

### Features

- Size Design 33.5\*12\*30mm
- High Current Handling Capability 20kA @ 8/20μs
- Flame retardant
- Reliable to Protect Surge Voltage
- explosion-proof
- Short circuit without fire

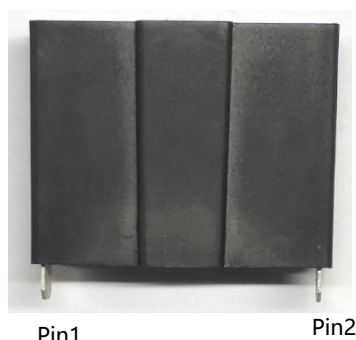
### Application information

- Secondary and tertiary surge protection for low-voltage AC and DC power supply and distribution system and electrical equipment

### Exterior



### Package (Top View)



### Agency Approvals

Icon	Description
<b>RoHS</b>	Compliance with 2011/65/EU
<b>HF</b>	Compliance with IEC61249-2-21:2003
	Mean lead free

### Schematics



### Test reference standards

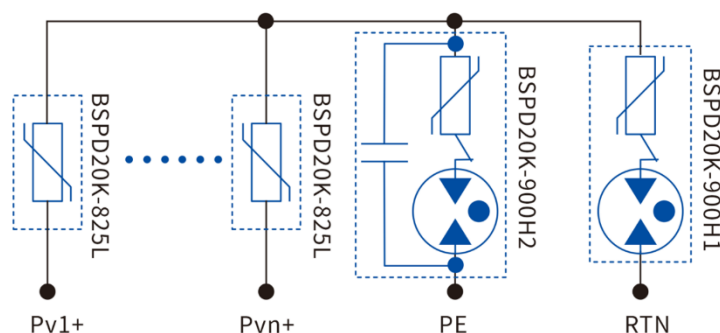
- 1) GB / T 18802.31-2021: Low-voltage surge protective devices-Part 31: Surge protective devices connected to photovoltaic installations-Requirements and test methods.
- 2) IEC 61643-31:2019 :Low-voltage surge protective devices - Part 31: Requirements and test methods for SPDs for photovoltaic installations
- 3) IEC 61643-1 Edition 1.1 Surge protective devices connected to low-voltage power distribution systems -Part 1: Performance requirements and testing methods

## Electrical Parameter

Items	Technical parameter
Product Model	BSPDPV20K-825L
MOV Voltage (1mA)	1000V $\pm$ 10%
MOV Leakage current ID(75%)	$\leq$ 20 $\mu$ A
Maximum continuous operating voltage Uc	625VAC/825VDC
Maximum continuous operating voltage of photovoltaic application Ucpv	825V
Nominal discharge current In (8/20 $\mu$ s)	10KA
Max discharge current Imax (8/20 $\mu$ s)	20KA
Voltage protection level Up	Platform votage $\leq$ 2.6KV <sup>1)</sup>
Rated short-circuit current of photovoltaic application Iscpv Matching external separator	50A
Operating and storage Temperature	-40 $\sim$ +85 $^{\circ}$ C
Modes of protection	Refer to Application Principle Chart
IP Code of enclosure	IP20
Flame retardant grade of enclosure	UL94 V0
Housing material	PBT

1) Manufacturer claims

## Application Principle Chart



## Part Numbering System

BSPD PV 20K -825 L  
(1) (2) (3) (4) (5)

- (1) BSPD:Bencent SPD  
(2) PV:Photovoltaic Module  
(3) 20K: Max discharge current  $I_{max} (8/20\mu s) 20KA$   
(4) 825: Maximum continuous operating voltage of photovoltaic application  $U_{cpv825V}$   
(5) L:1000V(1mA)MOV with explosion-proof

