

PRODUCT SPECIFICATION

50F RoHS SERIES

ISSUED DATE: REV. NO.:

DOC. NO.: PAGE: 2019/10/31 A06 HLD-PSI-8068

Page 1 of 9

制定 PREPARED BY **研发部** 2019-10-31 审核 CHECKED BY

批准 APPROVED BY

2019-10-31

1 适用范围/ SCOPE

李湖明人

本规格书适用于公司按照 IEC 60127 标准生产的 50F RoHS 系列 HOLLY® 商标的小型保险丝管。

This specification defines the technical requirements of miniature fuse type 50F RoHS series with H0LLY® brand, which are according to IEC 60127.

产品部件号为:
Construction of part no.: tv

_<u>型号</u> type

<u>额定电流</u> rated current

020

<u>额定电压</u> rated voltage

例如/ Example: 50F

* 额定电压/ Rated voltage: H - 250V

产品部件号/ PART NUMBER

产品部件号	型号规格	产品部件号	型号规格				
PART NUM BER	MODEL DETAIL	PART NUMBER	MODEL DETAIL				
50F-0050H	50F F50mAL 250V	50F-020H	50F F2AL 250V				
50F-0100H	50F F100mAL 250V	50F025H	50F F2.5AL 250V				
50F-0125H	50F F125mAL 250V	50F-032H	50F F3.15AL 250V				
50F-0160H	50F F160mAL 250V	50F-040H	50F F4AL 250V				
50F-0200H	50F F200mAL 250V	50F-050H	50F F5AL 250V				
50F-0250H	50F F250mAL 250V	50F-063H	50F F6.3AL 250V				
50F-0315H	50F F315mAL 250V	50F-080H	50F F8AL 250V				
50F-0400H	50F F400mAL 250V	50F-100H	50F F10AL 250V				
50F-0500H	50F F500mAL 250V	50F-120H	50F F12AL 250V				
50F-0630H	50F F630mAL 250V	50F-125H	50F F12.5AL 250V				
50F0800H	50F F800mAL250V	50F-50H	50F F15AL 250V				
50F-010H	50F F1AL 250V	50F-160H	50F F16AL 250V				
50F-013H	50F F1.25AL 250V	50F-200H	50F F20AL 250V				
50F-016H	50F F1.6AL 250V	1	/				

型号规格: <u>型号</u> 特性符号 额定电流 <u>分断能力符号</u> 额定电压 MODEL DETAIL: <u>Type</u> <u>Characteristic Symbol</u> <u>Rated Current</u> <u>Breaking Capacity Symbol</u> <u>Rated Voltage</u> 例如/ Example: <u>50F</u> <u>F</u> <u>2 A</u> <u>L</u> <u>250V</u>

2 相关标准/ APPLICABLE STANDARDS

2.1 50F RoHS 系列产品适用的相关标准是 IEC 60127 和 GB 9364。 Applicable standards for 50F RoHS series are IEC 60127 and GB 9364.

2.2 认证情况/ APPROVED DETAILS

额定电压	SEN	ΙΚΟ		VDE		BSI		IMQ				
RATED VOLTAGE	认证范围 APPROVED RANGE		证号码 RT. NO.	认证范围 APPROV RANGE	ΈD	认证号码 CERT. NO.	认证范围 APPROVED RANGE		证号码 RT. NO.	APPF	E范围 ROVED NGE	认证号码 CERT. NO.
0501	200mA~6.3A	17	716097	200mA~1	I0A	40014477	000 4 0 0 4	140.4	KM 52652		A 0 0 A	DA 54474
250V	8A~16A	17	716099	12.5A, 1	6A	40031763	200mA~6.3A	KIVI			200mA~6.3A	E1474
额定电压	UR/0	CUR		CSA			CCC					
RATED VOLTAGE	认证范围 APPROVED RANGE		证号码 RT. NO.			认证号码 CERT. NO.	认证范围 APPROVED RANGE.		认证号码 CERT. NO			
250V	200mA~16A	Ε´	156471	200mA~6.3A LR101178		200mA~6.3A		2005010207153272				
额定电压		K	С	CC			C PSE					
RATED VOLTAGE	认证范围 APPROVED RANGE)	认证 CERT	·亏的 ADDPOVE		认证范围 APPROVED RANGE	认证号码 CERT. NO.		认证范围 APPROVED RANGE		•	人证号码 ERT. NO.
250V	160mA~1A SU05008 1.25A~6.3A SU05008 8A,10A SU05008		8-3010 D		CQC10012046370		1A~5	A	JET 248	9-31003-2004		
230 V				,				0.0	5.1A~1	5A	JET 248	39-31003-2005

^{*}特性符号/ Characteristic Symbol: F - 速断型/ Quick-Acting, 分断能力符号/ Breaking Capacity Symbol: L – 低分断能力/ Low Breaking Capacity.



