

Product Data Sheets

Customer: _____

Part No. : _____

CoolerMaster Model No. : CHE-00033-01-GP

Edition: A1

Issued Date: 10/07/05

Revision History :			
Date of Release	Revision No.	Description	
Customer		Cooler Master	
Approved by	DCC	Checked by	Drafted by
	鐘建丰	周慧華	陳慧
Date:	Date: 10/07/05	Date: 10/07/05	Date:10/07/05



Cooler Master Co., Ltd.

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www.coolermaster.com

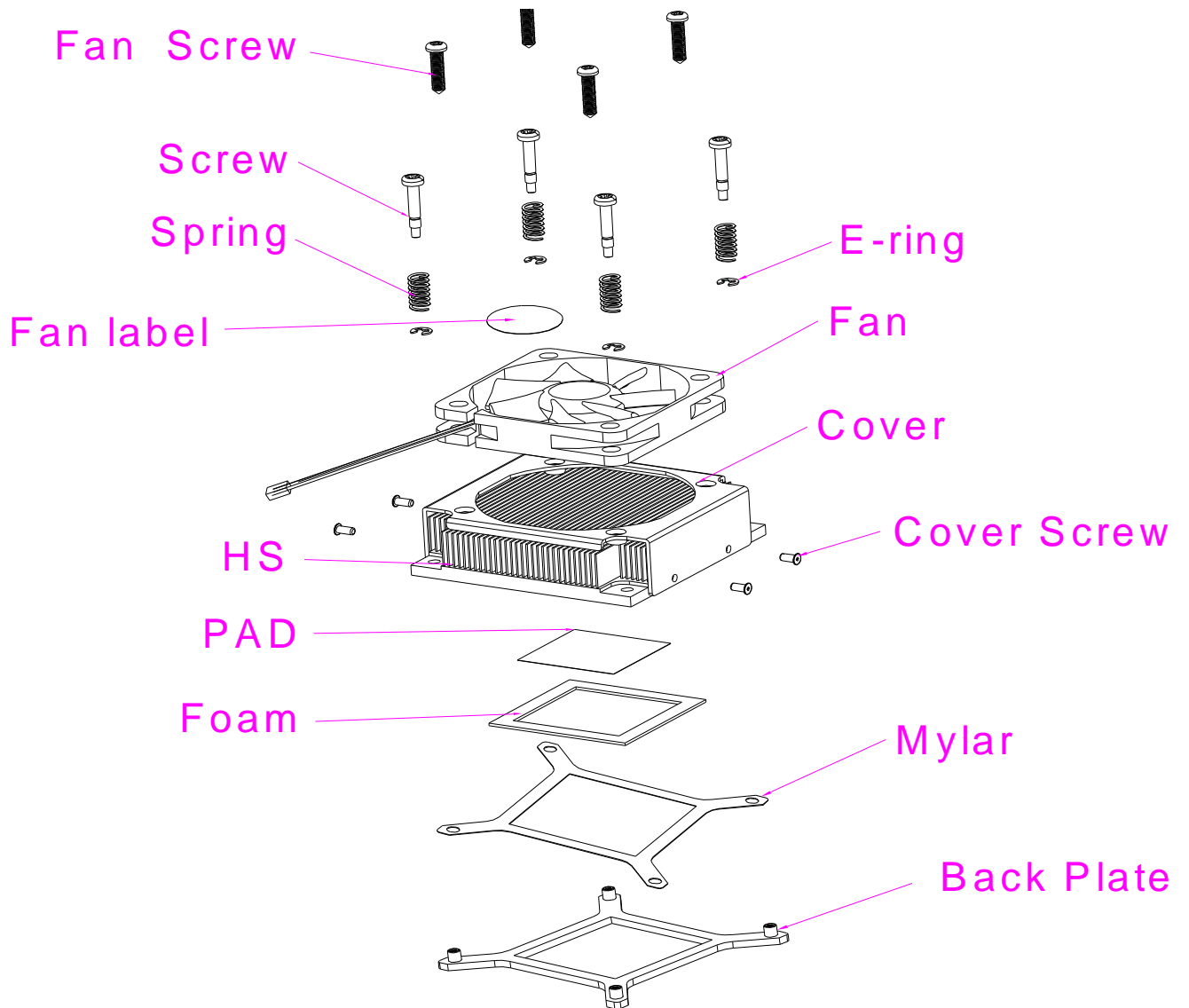


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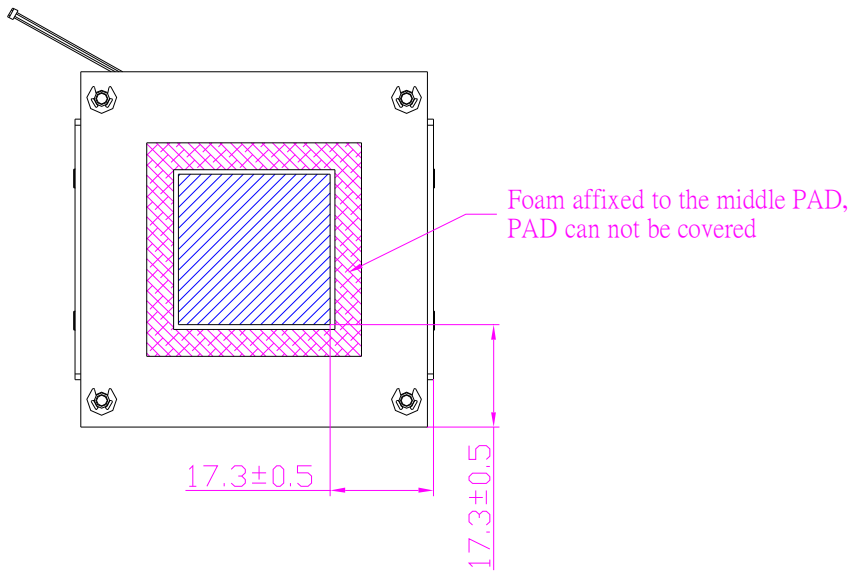
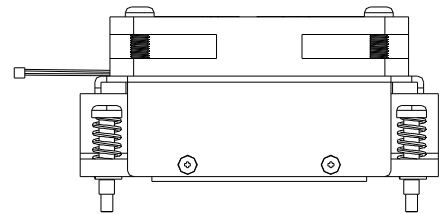
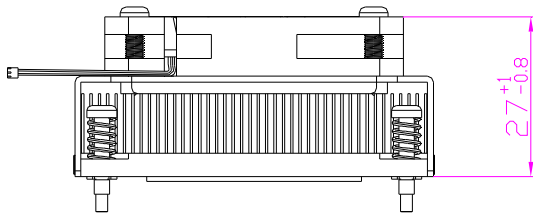
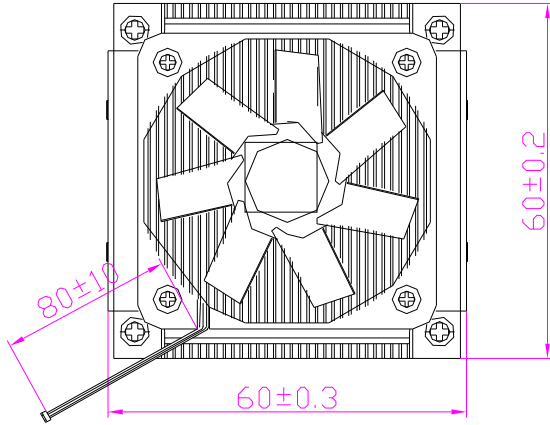


