


**Test specification:** IEC 62790:2020; EN 62790:2020

Our Reference 6126897B.50

Appendix No. 1.0

License Holder .....	SUZHOU UKT NEW ENERGY TECHNOLOGY Co., Ltd.
(full address) .....	688th, Youming Road, Wujiang District, 215200 Suzhou City Jiangsu, China
Production Factory 1 .....	SUZHOU UKT NEW ENERGY TECHNOLOGY Co., Ltd.
(full address) .....	688th, Youming Road, Wujiang District, 215200 Suzhou City Jiangsu, China
Type of Product .....	Junction box for photovoltaic modules
Trademark .....	
Type Name or Model No. ....	PV-JB06x (x=A or B or F1 or SF1 or F2 or SF2)
Rated Voltage .....	1500 Vdc for PV-JB06x (x=A or F1 or SF1); 1000 Vdc for PV-JB06x (x=B or F2 or SF2)
Rated impulse voltage.....	16 000 V for PV-JB06x (x=A or F1 or SF1); 12 000 V for PV-JB06x (x=B or F2 or SF2)
Max. working (module) Voltage .....	100 V
Rated Current .....	15 A for PV-JB06x (x=A or B) 20 A for PV-JB06x (x=F1 or SF1 or F2 or SF2 )
Reverse Current .....	25 A for PV-JB06x (x=A or B) 30 A for PV-JB06x (x=F1 or SF1 or F2 or SF2)
Standard .....	IEC 62790:2020; EN 62790:2020
Application class .....	Class A
Pollution degree .....	1 / <del>2</del> / <del>3</del> / 4 (inside of the junction box's enclosure, after potting)
Over voltage category .....	I / II / III / IV
Lower ambient temperature .....	-40 °C
Upper ambient temperature .....	+85 °C

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RTI housing material .....	+110 °C		
Flammability class .....	5VB (Verification Test)		
Termination and connection.....	Resistance welding-type final terminals for external flexible PV Cable; Soldered-type terminals for internal connection with PV ribbon; Integration for internal connection with bypass diode		
Cable diameter .....	5,5 mm - 6,8 mm		
Rated torque for cable gland.....	N/A		
Wire cross section area or cross section range.....	4 x 2,5 mm <sup>2</sup> / 1 x 4,0 mm <sup>2</sup> / 4 x 6,0 mm <sup>2</sup>		
Degree of protection.....	IP65/IP68(1m, 2h)		
Rewire able.....	Yes / No		
Adhesive and sealing compound of junction box/ Back sheet of PV-module .....	Type of adhesive and sealing compound	Type of Backsheet	
	HT906-Z, manufactured by Shanghai Huitian New Material Co., Ltd.	PVDF (KFB-30), manufactured by Jolywood (Suzhou) Sunwatt Co., Ltd.	
		PVF foil (T-3502), manufactured by Jolywood (Suzhou) Sunwatt Co., Ltd.	
		PVDF (Cynagard 225A), manufactured by Cybrid Technology Inc.	
		Fluororesin (BEC-301C), manufactured by Hangzhou First PV material Co., Ltd.	
		PVDF (XF300), manufactured by Suzhou Xingfu New Energy Technology Co., Ltd.	
		PET foil (DyMat PYE SPV BLK), manufactured by Coveme S.p.a.	
		PET foil (dyMat PYE SPV), manufactured by Coveme S.p.a.	
		PET foil (dyMat HDPYE SPV L), manufactured by Coveme S.p.a.	
		PET foil (CA005 (white)), manufactured by Kolon	
Fluoropolymer film (ETFE), manufactured by SAINT-GOBAIN			
Fluoropolymer film (ETFE), manufactured by			

