

KCEP



kcep.kz



**29 YEARS
ON THE MARKET**

of telecommunications, power engineering, railway automation and telemechanics. Our mission is to promote the development of the Kazakhstan economy through the introduction of advanced technologies in such industries as: industrial and civil engineering, mechanical engineering and metallurgy, transport communications, mining and oil refining industries, as well as railway automation and telemechanics.

As a philosophy of its activities, KCEP has chosen to meet the requirements and achieve the goals of its customers by providing high-quality products and services.

KCEP is a company with many years of experience in developing, manufacturing and integrating solutions for industry and the civil sector.

For 29 years, we have been the driving force behind the introduction of innovations in the Kazakhstani market in responsible sectors: in communications, electric power industry, railway automation and others. Today, combining advanced experience, the spirit of innovation and loyalty to tradition, we are ready for the technological demands of the new century.

1993
The year of foundation
of the company.

2003
QMS
in accordance with
ISO 9001 has been
implemented.

2009
The first kilometer
of optical cable
was produced..

2010
A new workshop
for cable production with
an area of 5.5 thousand m²
was built.

2011
The production
of a product range for FTTH
network using
GPON technology
was launched.

2015
The LAN cable
manufactured by KCEP
was successfully
certified in Germany.

2016
The serial
production of an optical
microcable for
blowing in accordance with
European standards
was launched.

2018
In Germany
successfully
completed test of optical
cable in accordance
with European
standards.

2019
KCEP is the main
supplier of optical cable
for the Government project
“Digital Kazakhstan”.



Dear friends,

We always care about our customers. We sustainably follow the principles of maintaining proper quality of products and a high level of service - this is the business culture that every employee of the company cultivates, and which is crucial for the long-term success, both ours and our customers.

Sergey Kim
CEO

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AIR BLOWN CABLE

Cable type KC-OKG

Application for installation in cable racks, on the walls of building in case of absence risks of mechanical damages, in protection pipes by blowing method



- 1 Central strength element
- 2 Optical fiber
- 3 Optical loose tube
- 4 Intermodular compound
- 5 Outer sheath

● Technical data

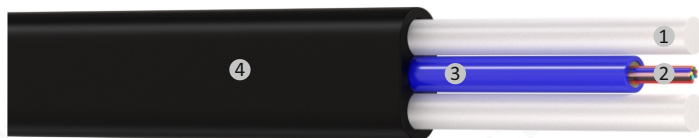
[More information on kcep.kz](http://www.kcep.kz)

Cable construction No	1084	1087	1056	10127	1050
Number of fibers	24	36		48	
Number of loose tube	6				
Number of fibers in loose tube	4	6		8	
Short-term crush test, kN/cm (N/10cm)	0,3 (3000)		0,25 (2500)	0,2 (2000)	0,3 (3000)
Dynamic tensile strength, not less than, kN	1,2	1,5		2,9	
Operating temperature	-40 ... +60 °C				
Installation temperature	-10 ... +50 °C				
Cable outer diameter, mm	8,7	8,8	9,4	9,3	10,3

AERIAL AND AIR BLOW CABLE

Cable type KC-OKGO

Application for suspension between communication poles, for installation in cable racks, on the walls of building in case of absence risks of mechanical damages, in protection pipes by blowing method



- 1 Peripheral strength element
- 2 Optical fiber
- 3 Optical loose tube
- 4 Outer sheath

[More information on kcep.kz](http://www.kcep.kz)

● Technical data

Cable construction No	1209	1210	1221	1222	1223	1224
Number of fibers	12	24	2	4	16	24
Number of loose tube	1	2	1			
Number of fibers in loose tube	2-12	12-24	1-2	2-4	8-16	24
Short-term crush test, kN/cm (N/10cm)	1,0 (10000)					
Dynamic tensile strength, not less than, kN	1,7	0,6	1,1	1,5	1,9	
Operating temperature	-40 ... +60 °C		-50 ... +70 °C			
Installation temperature	-10 ... +50 °C					
Overall dimensions, thickness x height, mm	3,6x8,1	3,6x11,0	5,3x2,4	6,5x2,8	7,2x3,6	7,7x4,0

