

For the content contained in this manual, Gandian Lightning Protection has the final right to interpret. For more detailed information, please inquire; our company's technical engineers will serve you wholeheartedly. Because of the continuous innovation of product technology, please refer to the actual product or the manual; Subject to change without notice.

Use environmentally friendly materials



**GA&DA**



**Photovoltaic Cable And MC4  
Solutions Catalogue**

**GANDIAN LIGHTNING PROTECTION ELECTRI CO.LTD.**

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**SAFETY  
AND  
RELIABLE**

**LIGHTNING  
PROTECTION  
PRODUCTS**

# GA&DA

## Gandianfanglei

Better life, better electricity

不辜负每一份电力，让电尽其所能

# GANDIAN LANGYONG

有品质才有市场，有改进才有进步，有创新才有发展

坚守专业与责任，做行业的领跑者

Stick to professionalism and responsibility  
and be the leader of the industry



## 公司简介 COMPANY PROFILE

Gandian Lightning Protection Electric Co., Ltd. is a modern high-tech enterprise dedicated to the design, research and development, production, sales and service of lightning safety protection equipment. The company is located in the economic and technological development zone of Jiujiang City, the only international trade port city in Jiangxi Province. The total plant construction area is 39,960 square meters, the factory covers an area of 29970.16 square meters, and there are more than 200 employees.

Through continuous reform and innovation, the company develops its own brand, showing a new look of internationalization, modernization and informationization. Break through high-end industries with focus, upgrade traditional industries with automation, actively build automated electrical equipment bases, gather a team of highly skilled experts, strengthen the simultaneous development of advanced equipment industry and modern service industry, have a variety of fully functional product performance testing laboratories, 8/20us 150kA compatible with 10/350us 25kA simulated lightning laboratory, 10/350us 120kA simulated lightning laboratory, 1.2/50us combined wave generator, 1.2/50us voltage generator, gap, discharge tube detector, thermal stability test System, lightning online monitoring system, intelligent lightning protection detection system, SPD backup protector power frequency current test, lightning non-trip current test system and a series of advanced detection equipment, to ensure the stability and innovation of our products!

Independently develop a number of advanced production and processing automatic assembly lines, which integrate automatic glue filling, automatic soldering, automatic laminating, pad printing, laser marking, automatic detection and uploading of data, automatic sealing and packaging and other automatic equipment to ensure each product consistency, fully guarantee efficient production and high-quality management, with unified planning of logistics, production, life and other service facilities, and strive to build a first-class intelligent production industrial base with international competitiveness.

The company took the lead in passing ISO9001 quality system certification, ISO14001 environmental management system certification, OHSAS18001 occupational health and safety management system, CQC certification, European Community CE certification, TUV Rheinland certification, CB certification, Rohs certification, and established a system from software and hardware. A strict quality management system can meet the various needs of new and old customers with the fastest speed, the best products, and the best services; sales points are set up throughout the country, and the sales scope radiates to all provinces in China, Southeast Asia, South America, and Europe, Africa and many other places, the service scope is all over the country, and the high-quality products and good service have won the favor of the majority of customers.

The main products are power surge protector series, smart lightning protection series, smart surge protector series, smart lightning protection box series, signal lightning protection series, fuses, circuit breakers, photovoltaic connectors, transfer switches, photovoltaic cables Wait. The products are mainly used in the construction of urban and rural power grids, urban infrastructure construction, factory construction stages, major domestic and foreign oil fields, petrochemical companies, shipbuilding industry, offshore oil drilling platforms, military power construction, photovoltaic power generation, wind power generation, coal, petroleum, Chemical, industrial and mining, hospitals, airports and other fields.

The company adheres to the corporate culture of "integrity first, happiness in the world, sharing and win-win", adheres to the spirit of "pragmatism, hard work, and dedication", and has the dream of "revitalizing national industry and assuming social morality". With the principle of trust, persist in realizing the new situation of "sustainable development, cooperative innovation", with the attitude of "professional, dedicated, rigorous, and eager to learn", always practice the glorious mission of "based on Rael Dunwei and build a world brand together".