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		NOWOFOL Kunststoffprodukte GmbH & Co. KG	
		Crown BO-P1, manufactured by Crown Advanced Material Co., Ltd.	
		Crown BO-P2, manufactured by Crown Advanced Material Co., Ltd.	
	1527, manufactured by Suzhou TONSAN Adhesive Ltd.	PVDF (KFB-30), manufactured by Jolywood (Suzhou) Sunwatt Co., Ltd.	
		PVDF (Cynagard 225A) manufactured by Cybrid Technology Inc.	
		Fluororesin (BEC-301C) manufactured by Hangzhou First PV material Co., Ltd.	
		PVDF foil (HTPV348S), manufactured by Chang Zhou Hui Tian New Material Co., Ltd.	
	PV-804, manufactured by DOW CORNING.	PET foil (CA005 (white)), manufactured by Kolon	
		PET foil (DyMat PYE SPV BLK), manufactured by Coveme S.p.a.	
		PET foil (dyMat PYE SPV), manufactured by Coveme S.p.a.	
	PET foil (dyMat HDPYE SPV L), manufactured by Coveme S.p.a.		
	Fluoropolymer film (ETFE), manufactured by SAINT-GOBAIN		
Potting material .....	Type of potting material	Type of Junction Box	
	1521, manufactured by Suzhou TONSAN Adhesive Ltd.	PV-JB06x (x=A or B or F1 or SF1 or F2 or SF2)	
	5299W-S, manufactured by Shanghai Huitian New Material Co., Ltd		
	Loctite SI 5611, manufactured by Henkel Corp., USA.		
Bypass-Diode .....	Type name	UKTD3045-06	
	Number	Diode module with 3 chips	
	Manufacturer	SUZHOU UKT NEW ENERGY TECHNOLOGY CO., LTD	
	Diode data	Side:150mil (3,8mmx3,8mm); Thickness:0,28mm (stated by manufacturer)/ Side:150mil; Thickness:0,28mm $I_f=30A; V_{RRM}=45V (T_j=200\text{ }^\circ\text{C})$	Side:150mil(3,8mmx3,8mm); Thickness:0,28mm (stated by manufacturer)/ Side:150mil; Thickness:0,28mm $I_f=30A; V_{RRM}=45V (T_j=200\text{ }^\circ\text{C})$
	Live part thickness of	0,80 mm	0,40 mm



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	diode module		
	Box type	PV-JB06x (x=A or B)	PV-JB06x (x=A or B)
	Rated current	15 A	15 A
Bypass-Diode .....	Type name	UKTD3045-06	UKTD30100-06
	Number	Diode module with 3 chips	Diode module with 3 chips
	Manufacturer	SUZHOU UKT NEW ENERGY TECHNOLOGY CO., LTD	
	Diode data	Side:150mil (3,8mmx3,8mm); Thickness:0,28mm (stated by manufacturer)/ Side:150mil; Thickness:0,28mm $I_f=30A; V_{RRM}=45V (T_j=200\text{ }^\circ\text{C})$	Side:150mil (3,8mmx3,8mm); Thickness:0,28mm (stated by manufacturer)/ Side:150mil; Thickness:0,28mm $I_f=30A; V_{RRM}=100V (T_j=200\text{ }^\circ\text{C})$
	Live part thickness of diode module	0,80 mm	0,80 mm
	Box type	PV-JB06x (x=F1 or F2)	PV-JB06x (x=F1 or F2)
	Rated current	20 A	20 A
Bypass-Diode .....	Type name	UKTD3045-06S4	UKTD30100-06S4
	Number	Diode module with 4 chips	Diode module with 4 chips
	Manufacturer	SUZHOU UKT NEW ENERGY TECHNOLOGY CO., LTD	
	Diode data	Side:150mil (3,8mmx3,8mm); Thickness:0,28mm (stated by manufacturer)/ Side:150mil; Thickness:0,28mm $I_f=30A; V_{RRM}=45V (T_j=200\text{ }^\circ\text{C})$	Side:150mil (3,8mmx3,8mm); Thickness:0,28mm (stated by manufacturer)/ Side:150mil; Thickness:0,28mm $I_f=30A; V_{RRM}=100V (T_j=200\text{ }^\circ\text{C})$
	Live part thickness of diode module	0,80 mm	0,80 mm
	Box type	PV-JB06x (x=SF1 or SF2)	PV-JB06x (x=SF1 or SF2)
	Rated current	20 A	20 A
(Optional) Accessories .....	N/A		

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**List of Critical Components** (add lines for multiple material sources)