CABLE FOR INSTALLATION IN CABLE DUCT SYSTEMS

Cable type KC-OKL

Application for installation in cable ducts, pipes, blocks, collectors, on bridges and in shafts, without bending loads, in case of a risk of cable damage by rodents, in areas with the possibility of flooding for a long time, into the soils of 1-3 categories



- ① Central strength element
- ② Optical fiber
- ③ Optical loose tube
- ④ Intermodular compound
- ⑤ Water-blocking element
- ⑥ Steel corrugated tape
- ⑦ Outer sheath

[More information on kcep.kz](http://www.kcep.kz)

● Technical data

Cable construction No	2025	2026	2027	2028	2036	2037
Number of fibers	28	48	96	144	24	48
Number of loose tube	7	6	8	12	6	
Number of fibers in loose tube	4	8	12		4	8
Short-term crush test, kN/cm (N/10cm)	0,35 (3500)				0,3 (3000)	0,4 (4000)
Dynamic tensile strength, not less than, kN	2,5				3,0	
Operating temperature	-40 ... +60 °C				-40 ... +70 °C	
Installation temperature	-10 ... +50 °C					
Cable outer diameter, mm	9,9	11,4	13,5	17,0	8,5	9,9

CABLE FOR INSTALLATION IN CABLE DUCT SYSTEMS

Cable type KC-OKLO

Application for installation in cable ducts, pipes, blocks, collectors, on bridges and in shafts, without bending loads, in case of a risk of cable damage by rodents, in areas with the possibility of flooding for a long time, into the soils of 1-3 categories



- 1 Peripheral strength element
- 2 Optical fiber
- 3 Optical loose tube
- 4 Steel corrugated tape
- 5 Outer sheath

[More information on kcep.kz](http://www.kcep.kz)

● Technical data

Cable construction No	2205	2207
Number of fibers	24	
Number of loose tube	1	
Number of fibers in loose tube	2-24	
Short-term crush test, kN/cm (N/10cm)	0,4 (4000)	0,3 (3000)
Dynamic tensile strength, not less than, kN	3,0	1,8
Operating temperature	-40 ... +60 °C	
Installation temperature	-10 ... +50 °C	
Cable outer diameter, mm	8,9	7,8



AERIAL CABLE

Cable type KC-OKT

Application for suspension on communication poles, public lighting poles and between buildings



- 1 Suspended strength element
- 2 Central strength element
- 3 Optical fiber
- 4 Optical loose tube
- 5 Intermodular compound
- 6 Outer sheath

[More information on kcep.kz](https://www.kcep.kz)

● Technical data

Cable construction No	3047
Number of fibers	48
Number of loose tube	6
Number of fibers in loose tube	8
Short-term crush test, kN/cm (N/10cm)	0,3 (3000)
Dynamic tensile strength, not less than, kN*	6,5
Operating temperature	-50 ... +70 °C
Installation temperature	-10 ... +50 °C
Overall dimensions, thickness x height, mm	8,7x15,0

AERIAL CABLE

Cable type KC-OKTO

Application for suspension on communication poles, public lighting poles and between buildings



- ① Suspended strength element
- ② Optical fiber
- ③ Optical loose tube
- ④ Outer sheath

[More information on kcep.kz](#)

● Technical data

Cable construction No	3209	3210
Number of fibers	24	
Number of loose tube	1	
Number of fibers in loose tube	2-24	
Short-term crush test, kN/cm (N/10cm)	0,55 (5500)	0,4 (4000)
Dynamic tensile strength, not less than, kN*	2,0	4,0
Operating temperature	-40 ... +70 °C	-50 ... +70 °C
Installation temperature	-10 ... +50 °C	
Overall dimensions, thickness x height, mm	4,8x8,1	4,7x10,5

AERIAL CABLE

Cable type KC-OKTO

Application for suspension on communication poles, public lighting poles and between buildings



- 1 Suspended strength element
- 2 Optical fiber
- 3 Optical loose tube
- 4 Outer sheath