Staff living area

The staff living area has 4360 square meters, 42 single rooms, 28 suites, supporting internal canteen, fitness area, outdoor activity area

Stamping and injection molding area

The stamping and injection molding area has 6800 square meters, 30 injection molding machines, 7 45T stamping machines, 5 35T stamping machines, 8 25 stamping machines, and the remaining 18 stamping machines of each tonnage

Comprehensive production area

The comprehensive production area has 8,100 square meters, dozens of production lines for various products, a simulation laboratory for lightning strikes, and various lightning protection products test instruments, etc.



# 实验设备 Laboratory And Testing



# 证书 Certificate And International Patents



ISO14001



ISO9001



OHSAS18001



CB



CQC



型式试验



TUV-CE



TUV



试验报告

# DC SINGLE CORE SOLAR PV CABLE



Cross Section mm <sup>2</sup>	Conductor Construction n/mm	Conductor Stranded OD.[mm]	Cable OD. mm	Conductor Max.Resistance AT 20°C Ω/Km	Current Carrying Capacity AT 60°C[A]
1.5	30/0.25	1.58	4.80	13.5	25
2.5	49/0.25	1.98	5.30	8.21	36
4	56/0.285	2.35	5.80	5.09	44
6	84/0.285	3.06	6.60	3.39	60
10	80/0.4	4.60	8.00	1.95	82
16	120/0.4	5.60	10	1.24	122
25	196/0.4	6.95	12	0.795	160
35	276/0.4	8.30	13.30	0.565	200

Order code:1.5mm<sup>2</sup>(230001)/2.5mm<sup>2</sup>(230002)/4mm<sup>2</sup>(230003)/6mm<sup>2</sup>(230004)/10mm<sup>2</sup>(230005)/16mm<sup>2</sup>(230006)/25mm<sup>2</sup>(230007)/35mm<sup>2</sup>(230008)

## Characteristics

Conductor	Stranded Tinned Copper
Insulation	Halogen Free Cross-linked Polyolefin[XLPO]
Diameter	Halogen Free Cross-linked Polyolefin[XLPO]
Rated Temperature	-40°C up~ +90°C
Rated Voltage	Ac:0.6/1KV DC:1.5KV
Weathering Resistance	Sun Resistant
Standard	2 PfG 1169 08.2007; EN 50618: 2014; NB/T42073-2016

## Marking(4mm<sup>2</sup>)

TUV SUD EN50616:2014 H1Z2Z2-K(CQC NB/T42073-2016 PV-YJYJ)DC 1.5KV 1x4mm<sup>2</sup> Gandian Lightning Protection Electric Co., Ltd.



## Cable Description

- Cable Full Name: Halogen-free low smoke cross-linked polyolefin Insulated and sheathed cables for photovoltaic power generation systems.
- Conductor Structure: EN60228(IEC60228.GB/T3956)Type five conductor and must be tinned copper wire
- Cable Color: Black or Red(The insulation material shall be extruded halogen-free material.which shall be composed of one layer or several tightly adhered layers. The insulation shall be solid and uniform in material and the insulation itself, the conductor and the tin layer shall be as far as possible not damaged when the insulation is peeled off)
- Cable Characteristics: Double insulated construction. Higher systems bear voltage, UV radiation, Low and High temperature resistant environment.

## Technical Data

Nominal Voltage	DC:1.5KV AC:1.0/1.0KV
Voltage Test On Completed Cable	AC:6.5KV DC:15KV.5min
Ambient Temperature	Max.ambient temperature:90°C Min.temperature for installation and handing::-25°C Max.storage temperature:+40°C
Thermal Endurance Properties	120°C.20000h.elongation at break≥50%
Refer To Short Circuit Allows The Temperature	The permitted short-circuit-temperature is 250°C referring to a period of 5s
Pressure Test At High Temperature	EN60811-3-1
Damp Heat Test	EN60068-2-78
Resistance Against Alkaline And Acid Solutions	EN60811-2-1
Ozone Resistance At Complete Cable	EN50396
Thermal Endurance Test	EN60216-2
Cold Bending Test	EN60811-1-4
Weathering/UV Resistance	EN50289-4-17
Test Of Vertical Flame Propagation At Complete Cable	EN60332-1-2
Halogen Content Test	EN60754-1/EN60754-2