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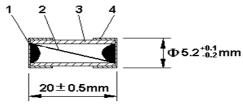
Page 2 of 9

3 公司地址/ADDRESS

中国福建省厦门市翔安区舫山东二路 829 号 829 Fangshan East 2nd Road, Xiang'an, Xiamen, China.

4 构造图/ CONSTRUCTION FIG. & DIMENSION

4.1 DIMENSION (Unit: mm)



编号 No.	品名 PART	材料名 MATERIAL MODEL	备注 NOTE
1	焊锡 Solder	无铅焊锡/ Pb Free	1
2	可熔体/ Element	金属丝/ Metal Wire	1
3	管体/ Tube	玻璃管/ Glass Tube	1
4	铜帽/ Cap	黄铜/ Brass	镀镍/ Nickel Plated

4.2 玻璃管/GLASS TUBE

玻璃管无破裂、缺损或污染等现象,且须透明易辨其内部的可熔体。

Tube shall be transparent as to be easily distinguished fusing element with naked eyes and the tube shall have no defects such as crack, injury and contamination.

4.3 铜帽/ CAP

铜帽应焊接牢固,以保证在未损坏熔断体时,铜帽不能被卸脱。样品在 15 -35 水中浸 24 小时取出后,在每个端帽上均匀施加拉力至 10N,保持 1 分钟,铜帽不应脱落。

Cap should be firmly attached so that it is not possible to remove them without damaging the fuse itself. The samples are immersed in water for 24 hours at a temperature between 15 and 35. After remove from the water, an axial pull steadily increasing to 10N is applied to each cap for 1 minute.

4.4 焊点/ SOLDERING JOINT

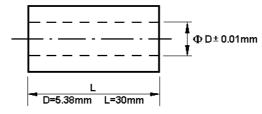
焊接铜帽端时,管内和铜帽外表面不能有残留的助焊剂、焊锡等异物。

Soldering joint in end cap shall not be melted during normal operation and shall not have solder chips on tube, element in view and outer surface of caps.

4.5 准直度/ALIGNMENT

保险丝管的全长必须能以保险丝自身的重量全部通过准直度卡规。其具体图形如下:

The entire length of the fuse shall pass through the gauge by the fuses own weight. The construction of gauge is as follows.



5 电气特性/ ELECTRICAL PERFORMANCES

5.1 电压降/ VOLTAGE DROP

熔断体在额定电流条件下,其两端的电压降不应超过下表规定的最大值。

The voltage drop across the fuse-link at their rated current shall not exceed the maximum values is in follows.



PRODUCT SPECIFICATION

50F RoHS SERIES

ISSUED DATE: REV. NO.: DOC. NO.:

PAGE:

2019/10/31 A06 HLD-PSI-8068 Page 3 of 9

F			
额定电流	额定电压	最大电压降	最大维持功耗
Rated Current	Rated Voltage	Maximum Voltage Drop	Maximum Sustained Power
(A)	(V)	(mV)	Dissipation (W)
50mA	,	7,000	1 , ,
100mA		3,500	
125mA		2,000	
160mA		2,000	
200mA		1,700	
250mA		1,400	
315mA		1,300	
400mA		1,200	1.6
500mA		1,000	1.0
630mA		650	
800mA		240	
1A		200	
1.25A	250	200	
1.6A		190	
2A		170	
2.5A		170	
3.15A		150	
4A		130	2.5
5A		130	2.0
6.3A		130	
8A		130	4
10A			
12A 12.5A			
15A		100	6
16A		100	•
20A			