[More information on kcep.kz](https://www.kcep.kz)

● Technical data

Cable construction No	3211	3212
Number of fibers	24	
Number of loose tube	1	
Number of fibers in loose tube	2-24	
Short-term crush test, kN/cm (N/10cm)	0,4 (4000)	0,8 (8000)
Dynamic tensile strength, not less than, kN*	7,0	4,5
Operating temperature	-50 ... +70 °C	
Installation temperature	-10 ... +50 °C	-30 ... +50 °C
Overall dimensions, thickness x height, mm	5,3x10,7	5,4x11,0

DIELECTRIC AERIAL CABLE

Cable type KC-OKP

Application for suspension between buildings, on lighting poles, on 0,4-10 kV power lines, in cable ducts, pipes, blocks, collectors, on bridges and in shafts, in case of risks of cable damage by rodents



- 1 Central strength element
- 2 Optical fiber
- 3 Optical loose tube
- 4 Intermodular compound
- 5 Glass yarns
- 6 Outer sheath

[More information on kcep.kz](http://www.kcep.kz)

● Technical data

Cable construction No	6307
Number of fibers	48
Number of loose tube	6
Number of fibers in loose tube	8
Short-term crush test, kN/cm (N/10cm)	0,15 (1500)
Dynamic tensile strength, not less than, kN*	4,7
Operating temperature	-50 ... +70 °C
Installation temperature	-10 ... +50 °C
Cable outer diameter, mm	9,2

ALL DIELECTRIC SELF SUPPORT CABLE

Cable type KC-OKK

Application for manual or mechanical suspension on poles of overhead lines, on power lines with voltage up to 110 kV poles, on the walls of buildings, in cable trays



- ① Central strength element
- ② Optical fiber
- ③ Optical loose tube
- ④ Inner sheath
- ⑤ Aramid yarns
- ⑥ Outer sheath

[More information on kcep.kz](#)

● Technical data

Cable construction No	7008	7114	7120
Number of fibers	24		60
Number of loose tube	6		5
Number of fibers in loose tube	4		12
Short-term crush test, kN/cm (N/10cm)	0,3 (3000)		0,22 (2200)
Dynamic tensile strength, not less than, kN*	4,0	6,0	4,0
Operating temperature	-40 ... +50 °C	-40 ... +70 °C	
Installation temperature	-10 ... +50 °C		-15 ... + 60 °C
Cable outer diameter, mm	9,5	11,9	10,3

CABLE FOR UNDERGROUND INSTALLATION

Cable type KC-OKB

Application for manual or mechanical installation in soils of all categories, except soils tend to negative temperature deformations, in case of high requirements for resistance to mechanical loads, in sewage systems, protective pipes, blocks, collectors



- 1 Central strength element
- 2 Optical fiber
- 3 Optical loose tube
- 4 Intermodular compound
- 5 Inner sheath
- 6 Zinc-coated steel
- 7 Outer sheath

[More information on kcep.kz](http://www.kcep.kz)

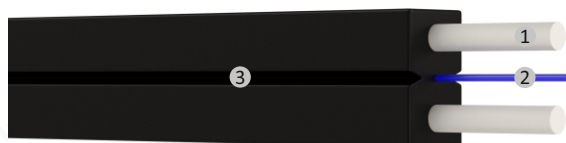
● Technical data

Cable construction No	6032	6033	6051	6054	6055
Number of fibers	20	30	48	24	48
Number of loose tube	5		4		
Number of fibers in loose tube	4	6	12	6	12
Short-term crush test, kN/cm (N/10cm)	0,55 (5500)	0,4 (4000)	0,5 (5000)	0,4 (4000)	
Dynamic tensile strength, not less than, kN	13,0		8,1	9,2	12,5
Operating temperature	-40 ... +60 °C			-50 ... +70 °C	
Installation temperature	-10 ... +50 °C				
Cable outer diameter, mm	11,9	12,5	14,1	11,4	12,4

INDOOR CABLE

Cable type KC-FTTH

Application for indoor installation, in pipes, on the walls of the buildings in cable ducts



