 HOLLYLAND (CHINA) ELECTRONICS TECHNOLOGY CORPORATION LIMITED. HOLLYLAND (XIAMEN) TECHNOLOGY CORPORATION LIMITED	PRODUCT SPECIFICATION	ISSUED DATE:	2020/12/10
	HC10LPV 1500V RoHS SERIES	REV. NO.: DOC. NO.: PAGE :	A08 HLD-PSI-1218 Page 1 of 6

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## 1. 适用范围/ SCOPE

本规格书适用于本公司生产的 HC10LPV RoHS 系列 HOLLY® 商标的圆筒型帽熔断体。本产品适用于太阳能光伏电池组件的保护。

This specification defines the technical requirements of fuse-links having cylindrical contact caps type HC10LPV RoHS series with HOLLY® brand. The fuse series designed for protection photovoltaic battery system.

目录编号为: 尺码 分断范围与使用类别 额定电流 额定电压  
part no: Size Breaking range and rated current rated voltage  
utilization category

例如 For Example: 10L PV 15 U15

\* 额定电压 Rated voltage: U15 - 1500V DC

产品部件号 PART NUMBER

产品型号 Type	目录编号 Part No.	订购编号 Order No.	额定电流 Rated Current	额定电压 Rated Voltage	电阻值 Resistance (Milli-Ohm)	最大功耗 Max Power(w)	I <sup>2</sup> T 值 I <sup>2</sup> t (A <sup>2</sup> Sec)	
							Pre-arcing	Total at 1500V
HC10LPV	10LPV15U15	TUV 10LPV15U15	15A	1500V DC	15.5	6	89.5	1500
		UL 10LPV15U15						
		TUV/UL 10LPV15U15						
	10LPV20U15	TUV 10LPV20U15	20A	1500V DC	8.7	6	124	1810
	10LPV25U15	10LPV25U15	25A	1500V DC	5.9	6.2	1072	2720
	10LPV30U15	10LPV30U15	30A	1500V DC	4.4	7.2	1906	4837
	10LPV32U15	10LPV32U15	32A	1500V DC	3.9	7.5	2412	6121
	10LPV35U15	10LPV35U15	35A	1500V DC	3.5	7.8	3183	8077


## 2. 相关标准及认证情况 APPLICABLE STANDARDS & APPROVED DETAILS

2.1 HC10LPV RoHS 系列产品适用的相关标准是 UL248-1, UL248-19。

Applicable standards for HC10LPV RoHS series are UL248-1, UL248-19。

2.2 认证情况 APPROVED DETAILS

产品型号 Type	额定电压 Rated Voltage	认证范围 Approved Range	cULus	TUV	备注 Remark
			证书号码 REPORT No.	证书号码 REPORT No.	
HC10LPV	1500V DC	1A~15A	E345479	/	/
		5A-20A	/	T50443216 01	/
		25A-35A	/	T50443216 0002	/

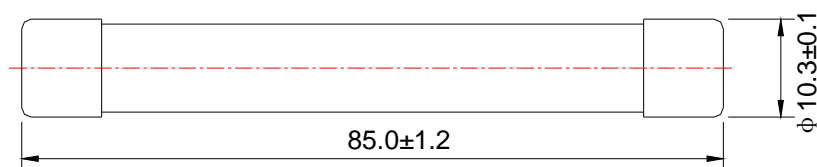
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### 3. 公司地址 ADDRESS

中国福建省厦门市翔安区舩山东二路 829 号  
829 Fangshan East 2nd Road, Xiang' an, Xiamen 361101, China

### 4. 构造图 CONSTRUCTION FIG. & DIMENSION

Type: HC10LPV  
Part No.: 10LPV (amp rating) U15  
1500V DC 5-35A



#### 4.1 原材料规格 MATERIAL

品名 PART	材料 MATERIAL	备注 REMARK
铜帽 Cap	黄铜 Brass	
内帽 Inner Cap	黄铜 Brass	
管体 Tube	陶瓷 Ceramic	1A-15A
	三聚氰胺管 Melamine Pipe	20A-35A
可熔体 Fusible Element	银 Silver	
石英砂 Quartz Sand	二氧化硅 Silicon Dioxide	
辅助灭弧剂 Auxiliary arc extinguish Material	胶 Glue	

#### 4.2 陶瓷管 Ceramic Tube

陶瓷管无破裂、缺损或污染等现象。

Ceramic tube shall have no defects such as crack, injury and contamination.

