
| 4. Cooling Method                            | N/A                |
| 5. Thermal Grease / PAD                      | X-23-7921-5        |
| 6. Fan Dimension                             | N/A                |
| 7. Fan Speed (with Heat Sink)                | N/A                |
| 8. Fan Airflow ( with Heat Sink )            | N/A                |
| 9. Fan Rating Voltage                        | N/A                |
| 10. Fan Rating Current ( with Heat Sink )    | N/A                |
| 11. Fan Power Consumption ( with Heat Sink ) | N/A                |
| 12. Fan Bearing Type                         | N/A                |
| 13. Fan Connector                            | N/A                |
| 21. Cooling Module Noise                     | N/A                |
| 15. Fan Operating Voltage Range              | N/A                |
| 16. Operating Temperature                    | -10 to + 70 deg. C |
| 17. Storage Temperature                      | -40 to + 70 deg. C |
| 18. Weight                                   | 250 g              |
| 19. Life Expectance                          | N/A                |
|  |                    |

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## 2.DIMENSION



UNIT: mm

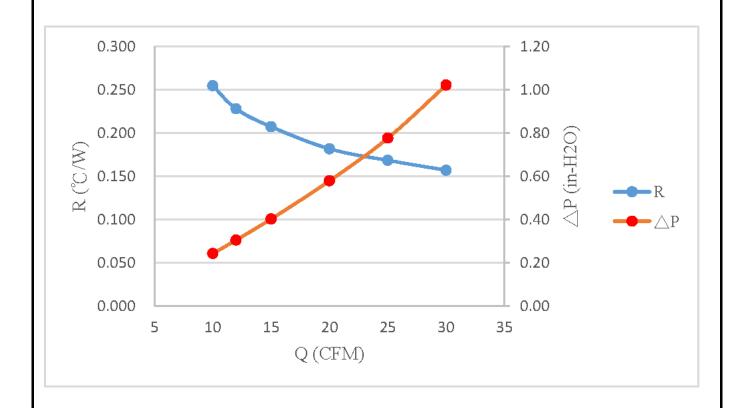
| SUNONWEA | ALTH | ELEC | TRIC |      |
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# 3.Heatsink Performance

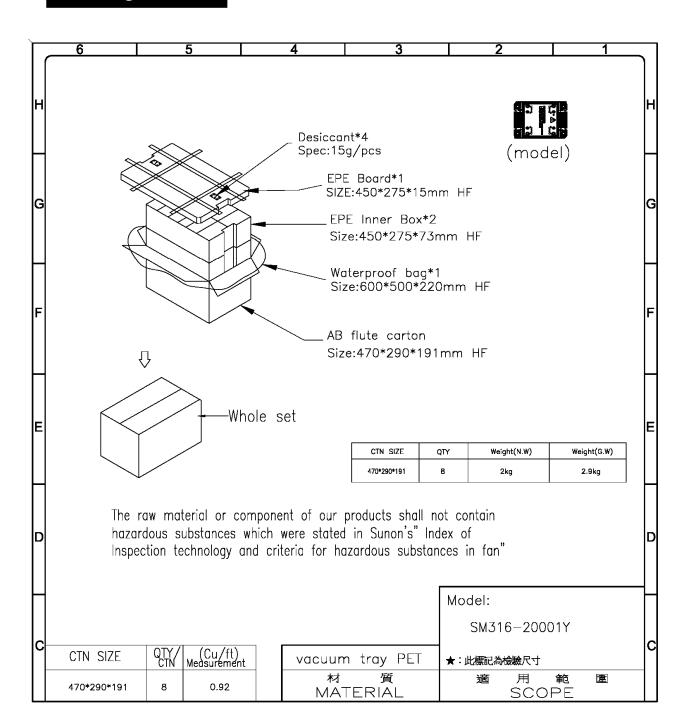


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## 4.Package



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|----------|------|------|------|------|
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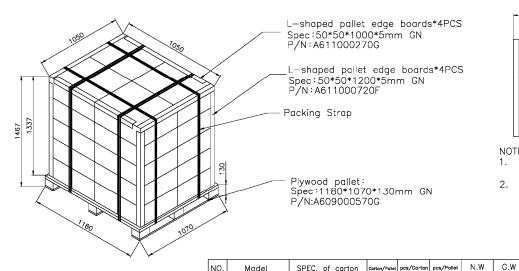
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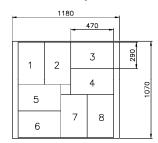
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## 4.Package



Carton Layout



#### NOTICE:

- 8 cartons per layer, 7 layers in total (56 Carton/Pallet). Tightly wrap around the pallet with wrapping films.

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|------|--------------|----------------|---------------|--------------|--------------|-----|------|
| 1.   | SM316-20001Y | 470*290*191    | 56            | 8            | 448          | 112 | 173  |
|      |              |                |               |              |              |     |      |

| SUNONWE | ALTH | ELEC | TRIC |      |  |
|---------|------|------|------|------|--|
| CHINE   | INDU | STRY | CO., | LTD. |  |
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# Notes

#### I. SPECIFICATION MODIFICATION

- 1. SUNON offers engineering assistance on module installation and cooling system design.
- 2. All changes, modifications and/or revisions to the specifications, if any, are incorporated in the attached specifications.
- 3. No changes, modifications and/or revisions to these specifications are effective absent agreement, by both SUNON and the customer, in writing.
- 4. This module will be shipped in accordance with the attached specification unless SUNON and the customer have agreed otherwise, in writing, as specified in Paragraph 3, above.