- 1 Peripheral strength element
- 2 Optical fiber
- 3 Outer sheath

[More information on kcep.kz](https://www.kcep.kz)

● Technical data

Cable construction No	4037	4039	4042
Number of fibers	4		
Cable color	white	black	white
Short-term crush test, kN/cm (N/10cm)	0,1 (1000)		0,15 (1500)
Dynamic tensile strength, not less than, kN	0,15		0,08
Operating temperature	-40 ... +50 °C	-40 ... +70 °C	-40 ... +50 °C
Installation temperature	-10 ... +40 °C		
Overall dimensions, thickness x height, mm	2,0x3,0		

AERIAL CABLE

Cable type KC-FTTHSC, KC-FTTHD

Application for suspension on communication poles and on the walls of the buildings

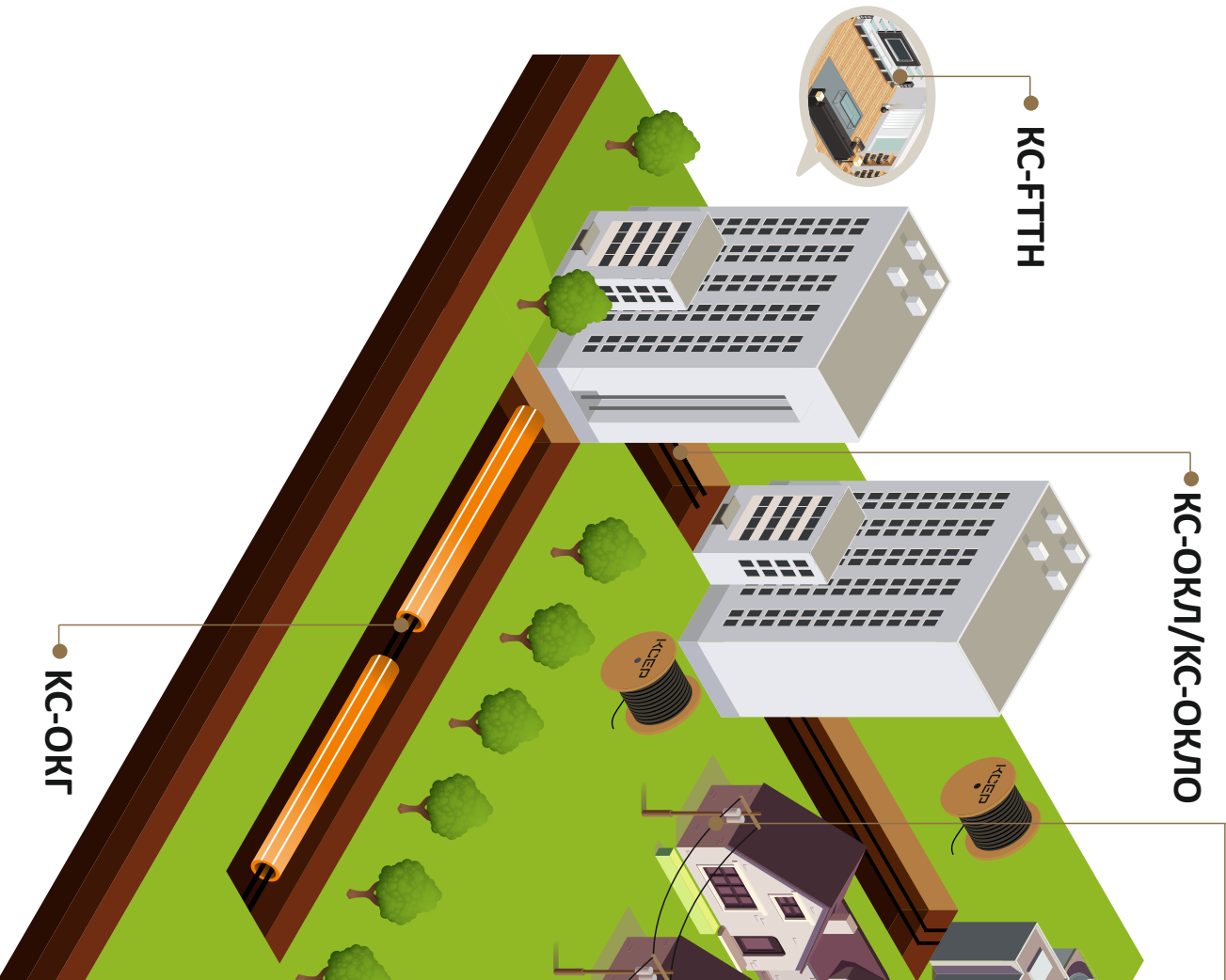


- ① Suspended strength element
- ② Peripheral strength element
- ③ Optical fiber
- ④ Outer sheath

[More information on kcep.kz](https://www.kcep.kz)

● Technical data

Cable construction No	4013(SC)	4043(D)	4047(D)
Number of fibers	2		
Short-term crush test, kN/cm (N/10cm)	0,1 (1000)	0,3 (3000)	
Dynamic tensile strength, not less than, kN	0,6	0,33	0,7
Operating temperature	-40 ... +70 °C		
Installation temperature	-10 ... +40 °C		
Overall dimensions, thickness x height, mm	2,2x5,6	2,2x5,2	2,7x6,0