### 5. 电气特性 ELECTRICAL PERFORMANCES

#### 5.1 测试条件 TEST CONDITIONS

全部测试条件都应在环境温度 20℃±5℃ 条件下进行。

All electrical tests are conducted at a ambient temperature of 20±5℃.

#### 5.2 温度上升试验 TEMPERATURE RISE TEST


当熔断体通以100%倍额定电流的条件下进行测试时，在达到热量平衡后，测量接线端子的温度，接线端子的温度上升不超过130℃。

The circuit is be made to carry 100% of the fuse rating. After thermal equilibrium is reached, the temperature rise on the terminal of each fuse shall not exceed 130℃ .

#### 5.3 时间-电流特性 TIME-CURRENT CHARACTERISTICS

当熔断体通以下表规定的电流时，其熔断时间必须符合下表的要求，且铜帽不能飞脱、管体不应破裂、损坏。

When the current in the following table is passing the fuse-link, its opening time must be in accordance with the requirements in the following table, that is, the pre-arcing time. Moreover, neither damage of the fuse-tube nor shattering of the cap shall occur.

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额定Rated			熔断时间BLOWING TIME
1A-35A	1.35In	最慢Max.	1 hour
1A-30A	2.0In	最慢Max.	4 minutes
32A-35A		最慢Max.	6 minutes

5.4 分断能力BREAKING CAPACITY

熔断体的分断能力应能达到下表规定的分断能力要求。熔断器分断电路后，熔断体及其部件可以改变颜色或者裂缝，但熔断体从载熔件或试验架上取出之前须保持为一整体。

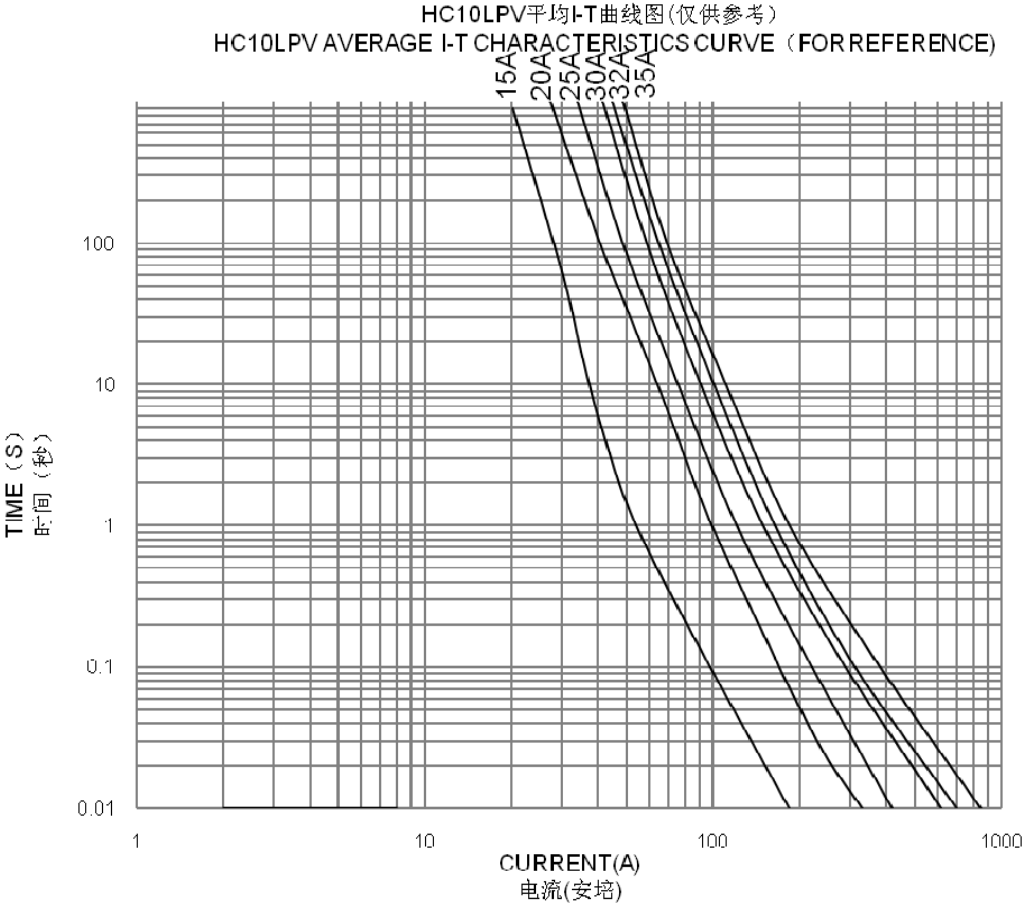
The breaking capacity should reach the breaking current rating given in the following table. After this test, the fuse-links or their parts may have changed their colour or may show cracks, provided that the fuse-link remains in one piece before its removal from the fuse-carrier or test rig.


