

光纤复合架空地线 (OPGW)

Optical Fiber Composite Overhead Ground Wire(OPGW)

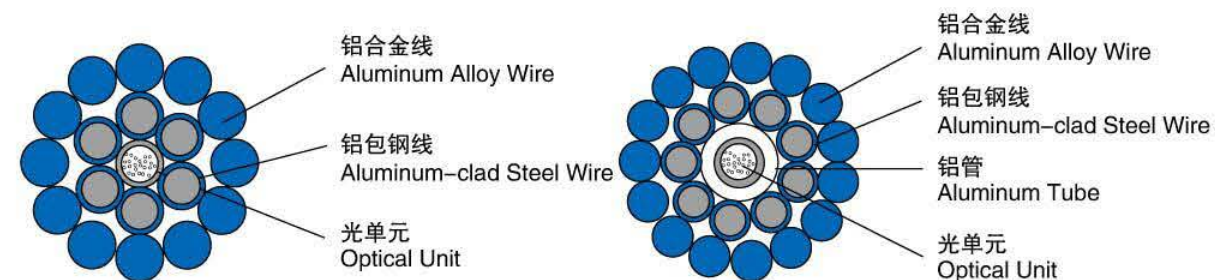
产品描述 Product Description

OPGW在保持原有架空地线的一切性能、功能不变的前提下加入光纤, 开辟高性能的光传输通道, 使之兼备避雷和通信功能, 是一种具有传统架空地线和通信能力的双重功能的线。

Optical fiber composite overhead ground wire (OPGW) adds fiber into it and at the same time, maintains all the original performance and functions of the existing overhead ground wire, which opens up the high-performance optical transmission channel, giving it both lightning-resistant and communications functions, it is a kind of wire that combines the functions of overhead ground wire and communications capabilities.

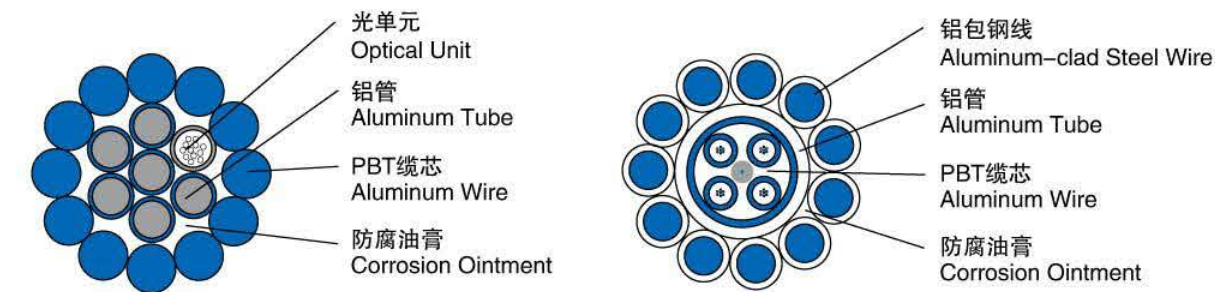


结构示意图 Structure



图a:中心管式结构一
a: Central Tube Structure

图b:中心管式结构二
b: Central Tube Structure



图c:层绞式结构一
c: Layer Stranding Structure

图d:铝包PBT
d: Aluminum clad PBT

光纤复合架空地线 (OPGW)

Optical Fiber Composite Overhead Ground Wire(OPGW)