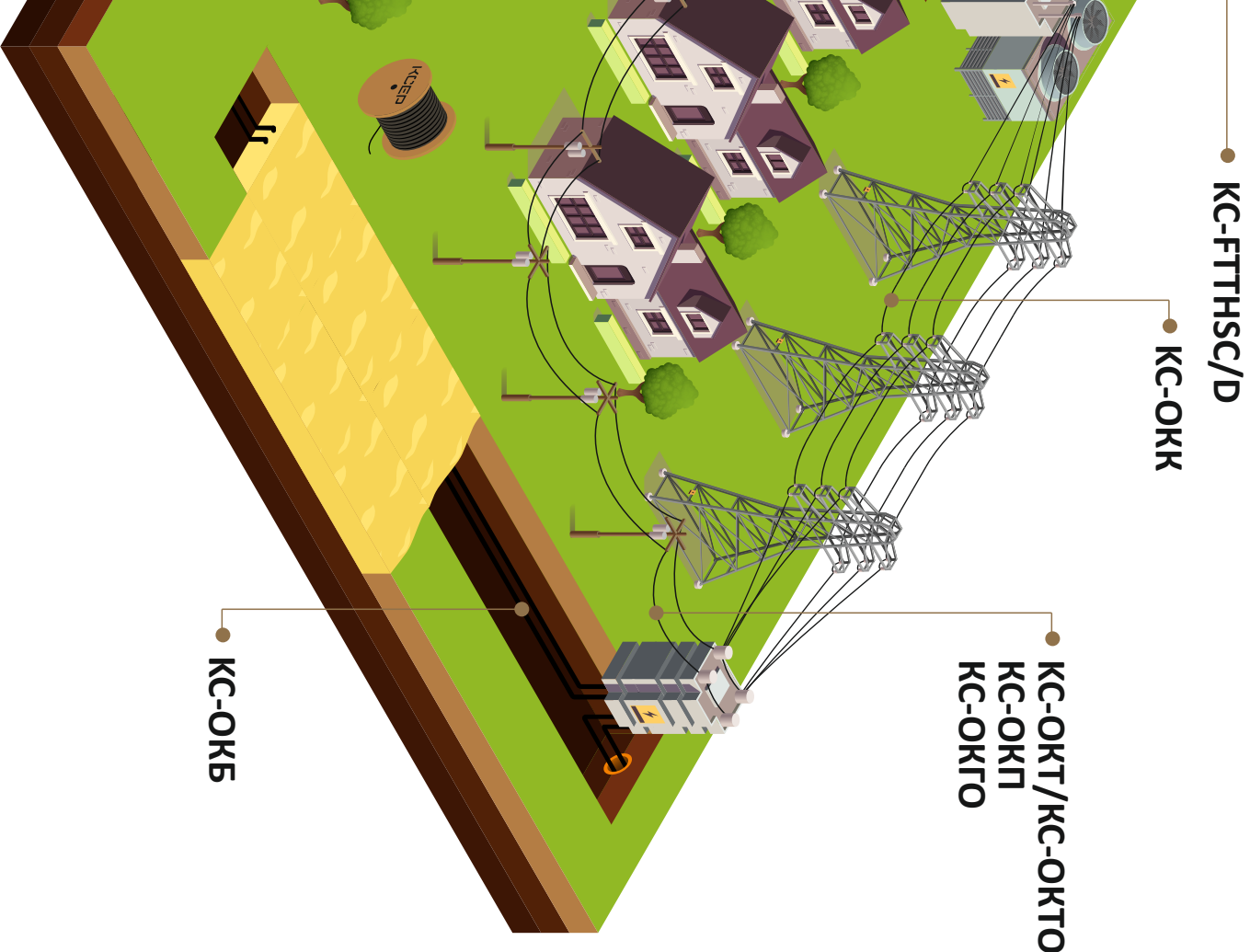


• КС-FTTH

• КС-ОКЛ/КС-ОКЛО

• КС-ОКЛ

FIBRE OPTICAL CABLE USAGE



● KC-FTTHSC/D

● KC-OKK

● KC-OKT/KC-OKTO
KC-OKП
KC-OKO

● KC-OKБ

OIL AND GAS INDUSTRY OPTICAL CABLES



CABLE FOR INSTALLATION IN CABLE DUCT SYSTEMS

Cable type KC-OKLnf

Application for indoor installation, in cable ducts, pipes, blocks, collectors, on bridges and in shafts, without bending loads, in case of a risks of cable damage by rodents, in areas with the possibility of flooding for a long time



- 1 Central strength element
- 2 Optical fiber
- 3 Optical loose tube
- 4 Intermodular compound
- 5 Water-blocking element
- 6 Inner sheath
- 7 Steel corrugated tape
- 8 Outer sheath

Fire indicators Flame retardant, category A according to IEC 60332-3-22.

Halogen-free according to IEC 60754. Low-smoke according to IEC 61034

● Technical data

[More information on kcep.kz](#)

Cable construction No	2034	2035
Number of fibers	60	96
Number of loose tube	5	8
Number of fibers in loose tube	12	
Short-term crush test, kN/cm (N/10cm)	0,4 (4000)	
Dynamic tensile strength, not less than, kN	2,7	
Operating temperature	-40 ... +60 °C	
Installation temperature	-15 ... +70 °C	
Cable outer diameter, mm	14,8	16,6

ALL DIELECTRIC SELF SUPPORT CABLE

Cable type KC-OKKnf