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# DC TWIN CORE SOLAR PV CABLE



Cross Section mm <sup>2</sup>	Conductor Construction n/mm	Conductor Stranded OD.[mm]	Cable OD. mm	Conductor Max.Resistance AT 20°C Ω/Km	Current Carrying Capacity AT 60°C[A]
2.5	49/0.25	1.98	11.5x5.4	8.21	36
4	56/0.285	2.35	12.7x5.7	5.09	44
6	84/0.285	3.06	14x6.6	3.39	60
Order code: 2.5mm <sup>2</sup> (230009)/4mm <sup>2</sup> (230010)/6mm <sup>2</sup> (230011)					

## Characteristics

Conductor	Stranded Tinned Copper
Insulation	Halogen Free Cross-linked Polyolefin[XLPO]
Diameter	Halogen Free Cross-linked Polyolefin[XLPO]
Rated Temperature	-40°C up~ +90°C
Rated Voltage	Ac:0.6/1KV DC:1.5KV
Weathering Resistance	Sun Resistant
Standard	VDE-AR-E 2283-4:2011

## Marking(4mm<sup>2</sup>)

TUV PV1-F4mm<sup>2</sup>0.9/1.8KVDC WARNING-DO NOT DISCONNECT UNDERLOAD-120°C SOLAR DC CABLE(+)-POLE  
 TUV PV1-F4mm<sup>2</sup>0.9/1.8KVDC WARNING-DO NOT DISCONNECT UNDER LOAD-120°C SOLARDC CABLE(-)-POLE

## Cable Description

- Cable Full Name: Halogen-free low smoke cross-linked polyolefin Insulated and sheathed cables for photovoltaic power generation systems.
- Conductor Structure: EN60228(IEC60228.GB/T3956)Type five conductor and must be tinned copper wire
- Cable Color: Black or Red(The insulation material shall be extruded halogen-free material.which shall be composed of one layer or several tightly adhered layers. The insulation shall be solid and uniform in material and the insulation itself, the conductor and the tin layer shall be as far as possible not damaged when the insulation is peeled off)
- Cable Characteristics: Double insulated construction. Higher systems bear voltage, UV radiation, Low and High temperature resistant environment.



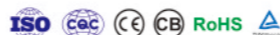
## Technical Data

Nominal Voltage	DC:1.8KV AC:0.6/1.0KV
Voltage Test On Completed Cable	AC:6.5KV DC:15KV.5min
Ambient Temperature	-40°C upto +90°C
Max.temperature At Conductor	+120°C
Service Life	The expected period of use is 25 years (Ambient temperature:-40°C upto +90°C)
Refer To Short Circuit Allows The Temperature	The permitted short-circuit-temperature is 200°C referring to a period of 5s
Bending Radius	≥4xp(D < 8mm). ≥6xp(D < 8mm).
Resistance Against Acid And Alkaline Solution	VDE-AR-E2283-4:2011
Cold Bending Test	VDE-AR-E2283-4:2011
Weathering/UV-Resistance	VDE-AR-E2283-4:2011
Qzone Resistance At Complete Cable	VDE-AR-E2283-4:2011
Test Under Fire Conditions	VDE-AR-E2283-4:2011

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# Solar PV Connector



PV Connector 1000V Series

## Solar PV Connector GDPV004



Type	GDPV004
Rated Voltage	1000V DC
Rated Current	30A
Standard	IEC 62852
Protection Degree	IP67
Contact Resistance	≤0.5mΩ
Pollution Degree	2
Ambient Temperature	-40°C~+85°C
Cable Cross Section Area	2.5mm <sup>2</sup> ,4mm <sup>2</sup> ,6mm <sup>2</sup>
Insulation Material	PC EXL 9330
Flame Class	UL94 V-0
Order Code	230012

## Diode Connector GDPV004-D



Type	GDPV004-D
Rated Voltage	1000V DC
Contact Materials	Tin Plated Copper
Rated Current	10A,15A,20A
Standard	IEC 62852
Protection Degree	IP67
Contact Resistance	≤0.5mΩ
Pollution Degree	2
Ambient Temperature	-40°C~+85°C
Insulation Material	PPO
Flame Class	UL94 V-0
Order Code	230013