#### II. OTHER

- 1. DO NOT operate this module in proximity to hazardous materials such as organic silicon, cyanogens, formalin, phenol, or corrosive gas environments including, but not limited to, H<sub>2</sub>S, SO<sub>2</sub>, NO<sub>2</sub>, or Cl<sub>2</sub>.
- 2. Unless otherwise noted, all testing of this module is conducted at 25°C ambient temperature and sixty-five percent (65%) relative humidity.
- 3. DO NOT store this module in an environment with high humidity. This module must be stored in accordance with the attached specifications regarding storage temperature. If this module is stored for more than 6 months, SUNON recommends functional testing before using.
- 4. SUNON reserves the right to use components from multiple sources at its discretion. The use of components from other sources will not affect the specifications as described herein.

#### III. WARRANTY

This module is warranted against all defects which are proved to be fault in our workmanship and material for one year from the date of our delivery. The sole responsibility under the warranty shall be limited to the repair of the module or the replacement thereof, at SUNON's sole discretion. SUNON will not be responsible for the failures of its module due to improper handing, misuse or the failure to follow specifications or instructions for use. In the event of warranty claim, the customer shall immediately notify SUNON for verification. SUNON will not be responsible for any consequential damage to the customer's equipment as a result of any module proven to be defective.

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### **Declaration of Restricted Materials**

### Control declaration of environment- related substances/ materials

1. In accordance with the Restriction of Hazardous Substances (RoHS) Directive 2011/65/EU and specific market requirements, SUNON Halogen-Free Product have complied with law and discipline not to employ the forbidden substances, and restrict the allowable concentration of some limited substances deliberately in our components.

| No | Substance  |   | Criteria               |  |
|----|--|---|------------------------|--|
| 1  | CFCs & HCFCs (ozone depleting substances)                      |   | Forbidden              |  |
| 2  | Chlorinated Organic Solvent                                    |   | Forbidden              |  |
|    | 3  | Plastic (Frame, Impeller, wire harness, etc.)   | <100ppm                |  |
|    |  | Solder  | <1000ppm               |  |
| 3  | Lead and its compounds   | Steel alloy                                     | <3500ppm               |  |
|    |  | Aluminium alloy                                 | <4000ppm               |  |
|    |  | Copper alloy                                    | <4wt%                  |  |
|    | Codminus and the   | Solder Parts composed of metals containing zinc | <20ppm                 |  |
| 4  | Cadmium and its compounds                                      | (e.g. brass, zinc for die casting)              | <100ppm                |  |
|    | compounds  | Plastic   | <5ppm                  |  |
| 5  | PBBs and PBDEs   |   | Forbidden              |  |
| 6  | PCB and PCT  |   | Forbidden              |  |
| 7  | CP, Short-chain Chlorina                                       | ted paraffins C10-13, Cl≥48 wt%                 | Forbidden              |  |
| 8  | Mirex  |   | Forbidden              |  |
| 9  | PCN  |   | Forbidden              |  |
| 10 | Hexavalent Chromium co   | mpounds   | <100ppm                |  |
| 11 | Mercury and its compounds                                      |   | Forbidden              |  |
| 12 | Asbestos   | Forbidden                                       |                        |  |
| 13 | Organic Tin compounds  | Forbidden                                       |                        |  |
| 21 | Azo compounds  | Forbidden                                       |                        |  |
| 15 | TBBP-A in external case j                                      | <1000ppm  |                        |  |
| 16 | Nickel in external case part                                   | <1000ppm  |                        |  |
| 17 | Hexabromocyclododecane   | (HBCDD)   | <1000ppm               |  |
| 18 | Di-butyl Phthalate (DBP)                                       | <1000ppm  |                        |  |
| 19 | Benzyl butyl Phthalate (BB                                     | ,   | <1000ppm               |  |
| 20 | Di-ethylhexyl Phthalate (DEHP)                                 |   | <1000ppm               |  |
| 21 | Di-isobutyl Phthalate (DIB                                     | <1000ppm  |                        |  |
|    | Brominated/chlorinated f                                       | Br<900ppm                                       |                        |  |
| 22 | applicatable item: frame,                                      | Cl<900ppm                                       |                        |  |
|    | insulator.   | Br+Cl<1500ppm                                   |                        |  |
| 23 | 23 PAHs and its 16 compounds in unusual contact material       |   | BaP < 20ppm            |  |
|    | 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2                        | Total <200ppm                                   |                        |  |
|    | PCB and electroplating material, PFOS content complianced with |   | <b>PFOS ≤1000ppm</b> ; |  |
| 24 | 2006/122/EC  | coating material                                |                        |  |
|    |  | $PFOS \le 1 \mu g/m^2$                          |                        |  |

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