Application for manual or mechanical suspension on poles of overhead lines, on power lines with voltage up to 110 kV poles, on the walls of buildings, in cable trays



- 1 Central strength element
- 2 Optical fiber
- 3 Optical loose tube
- 4 Intermodular compound
- 5 Water-blocking element
- 6 Inner sheath
- 7 Aramid yarns
- 8 Outer sheath

Fire indicators Flame retardant, category A according to IEC 60332-3-22.

Halogen-free according to IEC 60754. Low-smoke according to IEC 61034

● Technical data

[More information on kcep.kz](#)

Cable construction No	7111	7112	7113
Number of fibers	60	96	144
Number of loose tube	5	8	12
Number of fibers in loose tube	12		
Short-term crush test, kN/cm (N/10cm)	0,4 (4000)		
Dynamic tensile strength, not less than, kN*	7,0	8,1	
Operating temperature	-40 ... +85 °C		
Installation temperature	-15 ... +50 °C		
Cable outer diameter, mm	13,8	15,2	18,5

CABLE FOR UNDERGROUND INSTALLATION

Cable type KC-OKBnf

Application designed for manual or mechanical installation in soils of all categories, including soils tend to negative temperature deformation and in marshes, in cable duct systems, protection pipes, cable trays



- 1 Central strength element
- 2 Optical fiber
- 3 Optical loose tube
- 4 Intermodular compound
- 5 Aramid yarns
- 6 Water-blocking element
- 7 Inner sheath
- 8 Zinc-coated steel
- 9 Outer sheath

Fire indicators Flame retardant, category A according to IEC 60332-3-22.