# Solar PV Connector



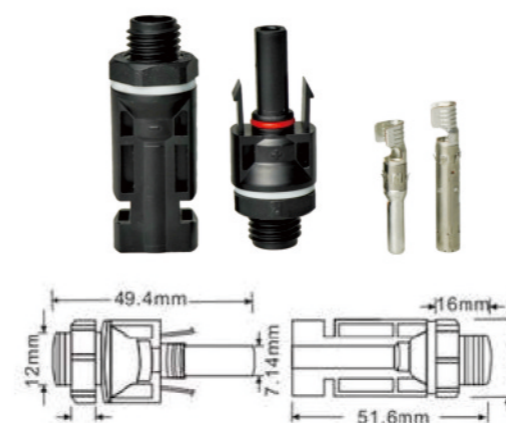
PV Connector 1000V Series

## Fuse Connector GDPV004-F



Type	GDPV004-F
Rated Voltage	1000V DC
Contact Materials	Tin Plated Copper
Rated Current	10A,15A,20A
Standard	IEC 62852
Protection Degree	IP67
Contact Resistance	≤0.5mΩ
Pollution Degree	2
Ambient Temperature	-40°C~+85°C
Insulation Material	PPO
Flame Class	UL94 V-0
Order Code	230014

## Plate End Connector GDPV004-P



Type	GDPV004-P
Rated Voltage	1000V DC
Contact Materials	Tin Plated Copper
Rated Current	20A
Standard	IEC 62852
Protection Degree	IP67
Contact Resistance	≤0.5mΩ
Pollution Degree	2
Ambient Temperature	-40°C~+85°C
Thread Size	12mm
Insulation Material	PPO
Flame Class	UL94 V-0
Order Code	230015

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# Solar PV Connector



T Type Branch Connector 1000V Series

# Solar PV Connector



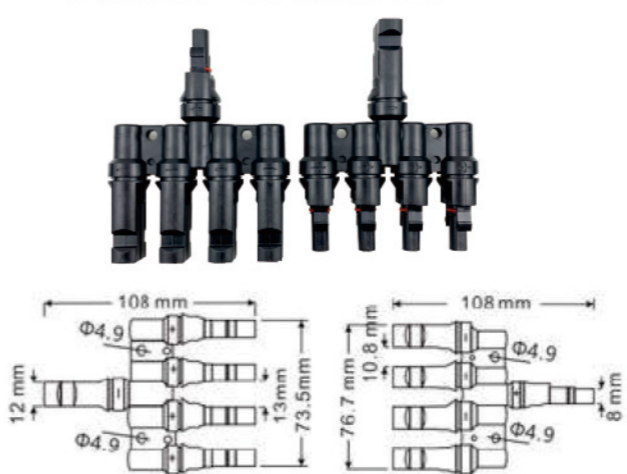
T Type Branch Connector 1000V Series

## 2 to 1 T Branch Connector



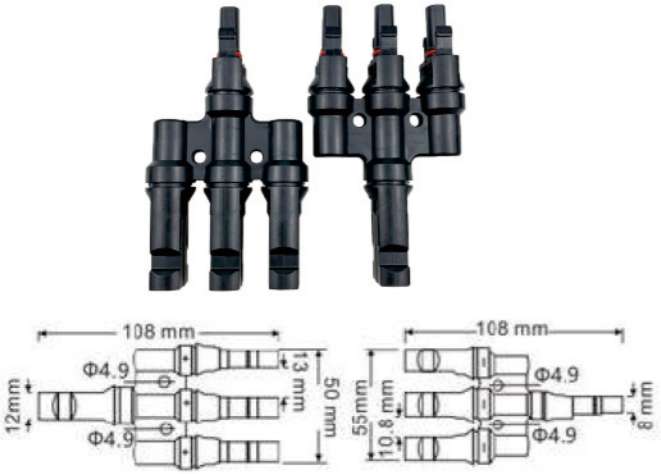
Type	GDPV004-T2
Rated Voltage	1000V DC
Rated Current	30A
Protection Degree	IP67
Contact Resistance	≤0.5mΩ
Pollution Degree	2
Ambient Temperature	-40°C~+90°C
Contact Materials	Tin Plated Copper
Adapter Connector	PV004/PV005
Insulation Material	PPO
Flame Class	UL94 V-0
Order Code	230016