5.2 预飞弧时间电流-特性/PRE-ARCING TIME-CURRENT CHARACTERISTICS

1X 03/40:31 1 B/10 13/12 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 1 1 2 1						
Rated Current	2.1I _n	2.75I _n		4	10I _n	
	Max.	Min.	Max.	Min.	Max.	Max.
32mA-100mA	30min.	10ms	500ms	3ms	100ms	20ms
>100mA-6.3A	30min.	50ms	2sec.	10ms	300ms	20ms
>6.3A-10A	30min.	50ms	2sec.	10ms	400ms	40ms
>10A~16A	30min.	50ms	3sec.	10ms	400ms	50ms
>16A	30min.	100ms	6sec.	20ms	600ms	60ms

5.3 分断能力/ IBREAKING CAPACITY

额定分断能力为 35A 或 10I_n(A.C.), 取其中较大者,及额定电流大于 10A 的额定分断能力均为 100A(A.C.)。 Rated breaking capacity is 35A or 10I_n whichever is greater, and 100A(I_n>10A), tested with A.C..

5.4 耐久性试验/ ENDURANCE TEST

耐久性试验过程。/ The process of endurance test is as follows.

A 对熔断体通过 1.2 倍的额定电流 1 小时,然后切断电流 15 分钟,重复此循环 100 次。/ A current $1.2I_n$ is passed through the fuse-link for a period of 1hour. The current is then switched off for a period of 15 minutes. The cycle is repeated 100 times.

B 然后对熔断体通以 1.5 倍额定电流 1 小时(I_n 6.3A)或 0.5 小时(I_n > 6.3A)。/ A current 1.5 I_n is then passed through the fuse-link for 1hour(I_n 6.3A) or 0.5hour(I_n > 6.3A).

- C 测量熔断体两端的电压降。试验后 ,熔断体两端的电压降的增大量不大于试验前测得值的 10%。/ Finally, the voltage drop across the fuse-link is measured. The voltage drop across the fuse-link after the test shall not have increased by more than 10% of the Value measured before the test.
- D 试验后,标记仍应清晰可辨,而且诸如端帽上的焊点不应出现任何明显的劣变。/ After the test, the marking shall still be legible and soldered joints on end caps, for example, shall not show and appreciable deterioration.



PRODUCT SPECIFICATION

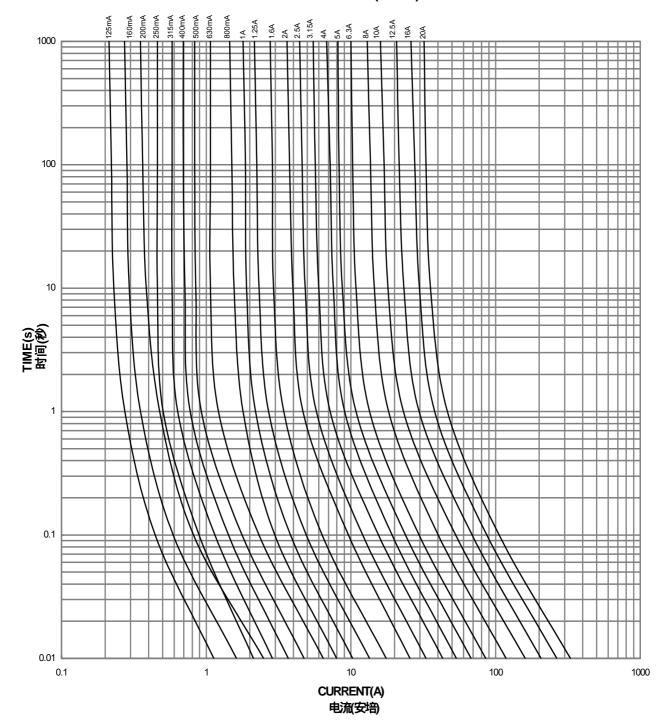
50F RoHS SERIES

ISSUED DATE: REV. NO.: DOC. NO.: PAGE:

2019/10/31 A06 HLD-PSI-8068 Page 4 of 9

5.5 平均 I-T 特性曲线图(仅供参考)/ THE AVERAGE I-T CHARACTERISTICS CURVE(FOR REFERENCE ONLY)

50F RoHS Average I-T Characteristics Curve(For Rrference Only) 50F RoHS 平均I-T曲线图(供参考)