常用产品参数 Commonly Used Product Parameters

型号 type	结构参数 structure parameters						截面面积 section area			单位长度 重量 per unit length kg/km	额定 拉断力 rated breaking force kN	20℃时 直流 电阻 R(20) DC resistance Ω/km	拉重比 Pull weight ratio km	弹性 模量 Elastic modulus GPa	线膨胀 系数 Coefficient of linear expansion x 10 ⁻⁶ /℃	短路 电流热 容量 The heat capacity of the short-circuit current kA ² ·s	推荐匹配地线 Recommended matching ground wire	
	中心 不锈钢管光单元 center stainless steel tube light unit		外层 Outer layer				直径 nominal diameter mm	铝包 钢线 AL mm ²	铝合 金线 AS mm ²									总计 total mm ²
	根数 number	直径 nominal diameter mm	光纤最 大数量 /B1	根数 number	直径 nominal diameter mm	材料 Material												
OPGW-24B1-40 [51:8.0]	1	3.00	24B1	6	3.00	LB20	9.00	42.41	—	42.41	303.6	51.15	2.0275	17.19	162.00	13.00	7.96	GJ-50
OPGW-30B1-50 [58:10.3]	1	3.20	30B1	6	3.20	LB20	9.60	48.25	—	48.25	342.7	58.20	1.7819	17.33	162.00	13.00	10.31	GJ-50
OPGW-36B1-55 [64:13.1]	1	3.40	36B1	6	3.40	LB20	10.2	54.48	—	54.48	389.3	64.23	1.5785	16.83	162.00	13.00	13.14	—
OPGW-40B1-60 [66:14.8]	1	3.50	40B1	6	3.50	LB20	10.50	57.73	—	57.73	411.1	65.96	1.4896	16.38	162.00	13.00	14.75	—
OPGW-40B1-60 [70:16.5]	1	3.60	40B1	6	3.60	LB20	10.80	61.07	—	61.07	433.4	69.81	1.4080	16.43	162.00	13.00	16.51	—
OPGW-48B1-70 [77:20.5]	1	3.80	48B1	6	3.80	LB20	11.40	68.05	—	68.05	480.1	76.55	1.2636	16.27	162.00	13.00	20.50	JLB20A-70-7

型号 type	结构参数 structure parameters										截面面积 section area			单位长度 重量 per unit length kg/km	额定 拉断力 rated breaking force kN	20℃时 直流 电阻 R(20) DC resistance Ω/km	拉重比 Pull weight ratio km	弹性 模量 Elastic modulus GPa	线膨胀 系数 Coefficient of linear expansion x10 ⁻⁶ /℃	短路 电流热 容量 The heat capacity of the short-circuit current kA ² ·s	推荐匹配地线 Recommended matching ground wire			
	中心 center		内层(第1层) first layer		外层(第2层) second layer		不锈钢管光单元 stainless steel tube light unit		直径 nominal diameter mm	铝包 钢线 AL mm ²	铝合 金线 AS mm ²	总计 total mm ²												
	根数 number	直径 nominal diameter mm	材料 Material	根数 number	直径 nominal diameter mm	材料 Material	根数 number	直径 nominal diameter mm					光纤最 大数量 maximum number of optical fiber											
OPGW-24B1-90 [107:24.9]	1	2.60	LB20	5	2.50	LB20	12	2.50	LB20	1	2.50	24B1	12.60	86.76	—	86.76	615.4	107.04	0.9718	17.75	162.00	13.00	34.88	JLB20A-95-7
OPGW-24B1-100 [121:44.3]	1	2.60	LB20	5	2.50	LB20	11	2.85	LB20	1	2.50	24B1	13.30	100.03	—	100.03	691.2	120.63	0.8626	17.81	162.00	13.00	44.30	GJ-100
OPGW-30B1-120 [144:62.8]	1	2.85	LB20	5	2.75	LB20	11	3.10	LB20	1	2.70	30B1	14.55	119.10	—	119.10	819.2	143.64	0.7244	17.89	162.00	13.00	62.80	GJ-120
OPGW-30B1-120 [68:114.0]	1	2.85	LB20	5	2.75	LB20	11	3.10	LHA2	1	2.70	30B1	14.55	86.08	83.02	119.10	489.3	68.00	0.3421	14.18	94.38	17.80	114.01	JLB40-120-19
OPGW-36B1-135 [164:82.3]	1	3.20	LB20	5	3.10	LB20	12	3.10	LB20	1	3.00	36B1	15.60	136.35	—	136.35	934.7	164.44	0.6326	17.95	162.00	13.00	82.31	—
OPGW-36B1-135 [83:127.8]	1	3.20	LB40	5	3.10	LB40	12	3.10	LB40	1	3.00	36B1	15.60	136.35	—	136.35	682.8	83.45	0.3215	12.65	109.00	15.50	127.76	—
OPGW-36B1-145 [175:93.4]	1	3.30	LB20	5	3.20	LB20	12	3.20	LB20	1	3.10	36B1	16.10	145.28	—	145.28	994.6	174.97	0.5937	17.95	162.00	13.00	93.44	—
OPGW-36B1-145 [193:119.0]	1	3.30	LB40	5	3.20	LB40	12	3.20	LB40	1	3.10	36B1	16.10	145.28	—	145.28	704.9	88.91	0.3018	12.87	109.00	15.50	145.03	JLB40-150-19
OPGW-48B1-165 [193:119.0]	1	3.50	LB20	5	3.40	LB20	12	3.40	LB20	1	3.30	48B1	17.10	163.97	—	163.97	1125.0	193.32	0.5260	17.53	162.00	13.00	119.03	—
OPGW-48B1-185 [211:150.5]	1	3.80	LB20	5	3.60	LB20	12	3.60	LB20	1	3.40	48B1	18.20	184.38	—	184.38	1261.9	211.15	0.4678	17.08	162.00	13.00	150.51	—