## 4 to 1 T Branch Connector



Type	GDPV004-T4
Rated Voltage	1000V DC
Rated Current	30A
Protection Degree	IP67
Contact Resistance	≤0.5mΩ
Pollution Degree	2
Ambient Temperature	-40°C~+90°C
Contact Materials	Tin Plated Copper
Adapter Connector	PV004/PV005
Insulation Material	PPO
Flame Class	UL94 V-0
Order Code	230018

## 3 to 1 T Branch Connector



Type	GDPV004-T3
Rated Voltage	1000V DC
Rated Current	30A
Protection Degree	IP67
Contact Resistance	≤0.5mΩ
Pollution Degree	2
Ambient Temperature	-40°C~+90°C
Contact Materials	Tin Plated Copper
Adapter Connector	PV004/PV005
Insulation Material	PPO
Flame Class	UL94 V-0
Order Code	230017

## 5 to 1 T Branch Connector



Type	GDPV004-T5
Rated Voltage	1000V DC
Rated Current	30A
Protection Degree	IP67
Contact Resistance	≤0.5mΩ
Pollution Degree	2
Ambient Temperature	-40°C~+90°C
Contact Materials	Tin Plated Copper
Adapter Connector	PV004/PV005
Insulation Material	PPO
Flame Class	UL94 V-0
Order Code	230019

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# Solar PV Connector



Y Type Branch Connector 1000V Series

# Solar PV Connector



Y Type Branch Connector 1000V Series

## 2 to 1 Y Branch Connector



Type	GDPV004-2T1
Rated Voltage	1000V DC
Rated Current	30A
Protection Degree	IP67
Contact Resistance	≤0.5mΩ
Pollution Degree	2
Ambient Temperature	-40°C~ +85°C
Contact Materials	Tin Plated Copper
Insulation Material	PPO/XLPE
Flame Class	UL94 V-0
input Cable	PV Cable 1X4mm <sup>2</sup>
Output Cable	PV Cable 1X4mm <sup>2</sup>
Order Code	230020

## 4 to 1 Y Branch Connector



Type	GDPV004-4T1
Rated Voltage	1000V DC
Rated Current	30A
Protection Degree	IP67
Contact Resistance	≤0.5mΩ
Pollution Degree	2
Ambient Temperature	-40°C~ +85°C
Contact Materials	Tin Plated Copper
Insulation Material	PPO/XLPE
Flame Class	UL94 V-0
input Cable	PV Cable 1X4mm <sup>2</sup>
Output Cable	PV Cable 1X4mm <sup>2</sup>
Order Code	230022

## 3 to 1 Y Branch Connector



Type	GDPV004-3T1
Rated Voltage	1000V DC
Rated Current	30A
Protection Degree	IP67
Contact Resistance	≤0.5mΩ
Pollution Degree	2
Ambient Temperature	-40°C~ +85°C
Contact Materials	Tin Plated Copper
Insulation Material	PPO/XLPE
Flame Class	UL94 V-0
input Cable	PV Cable 1X4mm <sup>2</sup>
Output Cable	PV Cable 1X4mm <sup>2</sup>
Order Code	230021

## X to 1 Y Branch Connector



Type	GDPV004-XT1
Rated Voltage	1000V DC
Rated Current	30A
Protection Degree	IP67
Contact Resistance	≤0.5mΩ
Pollution Degree	2
Ambient Temperature	-40°C~ +85°C
Contact Materials	Tin Plated Copper
Insulation Material	PPO/XLPE
Flame Class	UL94 V-0
input Cable	PV Cable 1X4/6mm <sup>2</sup>
Output Cable	PV Cable 1X4/6mm <sup>2</sup>
Order Code	230023