2. Explosion Drawing



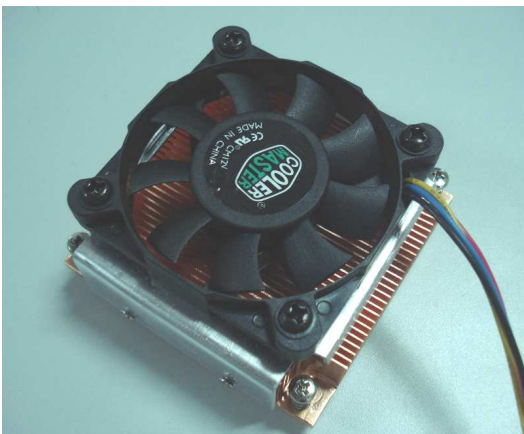
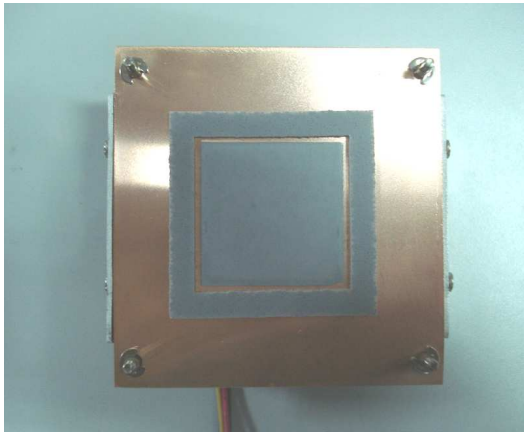
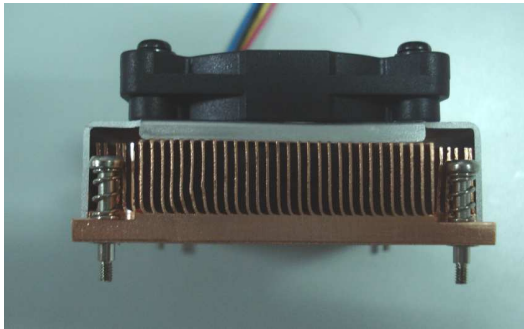


Assembly Drawing





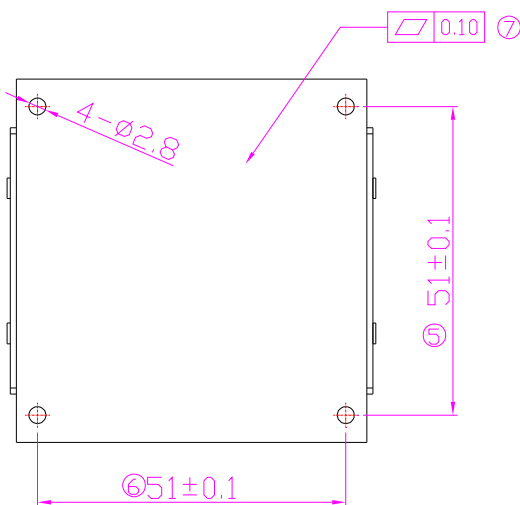
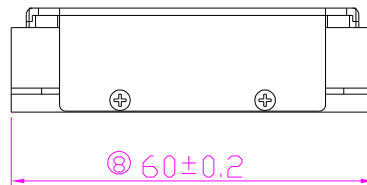
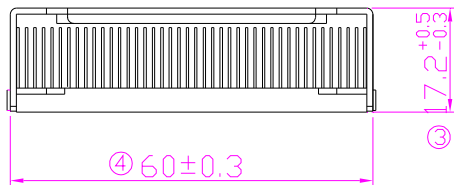
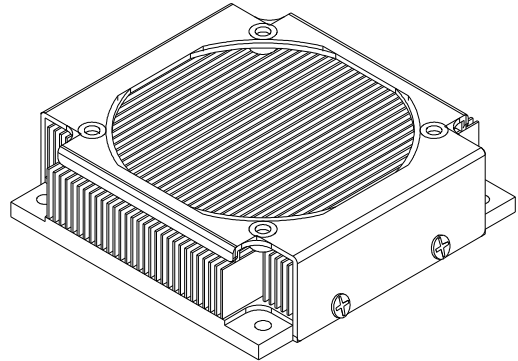
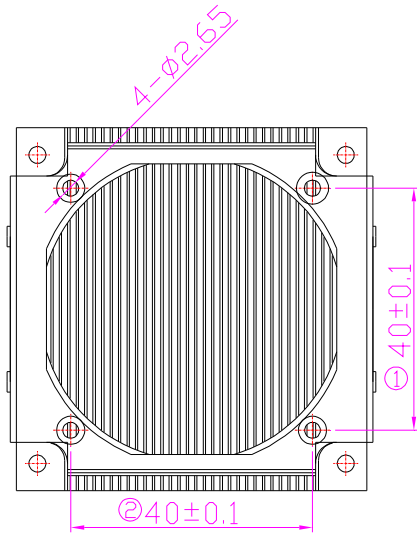
Whole photo





3. Specification & Drawing

Heat Sink Assembly



General Dimension Tolerances (Unit : mm)

0	—	30	± 0.2
31	—	60	± 0.3
61	—	100	± 0.4
101	and	Over	± 0.5
Angles			$\pm 2^\circ$