注1: 型号中光纤芯数为光单元所承受的最大芯数; 2: 产品性能参数均为标称值; 3: 光纤类型以刚类举例; 4: 除单位长度质量, 其它参数均未考虑光单元因素; 5: 短路电流热容量: 温度范围取40℃~200℃。

光纤复合架空地线 (OPGW)

Optical Fiber Composite Overhead Ground Wire(OPGW)

常用产品参数 Commonly Used Product Parameters

型号 type	结构参数 structure parameters						直径 nominal diameter mm	截面积 section area			单位长度质量 weight per unit length kg/km	额定拉断力 rated breaking force kN	20℃时直流电阻 R(20) DC resistance Ω/km	拉重比 Pull weight ratio km	弹性模量 Elastic modulus GPa	线膨胀系数 Coefficient of linear expansion × 10 ⁻⁶ /℃	短路电流热容量 The heat capacity of the short-circuit current kA ² ·s	推荐匹配地线 Recommended matching ground wire
	中心 不锈钢管单元 center stainless steel tube light unit		外层 Outer layer					铝包钢线 AL	铝合金线 AS	总计 total								
	根数 number	直径 nominal diameter mm	光纤最大数量 /B1	根数 number	直径 nominal diameter mm	材料 Material												
OPGW-24B1-40 [51.8.0]	1	3.00	24B1	6	3.00	LB20	9.00	42.41	—	42.41	303.6	51.15	2.0275	17.19	162.00	13.00	7.96	GJ-50
OPGW-30B1-50 [58.10.3]	1	3.20	30B1	6	3.20	LB20	9.60	48.25	—	48.25	342.7	58.20	1.7819	17.33	162.00	13.00	10.31	GJ-50
OPGW-36B1-55 [64.13.1]	1	3.40	36B1	6	3.40	LB20	10.2	54.48	—	54.48	389.3	64.23	1.5785	16.83	162.00	13.00	13.14	—
OPGW-40B1-60 [68.14.8]	1	3.50	40B1	6	3.50	LB20	10.50	57.73	—	57.73	411.1	65.98	1.4896	16.38	162.00	13.00	14.75	—
OPGW-40B1-60 [70.15.5]	1	3.60	40B1	6	3.60	LB20	10.80	61.07	—	61.07	433.4	69.81	1.4080	16.43	162.00	13.00	16.51	—
OPGW-48B1-70 [77.20.5]	1	3.80	48B1	6	3.80	LB20	11.40	68.05	—	68.05	480.1	76.55	1.2636	16.27	162.00	13.00	20.50	JLB20A-70-7