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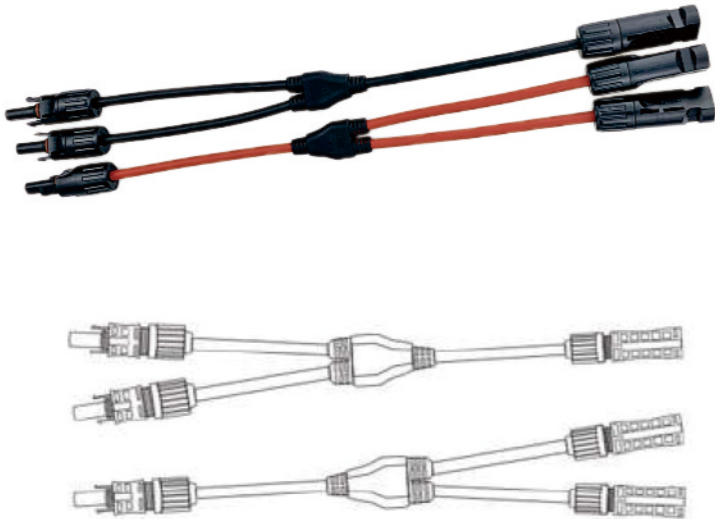
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# Solar PV Conector



Y Type Branch Connector 1500V Series

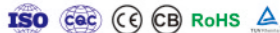
## 2 to 1 Y Branch Connector



Type	GDPV005-2T1
Rated Voltage	1500V DC
Rated Current	30A
Protection Degree	IP67
Contact Resistance	≤0.5mΩ
Pollution Degree	2
Ambient Temperature	-40°C~ +85°C
Contact Materials	Tin Plated Copper
Insulation Material	PPO/XLPE
Flame Class	UL94 V-0
input Cable	PV Cable 1X4mm <sup>2</sup>
Output Cable	PV Cable 1X4mm <sup>2</sup>
Order Code	230024

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# Solar PV Conector



Y Type Branch Connector 1500V Series

## 3 to 1 Y Branch Connector



Type	GDPV005-3T1
Rated Voltage	1500V DC
Rated Current	30A
Protection Degree	IP67
Contact Resistance	≤0.5mΩ
Pollution Degree	2
Ambient Temperature	-40°C~ +85°C
Contact Materials	Tin Plated Copper
Insulation Material	PPO/XLPE
Flame Class	UL94 V-0
input Cable	PV Cable 1X4mm <sup>2</sup>
Output Cable	PV Cable 1X4mm <sup>2</sup>
Order Code	230025

## 4 to 1 Y Branch Connector



Type	GDPV005-4T1
Rated Voltage	1500V DC
Rated Current	30A
Protection Degree	IP67
Contact Resistance	≤0.5mΩ
Pollution Degree	2
Ambient Temperature	-40°C~ +85°C
Contact Materials	Tin Plated Copper
Insulation Material	PPO/XLPE
Flame Class	UL94 V-0
input Cable	PV Cable 1X4mm <sup>2</sup>
Output Cable	PV Cable 1X4mm <sup>2</sup>
Order Code	230026

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# Solar PV Connector



Solar PV Connector 1500V Series

## Photovoltaic Connector

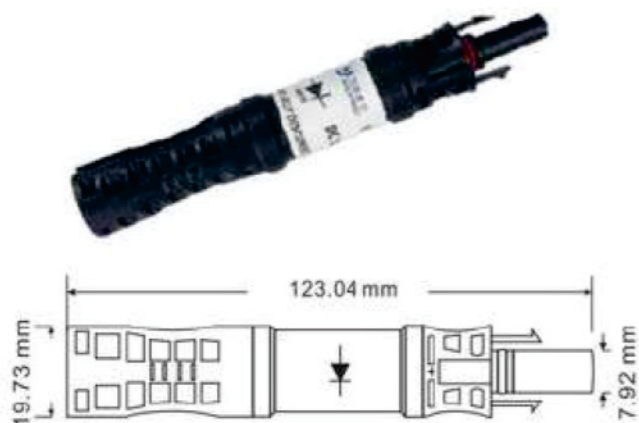
GDPV005



Type	GDPV005
Rated Voltage	1500V DC
Rated Current	30A
Standard	IEC 62852
Protection Degree	IP67
Contact Resistance	≤0.5mΩ
Pollution Degree	2
Ambient Temperature	-40°C~+85°C
Cable Cross Section Area	2.5mm <sup>2</sup> ,4mm <sup>2</sup> ,6mm <sup>2</sup>
Insulation Material	PC EXL 9330
Flame Class	UL94 V-0
Order Code	230027