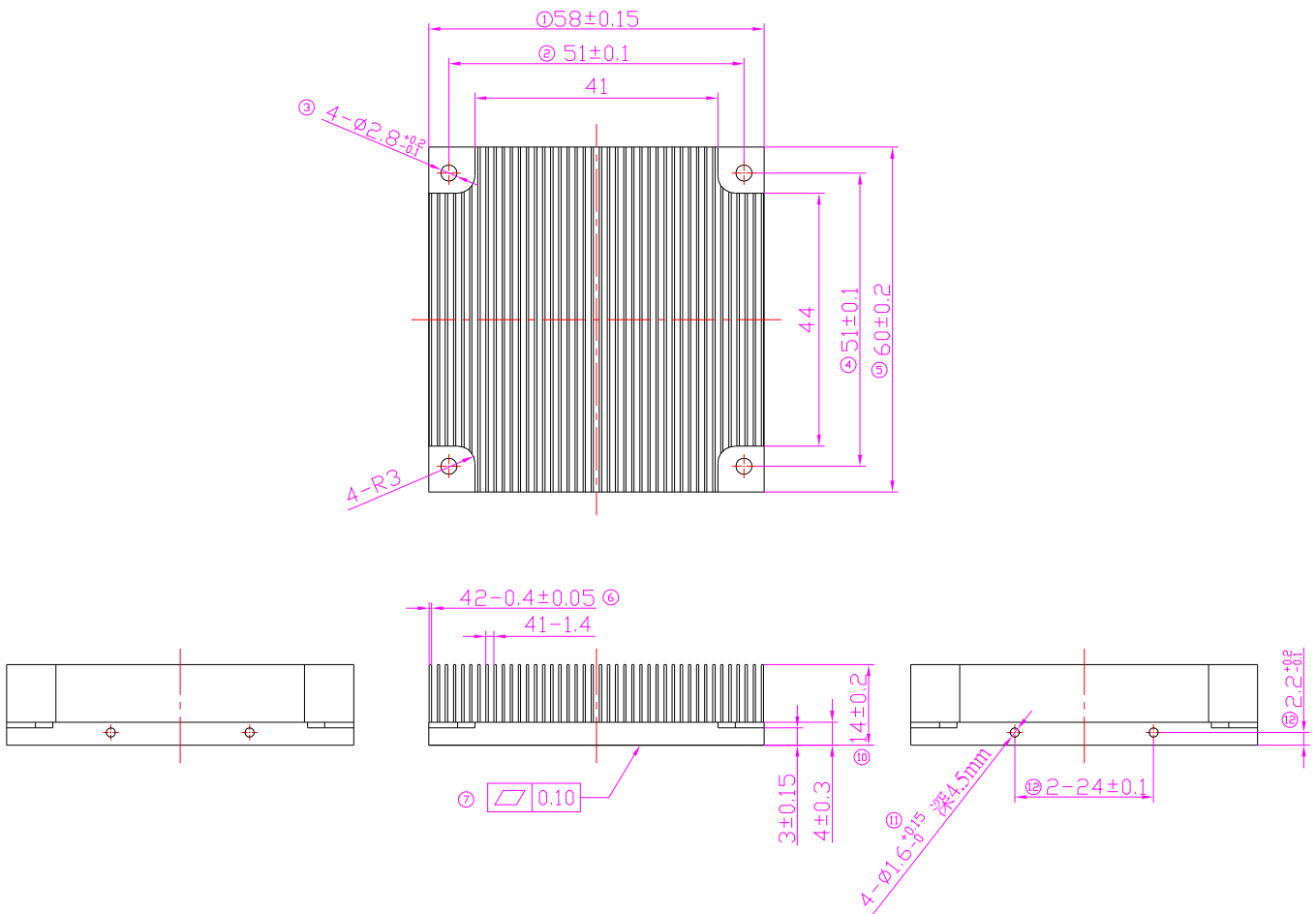
Heat sink

Material :Cooper Alloy C1100

Finished: Anti-oxidation

Mechanical Characteristics :

Alloy No.	Tensile strength (26-32kgf/mm ²)	Hardness Test (80~100HV)	Elongation
C1100	26329	88	98



0	—	30	± 0.2
31	—	60	± 0.3
61	—	100	± 0.4
101	and	Over	± 0.5
Angles			$\pm 2^\circ$



COVER

Material : Aluminum Alloy 1050

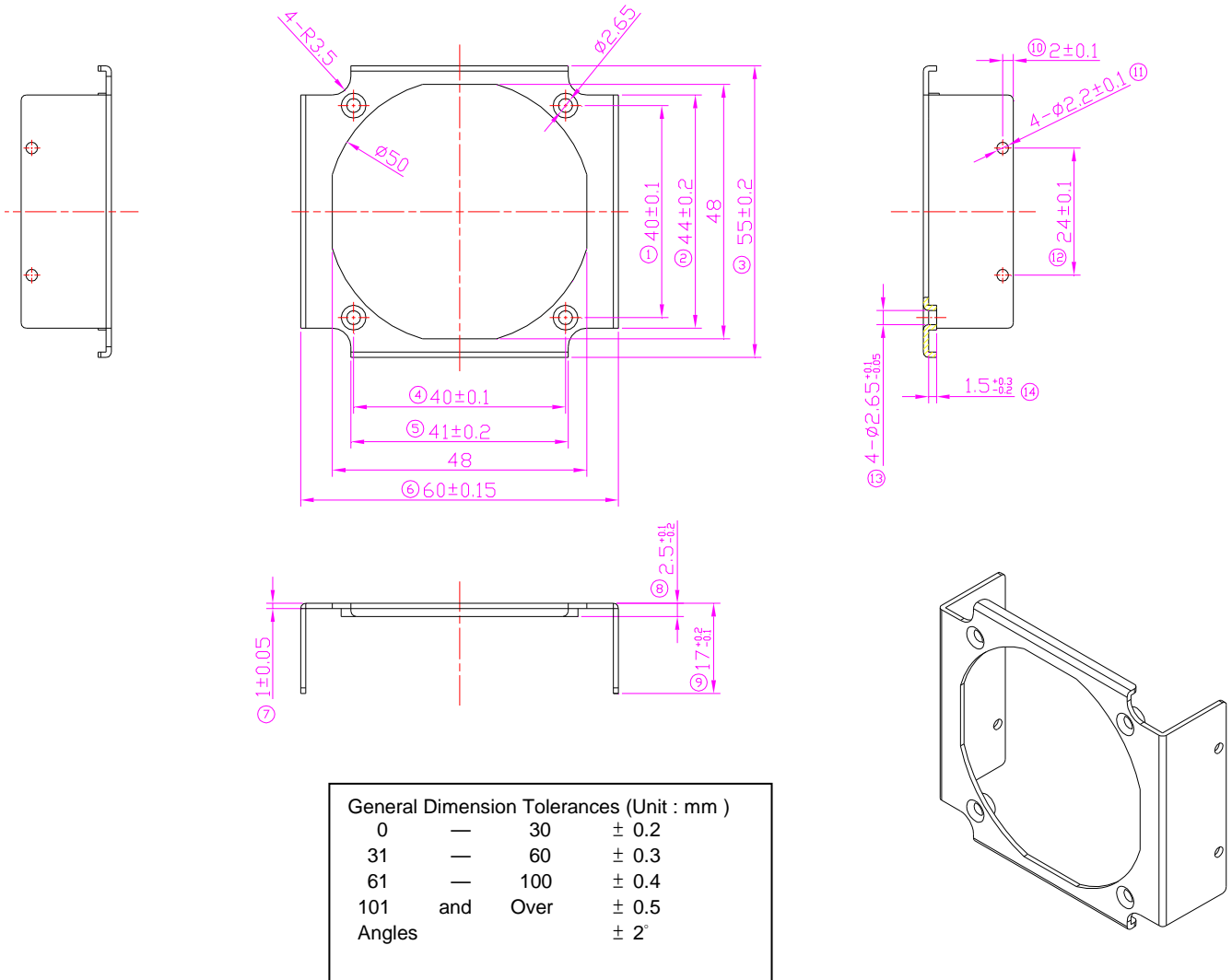
Finished: CLEAR CHROMATE

Mechanical Characteristics :