型号 type	结构参数 structure parameters										直径 nominal diameter mm	截面积 section area			单位长度质量 weight per unit length kg/km	额定拉断力 rated breaking force kN	20℃时直流电阻 R(20) DC resistance Ω/km	拉重比 Pull weight ratio km	弹性模量 Elastic modulus GPa	线膨胀系数 Coefficient of linear expansion × 10 ⁻⁶ /℃	短路电流热容量 The heat capacity of the short-circuit current kA ² ·s	推荐匹配地线 Recommended matching ground wire		
	中心 center		内层(第1层) first layer			外层(第2层) second layer			不锈钢管单元 stainless steel tube light unit			铝包钢线 AL	铝合金线 AS	总计 total										
	根数 number	直径 nominal diameter mm	材料 Material	根数 number	直径 nominal diameter mm	材料 Material	根数 number	直径 nominal diameter mm	材料 Material	根数 number													直径 nominal diameter mm	光纤最大数量 maximum number of optical fiber
OPGW-24B1-90 [107.34.3]	1	2.60	LB20	5	2.50	LB20	12	2.50	LB20	1	2.50	24B1	12.60	88.76	—	88.76	615.4	107.04	0.9718	17.75	162.00	13.00	34.88	JLB20A-95-7
OPGW-24B1-100 [121.44.3]	1	2.60	LB20	5	2.50	LB20	11	2.85	LB20	1	2.50	24B1	13.30	100.03	—	100.03	691.2	120.63	0.8626	17.81	162.00	13.00	44.30	GJ-100
OPGW-30B1-120 [144.62.8]	1	2.85	LB20	5	2.75	LB20	11	3.10	LB20	1	2.70	30B1	14.55	119.10	—	119.10	619.2	143.64	0.7244	17.89	162.00	13.00	62.80	GJ-120
OPGW-30B1-120 [68.114.0]	1	2.85	LB20	5	2.75	LB20	11	3.10	LHA2	1	2.70	30B1	14.55	36.08	83.02	119.10	489.3	68.00	0.3421	14.16	94.38	17.80	114.01	JLB40-120-19
OPGW-36B1-135 [164.82.3]	1	3.20	LB20	5	3.10	LB20	12	3.10	LB20	1	3.00	36B1	15.60	136.35	—	136.35	934.7	164.44	0.6326	17.95	162.00	13.00	82.31	—
OPGW-36B1-135 [83.127.8]	1	3.20	LB40	5	3.10	LB40	12	3.10	LB40	1	3.00	36B1	15.60	136.35	—	136.35	662.8	83.45	0.3215	12.85	109.00	15.50	127.78	—
OPGW-36B1-145 [175.83.4]	1	3.30	LB20	5	3.20	LB20	12	3.20	LB20	1	3.10	36B1	16.10	145.28	—	145.28	904.6	174.97	0.5937	17.95	162.00	13.00	93.44	—
OPGW-36B1-145 [89.145.0]	1	3.30	LB40	5	3.20	LB40	12	3.20	LB40	1	3.10	36B1	16.10	145.28	—	145.28	704.9	88.91	0.3018	12.87	109.00	15.50	145.08	JLB40-150-19
OPGW-48B1-165 [193.119.0]	1	3.50	LB20	5	3.40	LB20	12	3.40	LB20	1	3.30	48B1	17.10	163.97	—	163.97	1125.0	193.32	0.5260	17.53	162.00	13.00	119.03	—
OPGW-48B1-185 [211.150.5]	1	3.80	LB20	5	3.60	LB20	12	3.60	LB20	1	3.40	48B1	18.20	184.38	—	184.38	1261.9	211.15	0.4678	17.08	162.00	13.00	150.51	—

注1: 型号中光纤芯数为光单元所承受的最大芯数; 2: 产品性能参数均为标称值; 3: 光纤类型以刚类为例; 4: 除单位长度质量, 其它参数均未考虑光单元因素; 5: 短路电流热容量: 温度范围取40℃-200℃。

光纤复合架空相线 (OPPC)