## Diode Connector

GDPV005-D



Type	GDPV005-D
Rated Voltage	1000V DC
Contact Materials	Tin Plated Copper
Rated Current	10A,15A,20A
Standard	IEC 62852
Protection Degree	IP67
Contact Resistance	≤0.5mΩ
Pollution Degree	2
Ambient Temperature	-40°C~+85°C
Insulation Material	PPO
Flame Class	UL94 V-0
Order Code	230028

# Solar PV Connector



Solar PV Connector 1500V Series

## Fuse Connector

GDPV005-F



Type	GDPV005-F
Rated Voltage	1500V DC
Contact Materials	Tin Plated Copper
Rated Current	15A,20A,25A
Standard	IEC 62852
Protection Degree	IP67
Contact Resistance	≤0.5mΩ
Pollution Degree	2
Ambient Temperature	-40°C~+85°C
Insulation Material	PPO
Flame Class	UL94 V-0
Order Code	230029

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# Solar PV Conector

Solar PV Connector 1500V Series



PV005-FA  
230030



PV005-FB  
230031



PV005-FC  
230032



PV005-FD  
230033

# Solar PV Conector

Solar PV Connector 1500V Series



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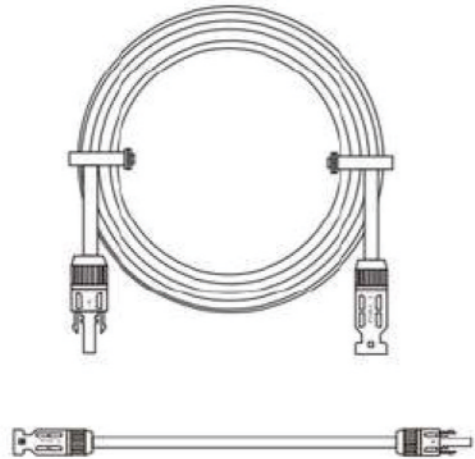
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# Solar Extension Cable for Solar Power System



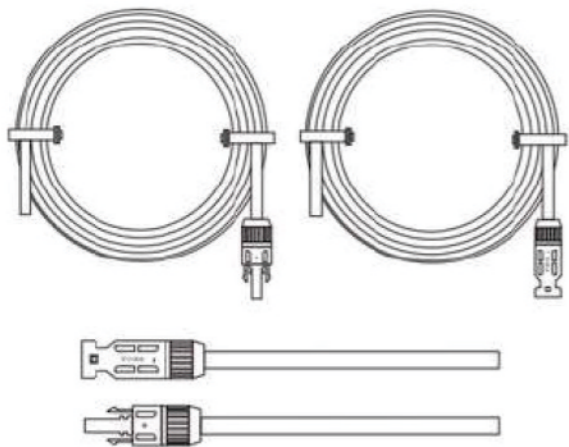
## Solar Extension Cable

### Solar Extension Cable with Connector(Double Ends)



Type	GDDC-DC
Rated Voltage	1000V ,1500VDC
Rated Current	30A
Protection Degree	IP67
Pollution Degree	2
Ambient Temperature	-40°C~ +85°C
Contact Materials	Tin Plated Copper
Insulation Material	PPO/XLPO
Flame Class	UL94 V-0
Cable Type	PV Cable
Cable Length	Customized

### Solar Extension Cable with Connector(Single Ends)



Type	GDDC-00
Rated Voltage	1000V ,1500VDC
Rated Current	30A
Protection Degree	IP67
Pollution Degree	2
Ambient Temperature	-40°C~ +85°C
Contact Materials	Tin Plated Copper
Insulation Material	PPO/XLPO
Flame Class	UL94 V-0
Cable Type	PV Cable
Cable Length	Customized

## Customization Scheme for Solar Extension Cable



Battery Brass Buckle



Solar Street Light



Anderson Joint



O Type DT

### The Image Of Different Cable Lengths(Double Ends)

### The Image Of Different Cable Lengths(Single Ends)



← 1M →



← 5M →



← 10M →



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