Alloy No.	Cutting Area Surface	Extension Rate
1050	Over 10.65 kgf/mm ²	7 %

Chemistry Ingredient & Temper Designation :

Value	Si	Fe	Cu	Mn	Cr	Mg	Zn	Ti	AL
SPECIFIED VALUES	0.25	0.4	0.05	0.05		0.05	0.05	0.03	99.5





Back Plate

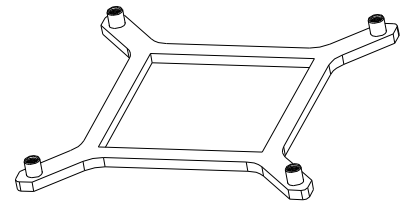
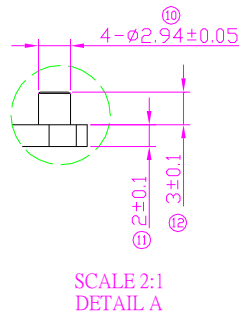
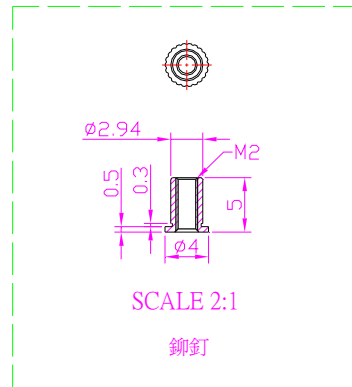
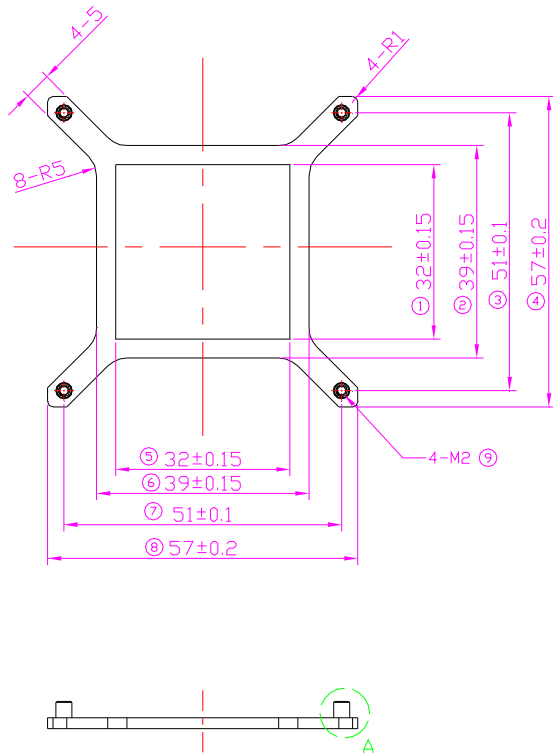
Material : SPCC

Nut Material: SUS302

Finished: Nickel-Plating

Hardness Test: 380~450HV

Thickness : 2mm



General Dimension Tolerances (Unit : mm)			
0	—	30	± 0.2
31	—	60	± 0.3
61	—	100	± 0.4
101	and	Over	± 0.5
Angles			± 2°



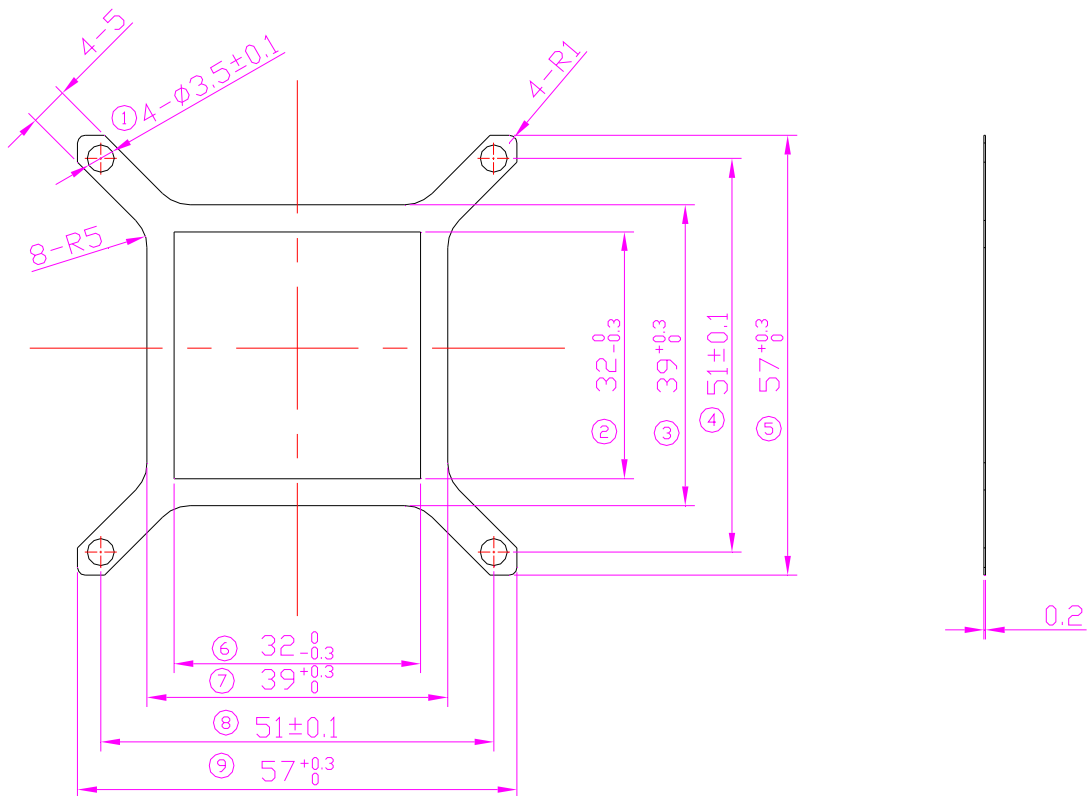
Mylar

Material : PET Mylar (Thickness: 0.18mm)

Color : DARK GREEN

Adhesive : 3M 468 (one side : 0.13mm, Total: 0.26mm)

Total thickness : 0.2 mm



General Dimension Tolerances (Unit : mm)

0	—	30	± 0.2
31	—	60	± 0.3
61	—	100	± 0.4
101	and	Over	± 0.5
Angles			$\pm 2^\circ$