Ref.	Object	Manufacturer / trademark	Type / model	Technical data / ratings	Standard (if applicable)	Certificates (if applicable)
1.0	Material of housing	ASAHI KASEI CHEMICALS CORP XYRON POLYMER	m-PPE, "Xyron", 644Z(f1)(c)	UL94, V-0, RTI=125 °C	—	UL E82268
2.0	Material of Box Lid	ASAHI KASEI CHEMICALS CORP XYRON POLYMER	m-PPE, "Xyron", 644Z(f1)(c)	UL94, V-0, RTI=125 °C	—	UL E82268
3.0	Material of bottom	ASAHI KASEI CHEMICALS CORP XYRON POLYMER	m-PPE, "Xyron", 644Z(f1)(c)	UL94, V-0, RTI=125 °C	—	UL E82268
4.0	PV Cable	Ningbo Kibor Wire & Cable Co., Ltd.	62930 IEC 131 1X1,5...240mm <sup>2</sup> HALOGEN FREE LOW SMOKE	1 x 4,0 mm <sup>2</sup>	IEC 62930:2017	TÜV Rheinland R 50413678 TÜV Rheinland R 50413678 & UL E470608
		Wuxi Xinhongye Wire & Cable Co., Ltd.	62930 IEC 131 1X1,5...35mm <sup>2</sup> HALOGEN FREE LOW SMOKE	1 x 4,0 mm <sup>2</sup>	IEC 62930:2017	TÜV Rheinland R 50439595 TÜV Rheinland R 50439595 & UL E332548
		SUZHOU YONGHAO CABLE CO., LTD.	62930 IEC 131 1X2,5...35mm <sup>2</sup> HALOGEN FREE LOW SMOKE	1 x 4,0 mm <sup>2</sup>	IEC 62930:2017	TÜV Rheinland R 50401233 TÜV Rheinland R 50401233 & UL E483912
5.0	Connector	SUZHOU UKT NEW ENERGY TECHNOLOGY CO., LTD	PV-CO01	Rated Voltage: 1000V Rated Current : 25A Cross section: 1x4,0mm <sup>2</sup>	IEC 62852:2014; EN 62852:2015	TÜV Rheinland R 50294826
			PV-CO02-xy	Rated Voltage:1500V Rated Current ≥30A Cross section: 1x4,0mm <sup>2</sup>		TÜV Rheinland R 50390097
		Jiangxi Jinko PV Material Co., Ltd.	PV-JK03M-1	Rated Voltage: 1000V Rated Current : 30A Cross section: 1x4,0mm <sup>2</sup>	IEC 62852:2014; EN 62852:2015	TÜV Rheinland R 50318165
			PV-JK03M-2	Rated Voltage: 1500V Rated Current : 30A Cross section: 1x4,0mm <sup>2</sup>		TÜV Rheinland R 50318165
		Stäubli Electrical Connectors AG	PV-KST4/xy-UR; PV-KBT4/xy-UR	Rated Voltage 1000V Rated Current: 39A Cross section: 1x4,0mm <sup>2</sup>	IEC 62852:2014; EN 62852:2015	TÜV Rheinland R 60127190
PV-KST4-EVO 2/xy_UR (male); PV-KBT4-EVO 2/xy_UR (female)	Rated Voltage: 1500V Rated Current: 45A Cross section: 1x4,0mm <sup>2</sup>		TÜV Rheinland R 60127169			

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Ref.	Object	Manufacturer / trademark	Type / model	Technical data / ratings	Standard (if applicable)	Certificates (if applicable)
		Tyco Electronics Austria GmbH	PV4-Syx (y=F or M, x=4.0)	Rated Voltage:1000V Rated Current: 40A Cross section: 1x4,0mm <sup>2</sup>	IEC 62852:2014; EN 62852:2015	TÜV Rheinland R 60148776
			PV4-S1yx (y=F or M, x=4.0)	Rated Voltage:1500V Rated Current: 40A Cross section: 1x4,0mm <sup>2</sup>		
		Zerun Co., LTD	Z4S-abcde (c=4, d=A or C) (only use for system voltage 1000 Vdc )	Rated Voltage 1000VDC / Rated Current: 40A / Cross section: 1x4,0mm <sup>2</sup>	IEC 62852:2014; EN 62852:2015	TUV Rheinland R 50495771
			Z4S-abcde (c=4, d=B or D)	Rated Voltage: 1500VDC / Rated Current: 40A/ Cross section: 1x4,0mm <sup>2</sup>		
6.0	Conductor	Wuxi Haoyunlai technology Co., Ltd.	Red Copper (T1), tin plated	Thickness of tin 0,3 mm	—	—
7.0	Soldering material	Yangzhong City Ring Electrical Materials Ltd.	Sn50-Pb50	Melting Point temperature: 183 °C	—	—
		SHENZHEN VITAL NEW MATERIAL COMPANY LIMITED	WTO-LF3000/0307	Sn99,0Ag0,3Cu0,7, soldering temperature: 235~250 °C		

Remark:

PV-JB06x (x=A or B or F1 or SF1 or F2 or SF2) have same box construction, the difference as below table.

Type	Rated Voltage	Rated Current	Diode module chips	Reverse Current
PV-JB06A	1500 Vdc	15 A	Diode module with 3 chips	25 A
PV-JB06B	1000 Vdc	15 A	Diode module with 3 chips	25 A
PV-JB06F1	1500 Vdc	20 A	Diode module with 3 chips	30 A
PV-JB06F2	1000 Vdc	20 A	Diode module with 3 chips	30 A
PV-JB06SF1	1500 Vdc	20 A	Diode module with 4 chips	30 A
PV-JB06SF2	1000 Vdc	20 A	Diode module with 4 chips	30 A