额定电压 RATED VOLTAGE	额定电流 RATED CURRENT	分断电流/ BREAKING CURRENT	备注REMARK
1500V DC	1-35A	30kA	

5.5 电阻测试COLD RESISTANCE TEST

环境温度为20±5℃，测试电流不大于熔断体额定电流的10%。  
Input less than or equal to 10% rated current of fuse-link to fuse for cold resistance test at the ambient temperature of 20±5℃.

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



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## 6. 产品标志 MARKING

### 6.1 熔断体上的标志应易于看清。

The relevant markings shall be marked on tube of the fuse-link and shall be easily visible.

### 6.2 每个熔断体应标有下列标记：The symbol for every fuse shall be as prescribed below:

#### 6.2.1 商标 Trade mark: HOLLY®

#### 6.2.2 额定电流 Rated current:

#### 6.2.3 额定电压 Rated voltage:

#### 6.2.4 分断能力 Breaking capacity:

#### 6.2.5 型号标识 Type mark: HC10LPV

#### 6.2.6 安全认证标志 Safety Approval Logo:

## 7. 环境参数/ ENVIRONMENT PARAMETERS

### 7.1 正常工作温度/ Normal Operating Temperature:

-5℃~40℃. 相对湿度在最高温度为 40℃ 时不超过 50%。在较低的温度下可以有较高的相对湿度，例如，在 20℃ 时，相对湿度可达 90%。The relative humidity does not exceed 50 % at the maximum temperature of 40 °C., Higher relative humidity is permitted at lower temperatures, for example, 90 % at 20 °C.

### 7.2 允许工作温度/ Allowable Operating Temperature:

-40℃~125℃.

## 8. 储存条件:

### 8.1、温度 Temperature: -40℃ to +90℃

### 8.2、空气 Air: 干净的 Clean.

### 8.3、湿度 Humidity: 相对湿度不大于 90%. The relative humidity is not more than 90%.

### 8.4、储存时间 Storage Time: 1年 One year


## 9. 使用选型推荐

熔断器在使用或选型过程中，应参照正常工作条件要求。

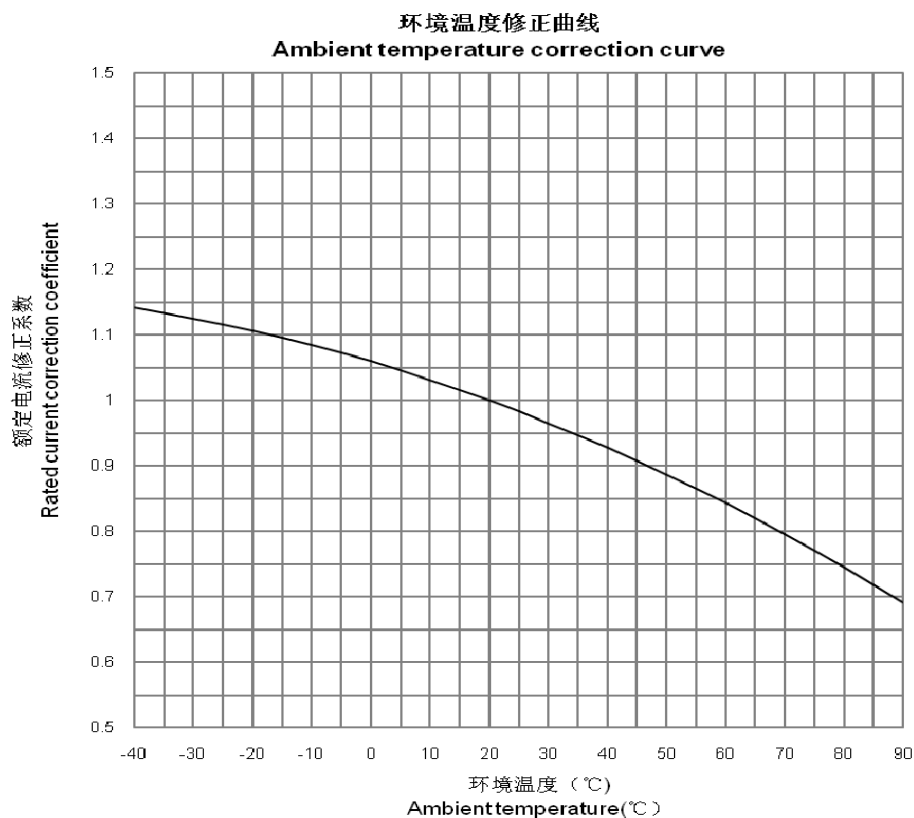
When the fuse is used or selected, it should refer to the requirements of normal working conditions.

