

OPLC / Optical Fiber Composite Cable

Optical fiber composite cable for power and communication integration

OPLC / Optical Fiber Composite Cable is prepared for preliminary product selection and quotation review. This product is used where power transmission and optical fiber communication are combined in one route. Electrical parameters and fiber-unit requirements should be reviewed together.



VOLTAGE

0.6/1kV to 35kV

CONDUCTOR

Power conductor with optical fiber unit, according to project design

TYPICAL USE

Smart grid routes

STANDARDS

IEC 60502

DATA SCOPE

1 technical table(s) included for preliminary selection

SELECTION NOTE

Confirm special performance, voltage, conductor, standard and installation condition.

For quotation review, provide cable type, standard, size, quantity and project destination.

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Application & Selection Summary

Typical applications

- Smart grid routes
- power distribution with communication
- monitoring lines
- utility communication and control routes.

Selection logic

- Confirm conductor specification, fiber count, cable structure, voltage route, installation condition and communication requirement.

Construction Overview

Item	Website-ready content
Product route	Power conductor and optical fiber unit combined in one cable structure according to project specification.
Voltage	0.6kV, 0.6/1kV, 35kV
Conductor	Power conductor with optical fiber unit, according to project design
Standards	IEC 60502
Confirmation	Final structure, dimensions and packing should follow selected standard, quotation review and order specification.

Readable Data Index

Data route	Size / rating range	Construction	Diameter / OD	Resistance / weight / rating
OPLC / Optical Fiber Composite Cable - Technical Table 1	See table	See table	See table	See table

Data boundary: these tables support website launch, quotation review and preliminary product selection. For project execution, final dimensions, electrical performance, packing and compliance documents should be confirmed against the selected project standard and order specification.

OPLC / Optical Fiber Composite Cable - Technical Table 1

Reference table for preliminary selection and quotation review.

Parameter	Available Customization Range	Key Considerations
Power Voltage	0.6/1kV (LV) up to 35kV (MV)	Determines insulation thickness (XLPE)
Power Cores	1 Core to 5 Cores	Dependent on phase/ground requirements
Copper Size	1.5 mm ² up to 630 mm ²	Determines current ampacity
Fiber Type	Single-Mode (G.652D) or Multi- Mode (OM1-OM4)	Single-mode for long distance (Wind farms)
Fiber Count	2 to 144 Cores	Determines data bandwidth capacity
Optical Tube	PBT Loose Tube or Stainless Steel Tube	Steel required for high crush resistance
Armouring	Unarmoured, STA (Steel Tape), SWA (Steel Wire)	SWA for high tensile loads / STA for burial
Outer Sheath	PVC, PE, or LSZH	PE for outdoor/water; LSZH for indoor fire safety