Fan Screw

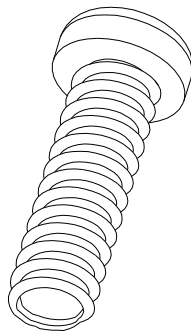
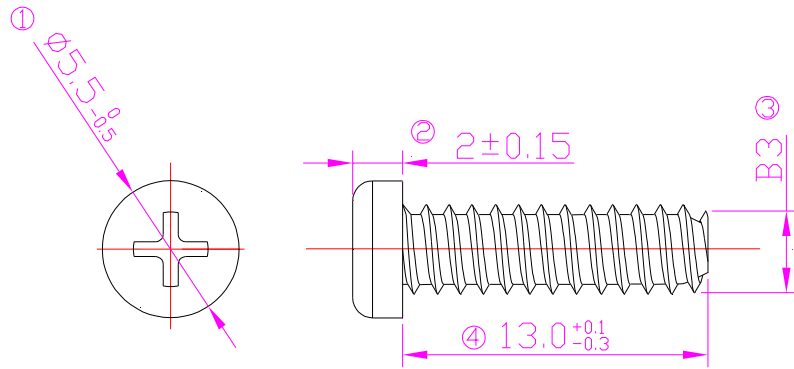
Material : AISI 1018

Finished: Zinc Black Plating

Product : ROD CARBON STEEL

Chemistry Ingredient Characteristics : (%)

Value	C	KN	P	S	SI	Mg
SPECIFIED VALUES	0.16	0.78	0.24	0.8	0.2	0.5147





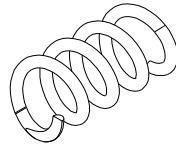
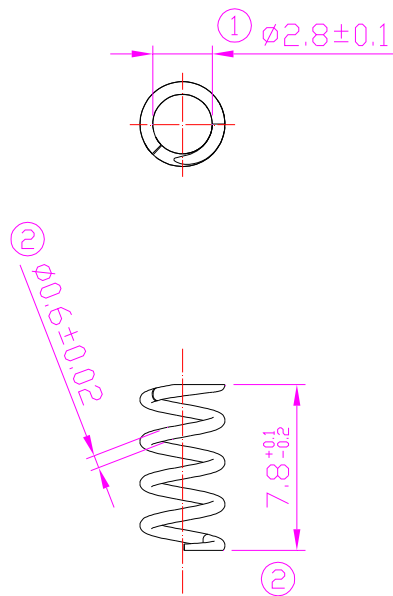
Spring

Material: SWP-B

Finished : Nickel-Plated

Mechanical Characteristics :

Value	C	Si	Mn	P	S	Cu
SPECIFIED VALUES	0.81	0.18	0.50	0.011	0.004	0.01



Note:

1. Material: SWPB
2. Dia. Of wire : 0.6 mm, left direction of revolving
3. Surface treatment : Nickel-plating (Thickness 3~5um)
4. Effective circles: 3.5
5. Total circles: 5
6. Free length : $7.8^{+0.1}_{-0.2}$
7. K value: 0.94 kgf/ mm
8. Net weight : 0.5g
9. Critical inspection dim. marked as $\textcircled{1} \sim \textcircled{X}$



Screw

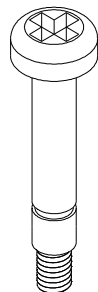
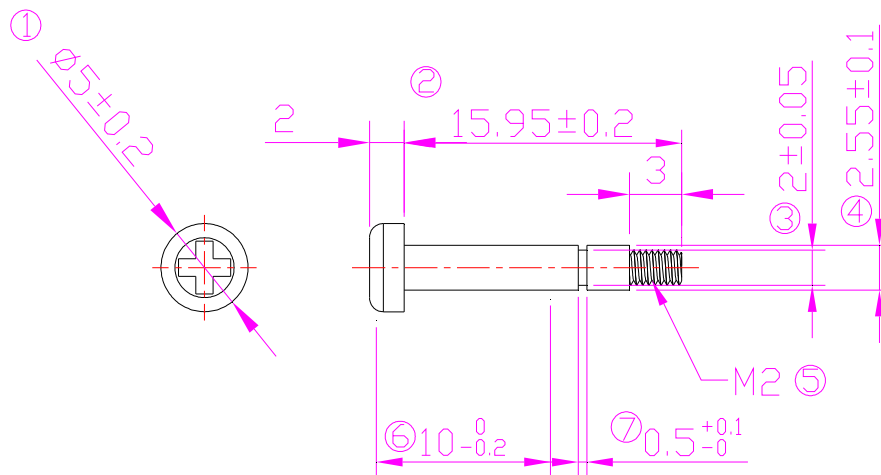
Material : AISI 1018

Finished: Nickel Plating

Product : ROD CARBON STEEL

Chemistry Ingredient Characteristics : (%)

Value	C	KN	P	S	SI	Mg
SPECIFIED VALUES	0.16	0.78	0.24	0.8	0.2	0.5147



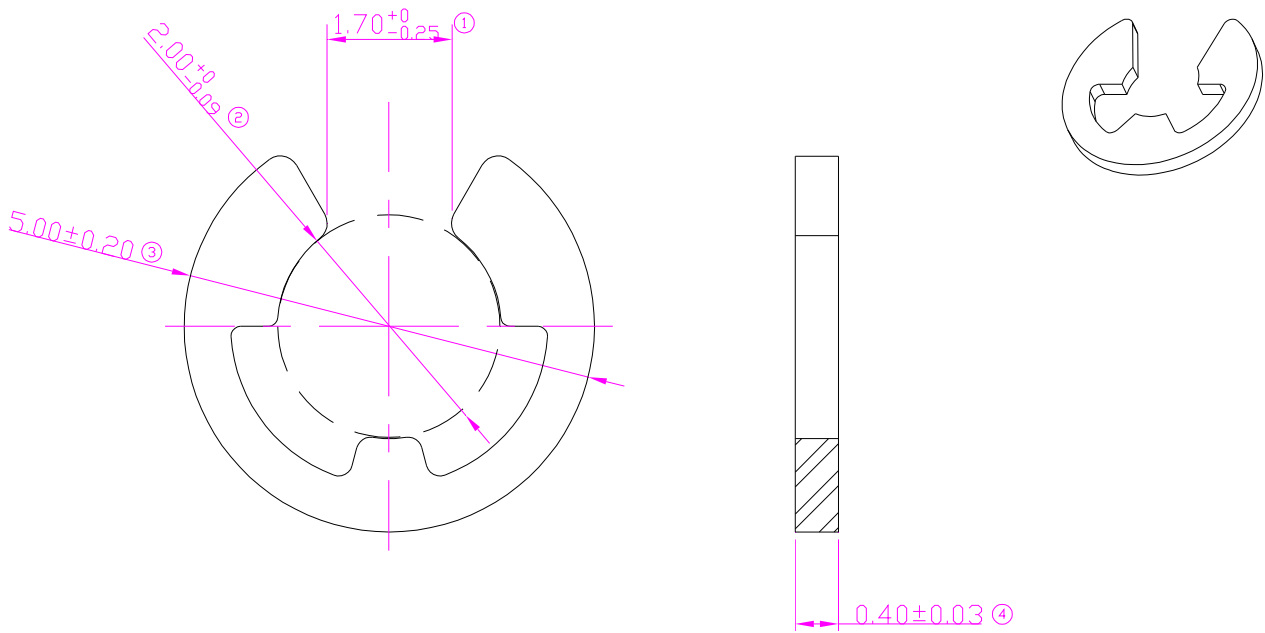
General Dimension Tolerances (Unit : mm)			
0	—	30	± 0.2
31	—	60	± 0.3
61	—	100	± 0.4
101	and	Over	± 0.5
Angles			± 2°



