

Optical Fiber Composite Low-voltage Cable OPLC

Optical fiber composite insulated power cable for low voltages (OPLC) is a new type of photoelectric composite cable for low voltage power lines, and has double functions as ordinary low voltage cable and communication cable. The structure of OPLC integrates the fiber and copper wire of transmission and distribution, it uses fiber composite low voltage cable as well as passive optical network technology to achieve fiber to the home (FTTH), undertake the power information collection service of resident users in information intranet, and satisfy the information extranet, multi- network integration service required by intelligent power grid informatization, automation and interactivity.

Application

1 .Electricity Distribution Room to Low voltage feeder box

◆flame retardancy requirement: flame retardant (code: ZR)

◆insulating material: cross-linked polyethylene (code: YJ)

◆sheath material: polyvinyl chloride (code: V)

◆cable category: three- phase four- wire and three- phase and five- wire

◆optical unit model: nonmetal central tube all- dry optical unit (code: XG), nonmetal central tube gel filled optical unit (code: XTG)

2.Low voltage feeder box to user ammeter

◆flame retardancy requirement: flame retardant (code: ZR)

◆insulating material: cross-linked polyethylene (code: YJ), polyvinyl chloride (code:V)

◆sheath material: polyvinyl chloride (code: V)

◆armoring requirement: double copper strip (code: 2)

◆outer sheath requirement: polyvinyl chloride (code: 2)

◆optical unit model: nonmetal central tube all-dry optical unit (code: XG)

◆cable category: single phase three- wire, three-phase four- wire

3.user ammeter to users' indoor

◆flame retardancy requirement: flame retardant (code: ZR), zero halogen low smoke flame retardant category C (code: WDZC)

◆insulating material: polyethylene (code: Y), polyvinyl chloride (code: V)

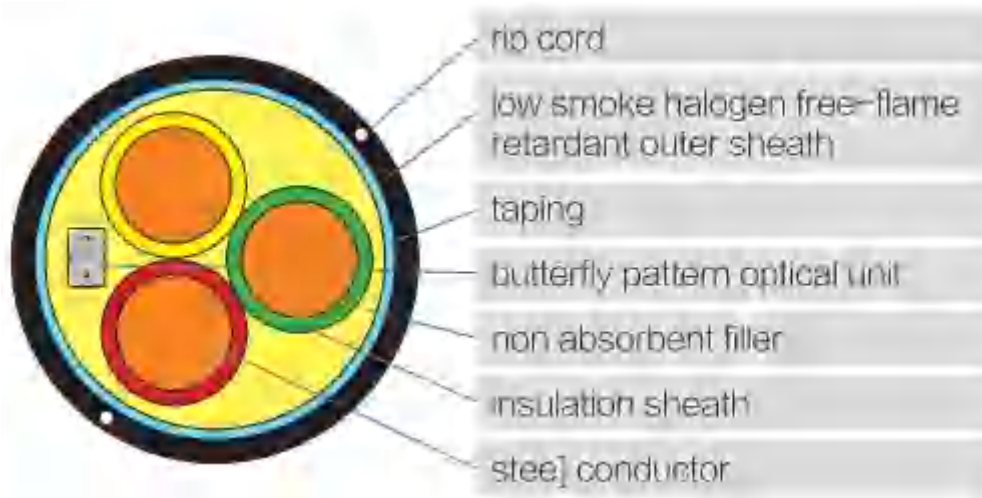
◆sheath material: polyethylene (code: Y), polyvinyl chloride (code: V)

◆optical unit model: nonmetal central tube all-dry optical unit (code: XG), bow-type optical unit (code: BG)

Structure parameter

1. Structure chart

Butterfly optical unit photoelectric composite cable (OPLC-YJY- 3x10+BG-0.6/1 T BI+1B4).



2. Optical unit structure parameters

Item	Unit	Value
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Item	Unit	Value
Number of fibers in the cable	Core	Two cores G.652/G.655
Optical unit type		Butterfly pattern
Diameter of strength member	mm	0.6
Sheathing material		Low smoke zero halogen flame retardant polyolefin
Outside diameter of optical unit	mm	2x3
Weight of optical unit	Kg	7.1

3. Cable structure parameters

Item	Unit	Corresponding sectional	Value	Remark
Conductor diameter	mm	10	3.8	The second type copper conductor
Number of conductor monofilamen	piece	10	7	Coarctate round
Conductor resistance	Ω /km	10	0.723	20°C
Insulation resistance	Ω -X1010	10	6.17	Model length 1000cm
Insulation thickness	mm	10	0.9	XLPE
Rip cord	piece		2	Polyester rip cord
Thickness of outer sheath	mm		2.3	Low smoke zero halogen flame retardant
Total cable diameter	mm		18.1	
Cable weight	kg/km		550	
Weight of OPLC	kg/km		557.1	

Typical structure

1. Nonmetal central tube all-dry photoelectric composite cable (OPLC-YJV22-4x185-0. 6/1-XG-8B1).
2. Nonmetal stranded gel filled type photoelectric composite cable (OPLC-YJV-4x150+1x90-0. 6/1-CTG-4B1).