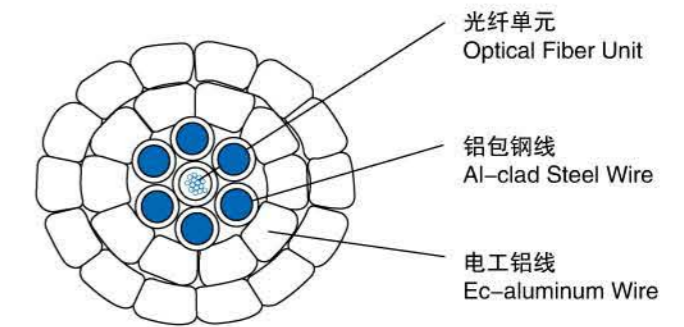
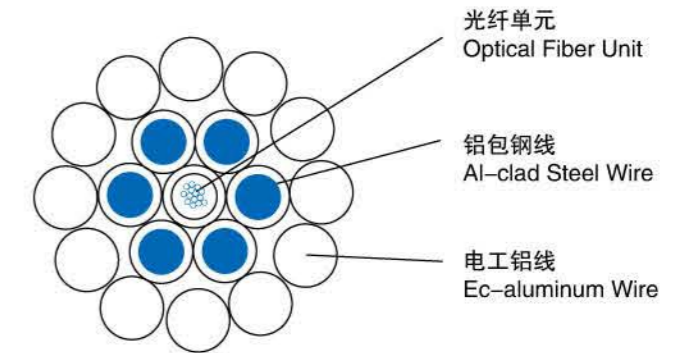
Optical Fiber Composite Overhead Phase Conductor(OPPC)

产品描述 Product Description

光纤复合架空相线OPPC是一种特殊的复合电力光缆, 将传统架空相线结构中的一根或多根镀锌钢丝(或铝包钢线)替换为不锈钢光纤单元, 使其具有传输电能及通信的双重功能。

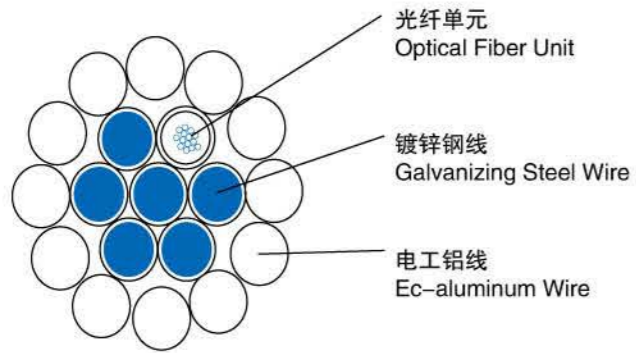
Optical fiber composite overhead phase Conductor (oppc) is a new type of special power composite cable, which combines optical fiber unit and traditional phase structure in the wire. It makes full use of its own line power system resources, particularly the power distribution network system, to avoid conflict with the outside world in aspects such as frequency resources, routing coordination, electromagnetic compatibility, which gives it dual functions of power transmission and communication.

结构示意图 Structure

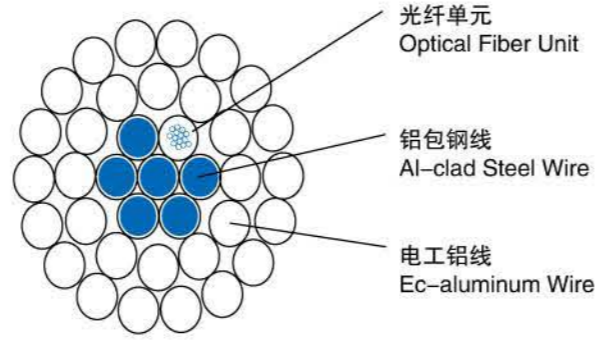


光纤复合架空相线 (OPPC)

Optical Fiber Composite Overhead Phase Conductor(OPPC)