E-ring

Material : SK7

Surface treatment: Nickel plating



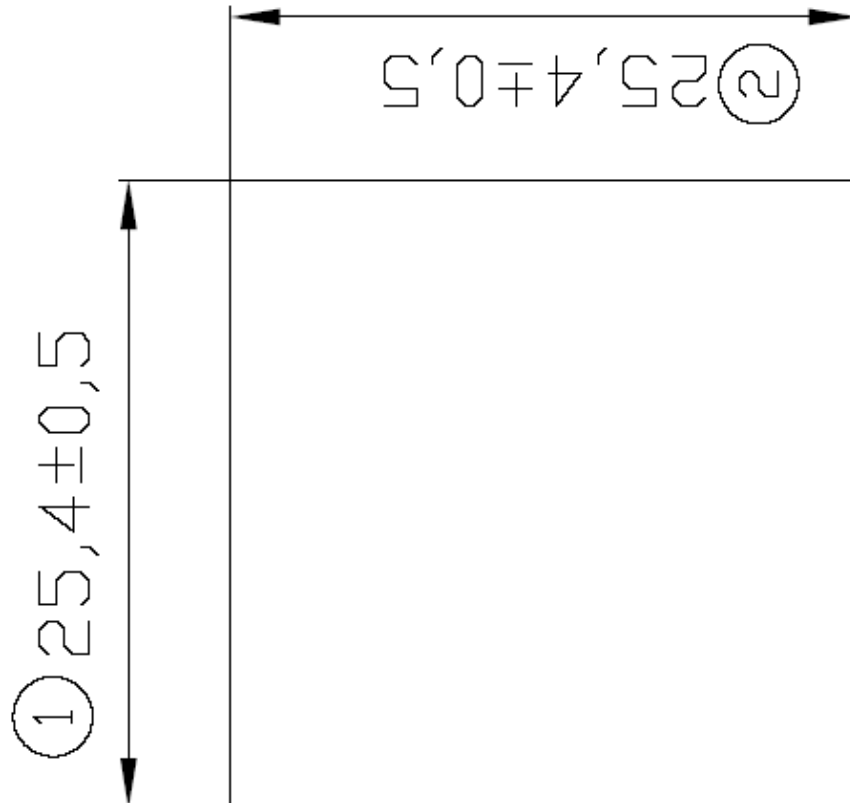


PAD

Material :TC-11

Color : GRAY

Thickness: 0.13mm





Fan label

Material: Paper

20 mm



Fan

ITEMS	DESCRIPTION
Rated Voltage	D.C.12.0V
Operating voltage	D.C.5.0V~13.8V
Start up voltage	D.C.5.0V (At 25°C Power ON/OFF)
Pulse Power operating	If duty cycle is 50% ,the frequency should \geq 10Hz
Current	0.12A
Power	1.44W
Speed	5,300 \pm 10%/rpm (At 25°C, To record speed after fan running normal, This time about 3~5minutes)
Air flow (at zero static pressure)	10.84CFM(0.301m ³ /min) Min:9.58CFM (0.271m ³ /min)
Air pressure (at zero air flow)	3.25mmH ₂ O (0.128inchH ₂ O) Min:2.63mmH ₂ O (0.104inchH ₂ O)
Acoustical noise	32.8dB(A) Max:35.8dB(A)
Life expectancy	70,000hrs continuous at 40°C, 15~85% relative humidity
Insulation resistance	Min 10M Ω between terminal stator and lead wire (+) at 500VDC
Dielectric strength	5mA max at 600VAC 50Hz 1 second between frame and (+) terminal
Operating temperature and humidity	-40 to 85°C, 5% to 90% RH
Storage temperature and humidity	-40 to 85°C, 5% to 95% RH

Output of rotary Signal:

- Output method- open collector method
- Circuit Specifications:
 - V_{cc} = 15V MAX
 - V_{ce(sat)} = 1.0V MAX
 - I_c = 5mA MAX
 - R = V_{cc}/I_c

2-2. Frequency Generator Waveform:

One Fan Rotation
 N: Revolution per minute (rpm).
 T1-T4 = $\frac{60}{N}$ (sec).
 Pulse width duty = T1-(T1+T2) = 50 \pm 5%

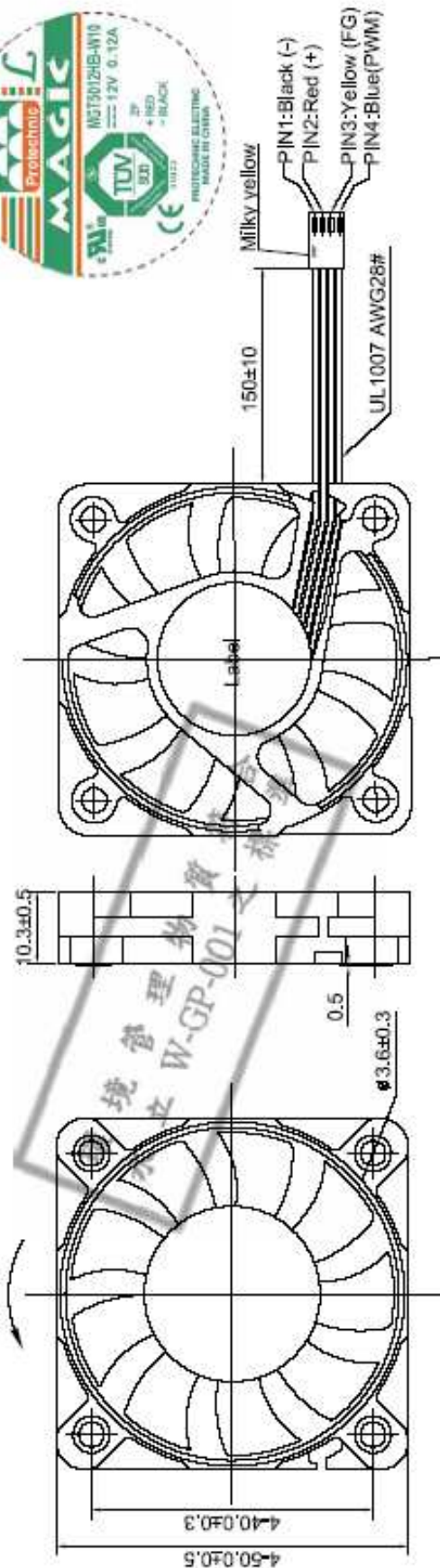
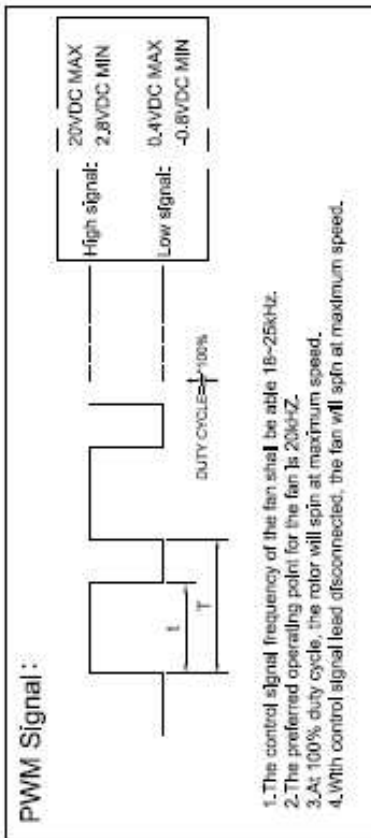
Noise Test: (ISO10302)