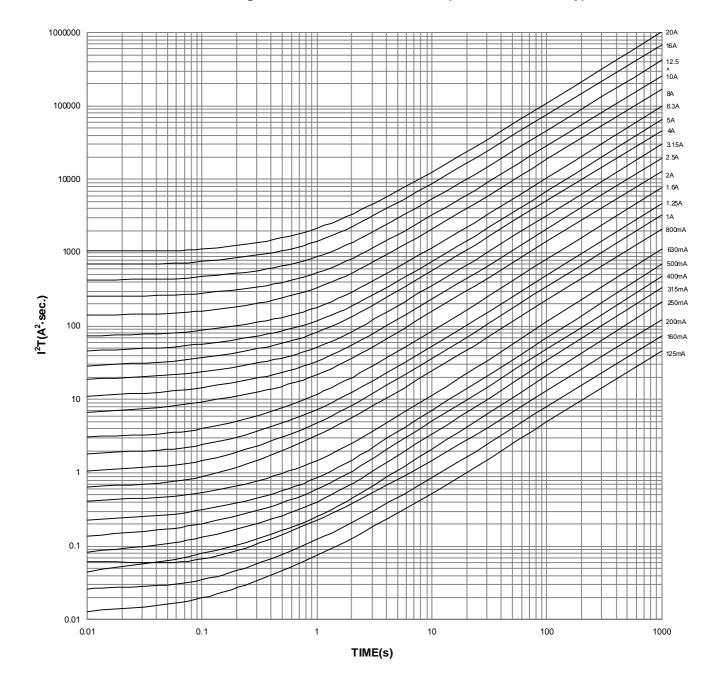
PRODUCT SPECIFICATION

50F RoHS SERIES

ISSUED DATE: REV. NO.: DOC. NO.: PAGE: 2019/10/31 A06 HLD-PSI-8068 Page 5 of 9

5.6 平均 I²T-T 特性曲线图(仅供参考)/ THE AVERAGE I²T-T CHARACTERISTICS CURVE(FOR REFERENCE ONLY)

50F RoHS Average I²T-T Characteristics Curve(For Reference Only)





PRODUCT SPECIFICATION

50F RoHS SERIES

REV. NO.: DOC. NO.:

PAGE:

2019/10/31 A06 HLD-PSI-8068 Page 6 of 9

5.7 电阻测试/ COLD RESISTANCE TEST

环境温度为 25 ± 2 , 测试电流不大于保险丝额定电流的 10%。

Input 10% of fuse rated current to fuse for cold resistance test at surrounding temperature of 25 ± 2 .

6 产品标志/ MARKING

6.1 保险丝上的标志应易于看清。

The relevant markings shall be marked on the caps of the fuse and shall be easily visible.

6.2 每个保险丝应标有下列标记。

The markings for every fuse shall be prescribed as below according to the types.

- 1) 型号名称/ Type: 50F(只有 CCC 认证时不需打 50F 标记/ 50F is not marked on the cap for the fuse which only have CCC approval.)
- 2) 商标/ Trademark: (日)
- 3) 特性符号/ Characteristic Symbol: F
- 4) 额定电流/ Rated Current
- 5) 分断能力符号/ Breaking Capacity Symbol: L
- 6) 额定电压/ Rated Voltage

注:1)、2) 和 3)应标注在保险丝管一端铜帽的侧面。

Note: 1), 2) and 3) should be marked on the one side cap of the fuse.

- 4)、5)、6) 和 7)应标注在保险丝管另一端铜帽的侧面。
- 4), 5), 6) and 7) should be marked on the other side cap of the fuse.

7 包装要求/ PACKING DETAILS

- 7.1 外箱包装方式/ EXTERNAL CARTON PACKING
 - 7.1.1 包装方式 A/ PACKING MODE A
 - 7.1.1.1 参考尺寸:长×宽×高=320×240×165mm。

Reference Dimension: Length \times Width \times Height = 320 \times 240 \times 165mm.

7.1.1.2 包装细节: 200EA/小塑料袋; 25 小塑料袋/大塑料袋; 2 大塑料袋/每箱。

Packing Details: 200EA/ little plastic-bag; 25 little plastic-bags/ big plastic-bag; 2 big plastic-bags/ External Carton.

- 7.1.2 包装方式 B/ PACKING MODE B
 - 7.1.2.1 参考尺寸:长×宽×高=375×245×165mm。

Reference Dimension: Length \times Width \times Height = 375 \times 245 \times 165mm.

7.1.2.2 包装细节: 200EA/小塑料袋; 5 小塑料袋/盒; 10 盒/每箱。

Packing Details: 200EA/ little plastic-bag; 5 little plastic-bags/ box; 10 boxes/ External Carton.