## Applicable environment and safety regulations

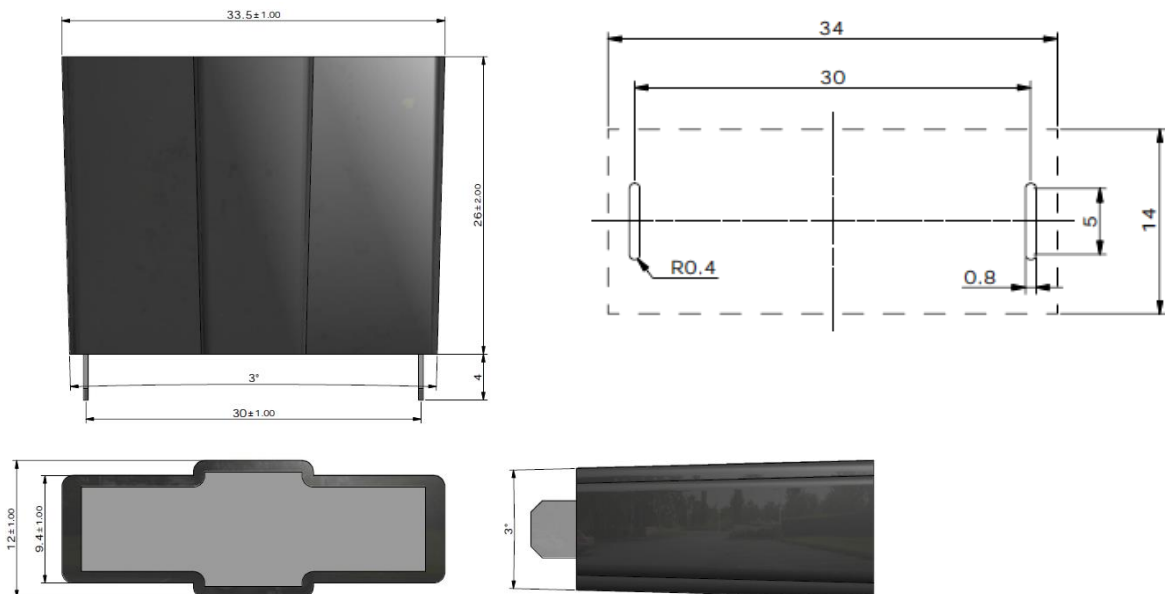
Items	Requirement Specification
Operating temperature	-40℃~85℃
Storage temperature	-40℃~85℃
relative humidity	5%~95%
Applicable altitude	≤5000m
The alarm circuit of this lightning protection module complies with the requirements of EN60950-1 for enhanced insulation, and the remote signaling alarm interface and main circuit. The insulation withstand voltage is 3750Vrms.	

Note: Up-screen program can be specified by customer's request via contacting Bencent service

## Product Dimensions

Unit:mm

### PCB Top Drilling Layer



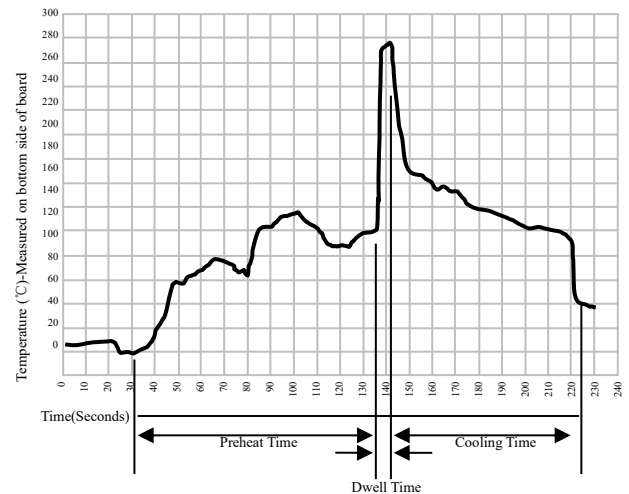
## Identification



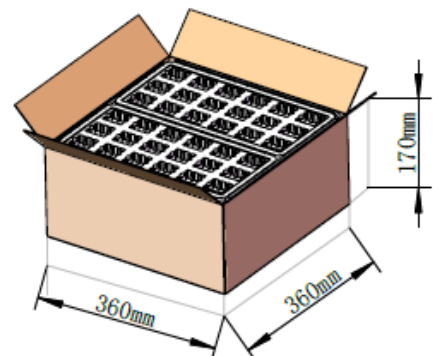
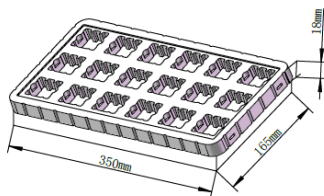
## Wave Soldering profile

Wave Soldering Condition		Pb-Free assembly
Pre Heat	Temperature Min	100°C
	Temperature Max	150°C
	Time (min to max)	60 – 180 secs
Solder Pot Temperature		265°C Max
Solder Dwell Time		2-5 seconds

Products can be welded manually or using wave soldering; It is recommended to use a thermostatic soldering iron of 100W at a temperature of  $420 \pm 5^\circ\text{C}$ , and the welding time is 1-3 seconds. It is recommended to use normal temperature solder wire for soldering.



## Package Information



Outline	Per Dish (PCS)	Per Carton (PCS)	Carton Size(mm)		
			L	W	H
Skin packing	18	324	360	360	170