- Measurement within anechoic chamber under free air condition
- Microphone is placed at a distance of 1m on the axis of air intake side
- Chamber background noise max 6.7dB(A)
- Using microphone: G.R.A.S 1/2 inch measure system 40AE+26CA or 1 inch low measure system 40HF
- Test system: National Instrument NI-4474 data acquisition system
- Acoustical noise at rated speed

PQ curve: (Rated Voltage or rated voltage at 100%PWM if applied)



ITEMS	DESCRIPTION	REMARKS
Frame	PBT(30%GF) UL: 94V-0	
Impeller	PBT(30%GF) UL: 94V-0	
Weight	19±5g	
Bearing	Two ball bearings	
Housing	WST P4-I25004K	or equivalence
Terminal	WST I25004PS-2	or equivalence
Tube	N/A	
Label	Ø23mm Material: PET	Protechnic
Speed V/s duty cycle (12V)	Duty cycle(%)	100%
	Speed (R.P.M)	5,300±10%
PWM test method: From 100% duty cycle to 0% duty cycle(At 25°C, rated voltage)		



DC BRUSHLESS FAN

Unit

mm

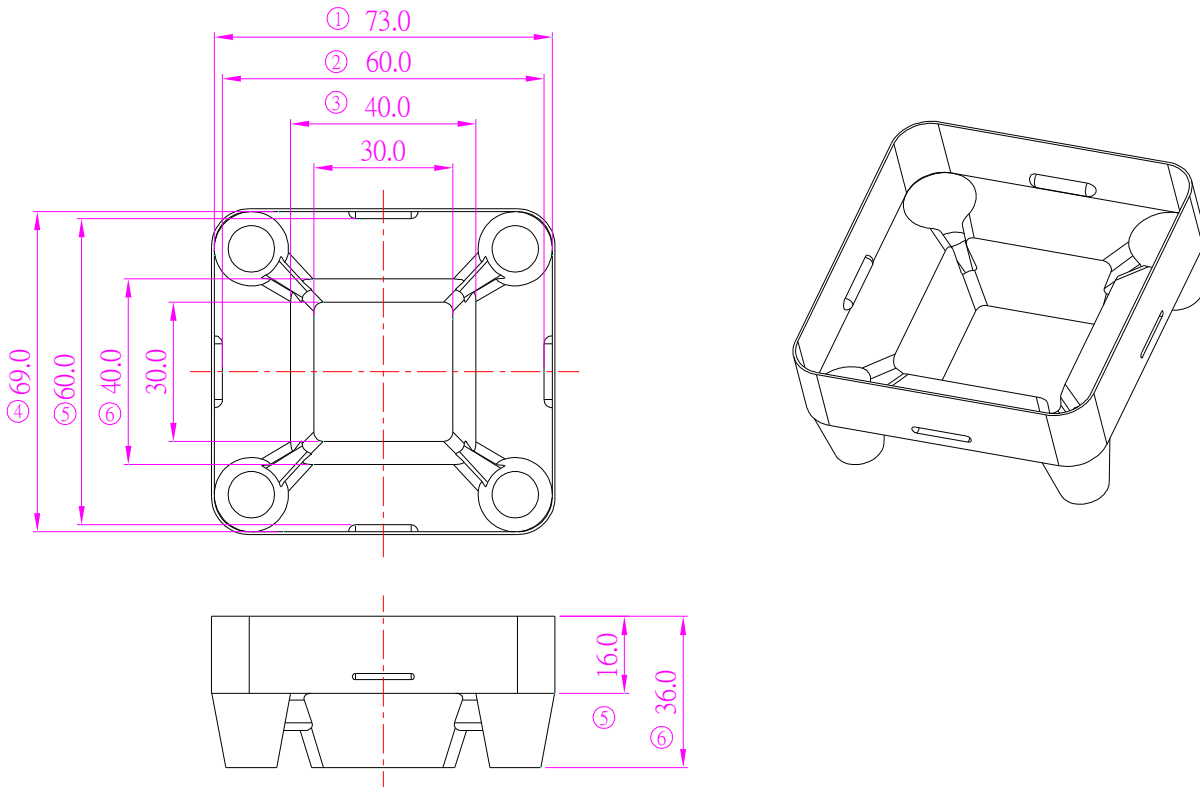
PROTECHNIC ELECTRIC CO.,LTD.