产品的包装应能达到防潮、抗振的作用,以防在运输或贮存过程中产品受潮或损坏。

Packing shall be so carried out that the products will not absorb moisture or be damaged during transportation or storage.

7.2 标签/ LABEL

标签应包括型号、额定电流、额定电压、额定分断电流、商标、安全标志、批量号码、公司名称、RoHS标志、绿色"G"、绿色"e"(仅无铅产品)和"QA"标志。

The label in the smallest package in which the fuses are put shall contain the Type, Rated current, Rated voltage, Interrupting current, Trademark, Safety approval logo, Lot. No., Company name, "RoHS" mark, green "G", green "e" (only Pb free products) and "QA" mark.

例批量号:





PRODUCT SPECIFICATION

50F RoHS SERIES

ISSUED DATE: REV. NO.: DOC. NO.: PAGE:

2019/10/31 A06 HLD-PSI-8068 Page 7 of 9

8 环境参数/ ENVIRONMENT PARAMETERS

- 8.1 工作温度/ Operating Temperature: -55 ~ 125 .
- 8.2 储存温度/ Storage Temperature: -55 ~85 .

9 信赖性试验/ RELIABILITY TEST

面用/Item		试验条件/Test Condition
项目/ Item	试验要求/ Test Requirement	试验条件/ Test Condition
高温试验 High Temperature Test	试验后保险丝管的电阻符合范围;电气特性符合:210% 30 分、150% 1 小时。 After high temperature test, the resistance value of the fuses shall be in range. Electrical Characteristics:210% 30minutes, 150% 1hour.	测试温度:105±2 ,测试时间:1000 小时。 Test Temperature: 105±2 , Test Time: 1000hours.
低温试验 Low Temperature Test	试验后保险丝管的电阻符合范围;电气特性符合:210%30分、150%1 小时。 After low temperature test, the resistance value of the fuses shall be in range. Electrical Characteristics:210%30 minutes, 150%1 hour.	测试温度:-20±2 ,测试时间:1000 小时。 Test Temperature: -20±2 , Test Time: 1000hours.
高湿试验 High Humidity Test	试验后保险丝管的电阻符合范围;电气特性符合:210%30分、150%1 小时。 After high humidity test, the resistance value of the fuses shall be in range. Electrical Characteristics: 210%30minutes, 150%1 hour.	测试温度:40 ± 2 ,测试湿度: 90%~95%,测试时间:96 小时。 Test Temperature: 40 ± 2 , Test Humidity: 90%~95%, Test Time: 96hours.
热冲击试验 Thermal Shock Test	试验后保险丝管的电阻符合范围;电气特性符合:210%30分、150%1 小时。 After thermal shock test, the resistance value of the fuses shall be in range. Electrical Characteristics: 210%30minutes, 150%1 hour.	每个循环:-40 放置 30 分钟后 85 放置 30 分钟,测试 10 循环。 -40 / 30minutes 85 / 30minutes, 10 cycles.
落下、冲击试验 Falling Shock Test	铜帽应固定牢固,以保证在未损坏熔断体时,铜帽不能被卸下。铜帽表面镀层应牢固不易脱落,每个端帽应能经受专用的设备外加的轴向拉力 10N,保持 1 分钟。玻璃管必须无缺陷破裂和缺损。试验后保险丝管的电阻符合范围;电气特性符合:210% 30 分、150% 1 小时。 Cap should be firmly attached so that it is not possible to remove them without damaging the fuse itself. The means of attachment shall be sufficient to withstand an axial pull of 10N applied to each cap for 1 minute. The cap shall be nickel plated firmly. The glass tube shall have no defects such as crack and injury. After falling shock test, the resistance value of the fuses shall be in range. Electrical Characteristics: 210% 30minutes, 150% 1hour.	一箱 5,000 或 10,000 个保险丝管从一 米高自由落下,跌落 20 次。 5,000EA or 10,000EA fuses/ one external carton, Falling Height: 1 meter, Falling Times: 20.