图c:层绞式结构一
c: Layer Stranding Structure



图d:层绞式结构一
d: Layer Stranding Structure

常用产品参数 Commonly Used Product Parameters

型号 type	结构参数 structure parameters											截面面积 section area			单位长度重量 weight per unit length kg/km	额定拉断力 rated breaking force kN	20℃时直流电阻 R(20) DC resistance Ω/km	参考载流量 interception amount for reference			导线 wire					
	中心 center		第一层 first layer		不锈钢管光单元 stainless steel tube light unit		第二层 second layer		第三层 third layer		直径 nominal diameter mm	铝包 钢线 AL	铝合 金线 AS	总计 total				40-70℃	40-80℃	40-90℃						
	根数 core	直径 nominal diameter mm	根数 core	直径 nominal diameter mm	根数 core	直径 nominal diameter mm	根数 core	直径 nominal diameter mm	根数 core	直径 nominal diameter mm												材料 Material	材料 Material	材料 Material		
	材料 Material	材料 Material	材料 Material	材料 Material	材料 Material	材料 Material	材料 Material	材料 Material	材料 Material	材料 Material	材料 Material	材料 Material	材料 Material													
OPPC-16B1-85/25	1	2.3	20AS	5	2.3	20AS	1	2.3	14B1	9	3.45	AL	/	/	AL	13.8	84.13	24.93	109.1	410	42.2	0.3106	251	307	362	LGJ-95/15
OPPC-16B1-90/25	1	2.4	20AS	5	2.4	20AS	1	2.4	20B1	9	3.6	AL	/	/	AL	14.4	91.61	27.14	118.8	446	45.9	0.2852	265	233	371	LGJ-95/20
OPPC-16B1-95/50	1	3.25	14AS	5	3.25	14AS	1	3.25	48B1	12	3.2	AL	/	/	AL	16.15	96.51	49.77	146.3	645	83.3	0.2665	281	346	397	LGJ-95/55
OPPC-16B1-110/25	1	2.35	20AS	5	2.35	20AS	1	2.35	16B1	8	4.2	AL	/	/	AL	15.45	110.84	26.02	136.9	491	47.3	0.2401	293	359	412	LGJ-120/20
OPPC-16B1-120/25	1	2.4	20AS	5	2.4	20AS	1	2.4	20B1	8	4.35	AL	/	/	AL	15.9	118.89	27.14	146.0	521	49.9	0.2242	305	374	430	LGJ-120/25
OPPC-16B1-150/25	1	2.35	20AS	5	2.35	20AS	1	2.35	16B1	11	2.6	AL	17	2.6	AL	17.45	148.66	26.02	174.7	597	54.1	0.1831	344	423	487	LGJ-150/25
OPPC-16B1-150/30	1	2.55	14AS	5	2.55	14AS	1	2.55	24B1	12	2.55	AL	18	2.55	AL	17.85	153.21	30.64	183.9	659	67.3	0.1799	349	430	195	LGJ-150/35
OPPC-16B1-185/25	1	2.35	20AS	5	2.35	20AS	1	2.35	16B1	10	3.0	AL	15	3.0	AL	19.05	183.78	26.02	209.8	693	58.7	0.1496	367	478	552	LGJ-185/45
OPPC-16B1-185/40	1	2.85	14AS	5	2.85	14AS	1	2.85	30B1	12	2.8	AL	18	2.8	AL	19.75	184.73	38.28	223.0	803	82.2	0.1489	391	494	560	LGJ-210/25
OPPC-16B1-210/25	1	2.3	20AS	5	2.3	20AS	1	2.3	16B1	9	3.35	AL	15	3.35	AL	20.3	211.54	24.93	236.5	762	63.9	0.1309	415	515	595	LGJ-210/25
OPPC-16B1-210/30	1	2.55	14AS	5	2.55	14AS	1	2.55	24B1	10	3.22	AL	16	3.22	AL	20.53	211.73	30.64	242.2	819	74.3	0.1317	419	519	601	LGJ-210/35
OPPC-16B1-240/30	1	2.45	20AS	5	2.45	20AS	1	2.45	20B1	9	3.6	AL	15	3.6	AL	21.75	244.29	28.29	272.6	875	73.1	0.1135	456	567	657	LGJ-240/30
OPPC-16B1-240/50	1	3.25	14AS	5	3.25	14AS	1	3.25	48B1	12	3.2	AL	18	3.2	AL	22.55	241.27	49.77	291.0	1045	104.2	0.1141	459	571	663	LGJ-240/55
OPPC-20B1+4A1a-400/35	1	2.5	LB14	1	2.5	SUS LB14	1	2.5	20B1+41A1a	10	3.22	HAL	22	3.22	HAL	26.82	29.45	390.88	420.33	1321	103.9	0.0725	620	780	869	LGJ-400/35