在超出正常工作要求的条件下应根据具体使用条件进行参数修正或咨询我司，具体规格需要考虑使用的最高温度、海拔高度、配合使用导线的截面积和脉冲电流来降容使用，并上机验证设计。

Under conditions beyond normal working requirements, parameters should be modified or consulted according to specific operating conditions. For specific specifications, the maximum temperature, altitude, cross-sectional area and pulse current of the wire in use should be considered for capacity reduction, and the design should be verified on the machine.

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## 10、环境温度修正曲线（仅供参考）Ambient temperature correction curve(For reference only)



## 11、海拔高度修正系数(仅供参考)Altitude correction factors (For reference only): 参考标准IEEE Std C37.40-2003 Refer to the IEEE Std C37.40-2003.

海拔高度 Altitude above sea level		额定电流修正系数 Rated current correction coefficient
米 Meters	英尺 Feet	
2100	7000	0.98
2400	8000	0.97
2700	9000	0.96
3000	10 000	0.96
3600	12 000	0.95
4300	14 000	0.93
4900	16 000	0.92

## 12.包装要求PACKING DETAILS

### 12.1 包装方式Packing

#### 12.1.1 小盒参考尺寸Small Box Size:

10LPV (amp rating) U15 (1500V DC 5-35A) : 长×宽×高length × width × height=88×52×11.5mm。


#### 12.1.2 外箱参考尺寸External Carton Size:

10LPV (amp rating) U15 (1500V DC 5-35A) :长×宽×高length × width × height=270×190×130mm。

#### 12.1.3 包装要求Packing Details:

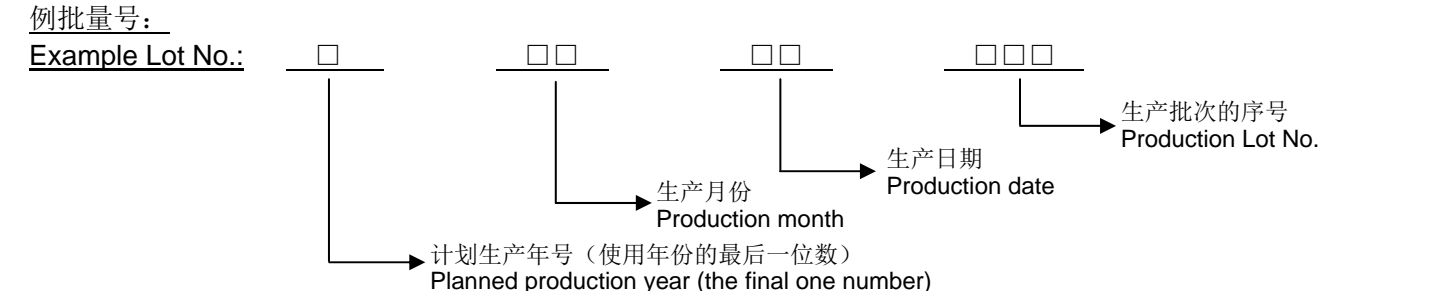
10LPV (amp rating) U15: 5个/小盒; 10 小盒/热缩袋; 10 热缩袋/每箱。

5EA/small box;10small boxes / Film bag;10 Film bags /exported carton.

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12.2 标签Label

标签应包括：型号、额定电压、额定电流、批量号码、RoHS 标志、安全认证标志。  
The label in the smallest package in which the fuse-links are put shall contain the Type, Rated voltage, Rated current, Lot. No., “RoHS” mark, Safety approval logo.



12.3 所有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 should meet the requirements of anti-moisture and anti-shaking so that the products will not absorb moisture or be damaged during transportation or storage.