PRODUCT SPECIFICATION

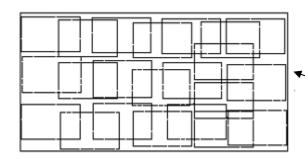
50F RoHS SERIES

ISSUED DATE: REV. NO.:

DOC. NO.: PAGE: 2019/10/31 A06 HLD-PSI-8068 Page 8 of 9

Package A

大塑料袋 Big-Plastic-Bag

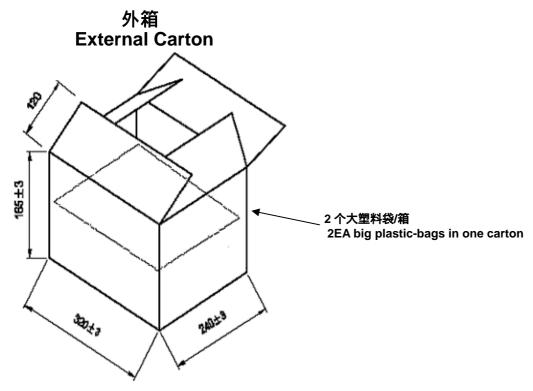


200 个/小塑料袋; 25 小塑料袋/大塑料袋

200EA/ little plastic-bag; 25 little plastic-bags/ big plastic-bag

5,000 个/大塑料袋

5,000EA/ big plastic-bag



1 重量 Weight

一个外箱(装满 10,000 个保险丝管)毛重 9.5 公斤/净重 9 公斤。

One external carton(filled with 10,000EA fuses): G.W. 9.5Kgs/ N.W. 9Kgs.

2 原材料 Material

内盒 Inner box: 纸板 Cardboard.

外箱 External carton: 双层瓦楞纸 Double layer corrugated paper, 厚度 Thickness>6mm.

3 印刷标志 Printing and Marking

外箱需有公司名称、电话、传真、电子邮箱、网址、商标、安全标志、RoHS、BSI ISO9001 和 CQC ISO14001:2004 等标志。

External carton With Company name, Tel, Fax, E-mail, Web site, Trade make, Safety approval logo, RoHS, BSI ISO9001 and CQC ISO14001:2004 registered firm etc..

包装方式 B



PRODUCT SPECIFICATION

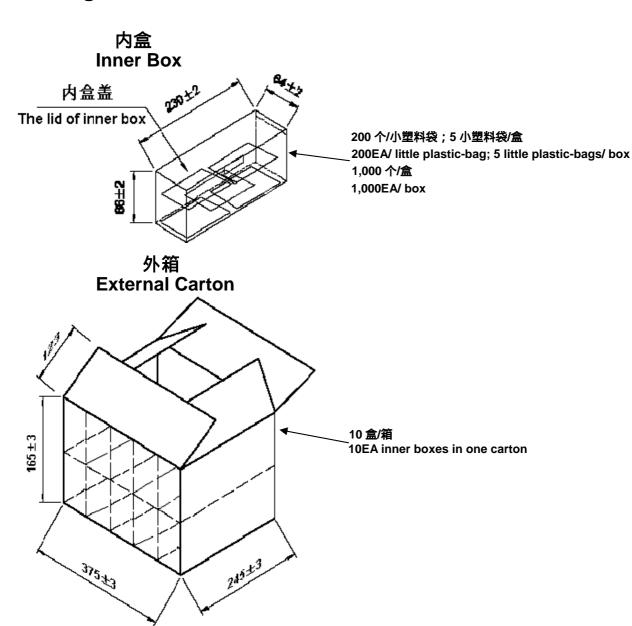
50F RoHS SERIES

REV. NO.: DOC. NO.:

PAGE:

2019/10/31 A06 HLD-PSI-8068 Page 9 of 9

Package B



1 重量 Weight

一个外箱(装满 10,000 个保险丝管)毛重 10 公斤/净重 9 公斤。

One external carton(filled with 10,000EA fuses): G.W. 10Kgs/ N.W. 9Kgs.

2 原材料 Material

内盒 Inner box: 纸板 Cardboard.

外箱 External carton: 双层瓦楞纸 Double layer corrugated paper, 厚度 Thickness>6mm.

3 印刷标志 Printing and Marking

外箱需有公司名称、电话、传真、电子邮箱、网址、商标、安全标志、RoHS、BSI ISO9001 和 CQC ISO14001:2004 等标志。

External carton With Company name, Tel, Fax, E-mail, Web site, Trade make, Safety approval logo, RoHS, BSI ISO9001 and CQC ISO14001:2004 registered firm etc..

单击下面可查看定价,库存,交付和生命周期等信息

>>HOLLY(好利来)