光纤复合低压电缆 (OPLC)

Optical Fiber Composite Low-voltage Cable(OPLC)

产品描述 Product Description

OPLC是一种将光纤单元复合在低压电力电缆内，具有电力传输和光通信传输双重能力的复合电缆，适用于额定电压0.4KV。

OPLC fiber composite low-voltage cable is a type of composite cable that combines optical fiber light with low-voltage cable; it has dual function of power transmission and communication and can be used at rate constant voltage of 0.4KV.

产品规格及结构说明 Size and structure

一、型号示例说明 1.model specification

示例一: GD-VY23 0.6/1kv 3-240+1x120+G1-12B1

说明: 包含12芯B1类光纤非金属层绞式光缆单元的铜芯聚氯乙烯绝缘钢带铠装聚乙烯护套光纤复合电缆，额定电压0.6/1kv，3芯加1芯，导体标称截面，240mm²(主)，120mm²

Example 1: GD-VY23 0.6/1kv 3-240+1x120+G1-12B1

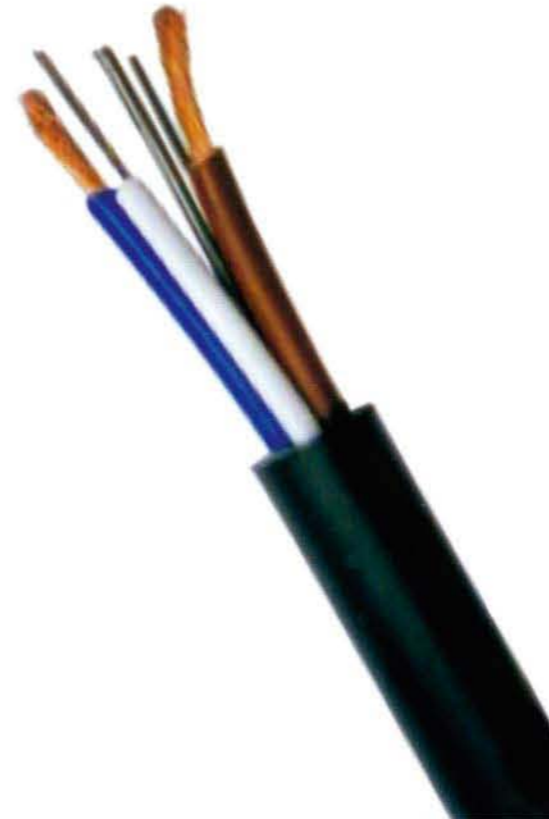
notes:includes the polythene insulated, steel tape armored and PVC sheathed power cable with copper core of the 12-core BI-category non-metallic coating metal strengthened optical cable unit, rated voltage 0.6/1kv, 3cores plus 1core, conductor nominal interception. 240cm²(major). 120mm².

示例二: GD-YJY 0.6/1kv 2x10+G4-4B1

说明: 包含4芯B1类光纤蝶形光缆单元的铜芯交联聚乙烯绝缘聚乙烯护套光纤复合电缆，额定电压0.6/1kv，2芯，导体标称截面，10mm²

Example 2: GD-YJY 0.6/1kv 2x10+G4-4B1

notes:includes the polythene insulated, steel tape armored and PVC sheathed power cable with copper core of the 12-core BI-category non-metallic coating metal strengthened optical cable unit, rated voltage 0.6/1kv, 3cores plus 1core, conductor nominal interception, 240cm (major), 120mm².



- GD——光纤复合电缆
- G1——非金属层绞式光缆单元
- G2——非金属中心束管(全干式)光缆单元
- G3——配线光缆单元
- G4——蝶形光缆单元

- GD——optical fiber composite cable
- G1——non-metallic layer hinged cable unit
- G2——non-metallic centre beam tube fiber optic cable unit
- G3——Widng cable unit
- G4——butterfiy cable unit