Tray

Material: PET (Thickness: 0.6 mm)

Mechanical Characteristics:



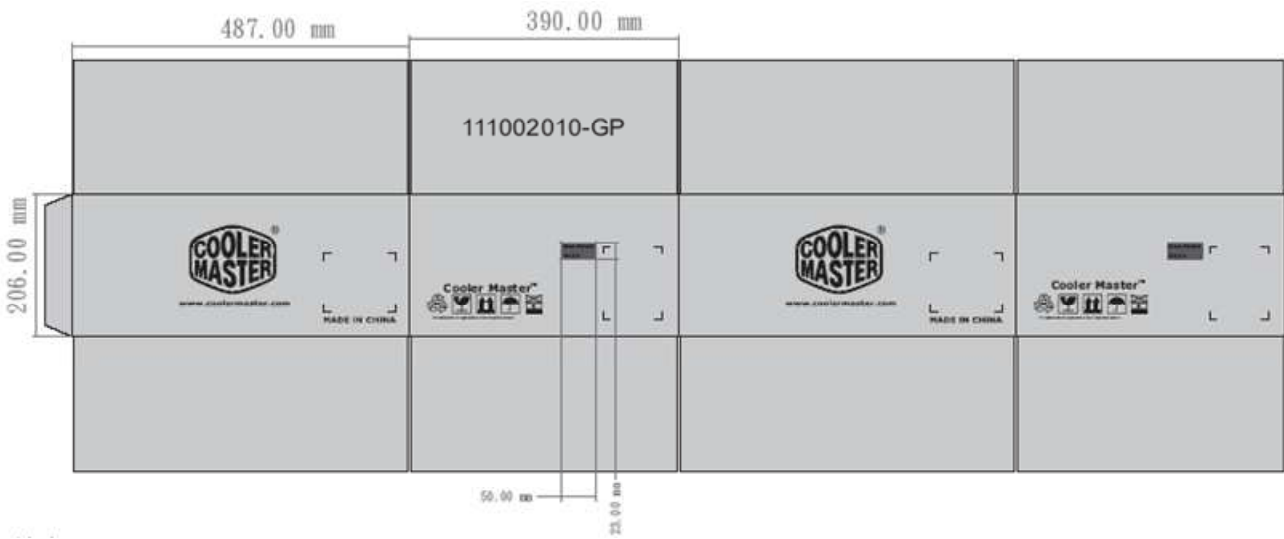


Carton

Material: BC (Thickness: 6~7 mm)

Size: 455*330*159mm

Mechanical Characteristics:





4. Package



Gift box in carton
30pcs in one layer
Total 3 layers in one carton



Carton size : 455*330*159
Gross weight : 15.0Kg



5. CE/UL



SPORTON LAB.



Certificate No: EC621413

CERTIFICATE

● **EQUIPMENT :** Cooler
MODEL NO. : XXXXXXXXXXXXXXXX (X=0-9, a-z, blank or "-")
APPLICANT : Cooler Master Co., Ltd.
 9F, No. 786, Chung-Cheng Rd., Chung-Ho City,
 Taipei Hsien, 235 Taiwan, R.O.C.



I HEREBY CERTIFY THAT:

THE MEASUREMENTS SHOWN IN THIS TEST REPORT WERE MADE IN ACCORDANCE WITH THE PROCEDURES GIVEN IN EUROPEAN COUNCIL DIRECTIVE 89/336/EEC. THE EQUIPMENT WAS PASSED THE TEST PERFORMED ACCORDING TO
European Standard EN 55022:1998/A1:2000/A2:2003 Class B, EN 61000-3-2:2000, EN 61000-3-3:1995/A1:2001 and EN 55024:1998/A1:2001/A2:2003 (IEC 61000-4-2:1995/A2:2000, IEC 61000-4-3:1995/A2:2002, IEC 61000-4-4:1995/A2:2001, IEC 61000-4-5:1995/A1:2000, IEC 61000-4-6:1996/A1:2000, IEC 61000-4-8:1993/A1:2000, IEC 61000-4-11:1994/A1:2000).
 THE TEST WAS CARRIED OUT ON Feb. 16, 2006 AT SPORTON INTERNATIONAL INC. LAB.

Jones Chan Feb. 24. 2006
 Jones Chan
 Supervisor



6. UL



**UL International, L.L.C.
Taiwan Branch**

美商優力安全認證有限公司台灣分公司

UL International, L.L.C., Taiwan Branch
台北市 112 北投區大業路 260 號 1 樓
1st Fl 260 Da-Yeh Road Beitou Taipei City Taiwan 112
電話: 886-2-2896-7790
傳真: 886-2-2891-7644
<http://www.ul.com.tw>

NOTICE OF AUTHORIZATION TO APPLY THE UL MARK

May 12, 2006

MS. Juyu Chen
Cooler Master Co Ltd
9th FL 786 Chung-Cheng Rd
Chung-Ho, Taipei Hsien 235
Taiwan

Fax number: 02-32340051
E-mail: juyu-chen@coolermaster.com.tw

Reference: File E189887 Project 06CA23884 P.O. Number U621412
Product: UL/CUL Investigation For COOLER FAN, employing the revise model designation A1A2-A3A4A5-A6A7A8A9, B1B2-B3B4B5-B6B7B8B9, C1C2-C3C4C5-C6C7C8C9 to A1A2-A3A4A5-A6A7A8A9-A10A11, B1B2-B3B4B5-B6B7B8B9-B10B11, C1C2-C3C4C5-C6C7C8C9-C10C11; and alternate model designation X1X2-X3X4X5-X6X7X8X9-X10X11.

Dear Ms. Chen,

Any information and documentation provided to you involving UL Mark services are provided on behalf of Underwriters Laboratories Inc.

UL's investigation of your product has been completed under the above project number and the subject product was determined to comply with the applicable requirements.

This letter temporarily supplements the UL Follow-Up Services Procedure and serves as authorization to apply the UL Recognized Marking and/or Recognized Component Mark only at the factory under UL's Follow-Up Service Program to the subject product, which is constructed as described below:

Similar to products covered in the UL Follow-Up Services Procedure, File E189887, Volume X1, Report Reference No, E189887-A1-UL-1, except for employing the revise model designation A1A2-A3A4A5-A6A7A8A9, B1B2-B3B4B5-B6B7B8B9, C1C2-C3C4C5-C6C7C8C9 to A1A2-A3A4A5-A6A7A8A9-A10A11, B1B2-B3B4B5-B6B7B8B9-B10B11, C1C2-C3C4C5-C6C7C8C9-C10C11; and alternate model designation X1X2-X3X4X5-X6X7X8X9-X10X11

To provide the manufacturer with the intended authorization to use the UL Mark, the addressee must send a copy of this Notice and all attached material to each manufacturing location as currently authorized in File E189887, Volume X1.

This authorization is effective from the date of this Notice and only for products at the indicated manufacturing locations. Records in the Follow-Up Services Procedure covering the product are now being prepared and will be sent to the indicated manufacturing locations in the near future. Please note that Follow-Up Services Procedures are sent to the manufacturers only unless the Applicant specifically requests this document.

Products that bear the UL Mark shall be identical to those that were evaluated by UL and found to comply with UL's requirements. If changes in construction are discovered, appropriate action will be taken for products not in conformance with UL's requirements and continued use of the UL Mark may be withdrawn.

Sincerely,

Jay Hsu

Jay Hsu
Project Engineer
UL International L.L.C., Taiwan Branch
Tel: +886-2-28967790
Fax: +886-2-28907451
E-mail: Jay.Hsu@tw.ul.com

Reviewed by:

Wisely Lin

Wisely Lin
Associate Project Engineer
UL International L.L.C., Taiwan Branch
E-mail: kenny.lin@tw.ul.com

An independent organization working for a safer world with integrity, precision and knowledge.