Halogen-free according to IEC 60754. Low-smoke according to IEC 61034

● Technical data

[More information on kcep.kz](#)

Cable construction No	6028	6029	6030
Number of fiberso	60	96	144
Number of loose tube	5	8	12
Number of fibers in loose tube	12		
Short-term crush test, kN/cm (N/10cm)	0,4 (4000)		0,6 (6000)
Dynamic tensile strength, not less than, kN	30	48	70
Operating temperature	-40 ... +85 °C		
Installation temperature	-30 ... +70 °C		
Cable outer diameter, mm	16,2	19,6	24,0

● GENERAL SPECIFICATION



Standarts

ST TOO 143-1930-10-16-38-2019 / ST TOO 143-1930-10-16-56-2019 /
ST TOO 143-1930-10-16-70-2013
ST RK 1798-2008 / ST RK GOST R 52266-2008
GOST 17.2.3.02-2014 / GOST 31565-2012
IEC 60304 / IEC 60794 / IEC 60331 / IEC 60332 / IEC 60754 / IEC 61034



Accordance ISO

ST RK ISO 9001-2016
ST RK OHSAS 18001-2008
ST RK ISO 14001-2016



Fiber type

Single Mode 250µm fiber accordihg to ITU-T G.657.A1 und G.652.D
Single Mode 250µm fiber accordihg to ITU-T G.652.D
Single Mode 250µm fiber accordihg to ITU-T G.657.A2



Marking accuracy

±0,5%



Length tolerance

±3%

All cable types in catalogue could be provided with flame retardant characteristic with an outer sheath made of self-extinguishing PE or PVC compound, with "nf" added to the cable marking

* The parameter "dynamic tensile strength, kN" is indicated at a fiber elongation of 0,6%
Dynamic tensile strength is not an operation paramater and indicates only cable resistance to a short-term loads during installation as a result of wedge, brake and sudden speed up

● PACKAGING ACCORDING TO GOST 18690-2012



Package type	Cable drum flange dimensions (without reel), mm	Drum width (without reel), mm	Weight (medium), kg
Cable drum 10	1000	680	65
Cable drum 12A	1220	900	100
Cable drum 14	1400	900	145
Cable drum 14G	1400	1090	150
Cable drum 17	1700	950	230
Cable drum 18A	1800	1390	400
Cable drum 18B	1800	1390	440
Cable drum 20A	2000	1360	495
Cable drum 25	2500	1680	1100

Package type	Cable coil dimensions, mm	Cable coil width (on pin), mm	Weight (medium), kg
Cable coil FTTH №1	450	440	5
Cable coil FTTH №2	550	440	6
Cable coil FTTH №3	600	520	12

There are two options for drums' coverage that KCEP offer:

- WP (wooden package) – package of the drum using wooden planks fixed by nails through stelltape to drums flanges;
- SP (soft package) – package of the cable on a drum using packing mat made of polymer tape with wooden battens.

● KCEP OPTICAL CABLE MARKING CODIFIER

KC	OKG	nf	П	24	G.652.D	LSZH	2,7	1050
								Internal construction number
								Tensile strength, кN
								Low smoke zero halogen sheath
								Fibre standart
								Number of optical fibers in cable
								Absence of identification- central strength element made of galvanized steel wire P- central strength element made of FRP-rod A - strength element made of ARP-rod
								Absence of identification -PE sheath nf - flame retardant sheath nf(A) - flame retardant sheath according to A category
								Cable type*
								Optical cable manufacturer - KCEP (Kazcentrelectroprovod LLP)

OKG – optical cable without armor;

OKL – optical cable with corrugated steel tape armor;

OKP – optical cable cable armored with class yarns;

OKK – optical cable cable armored with aramid yarns;

OKB – optical cable armored with galvanized steel wires

OKT – optical cable with suspended strength element made of galvanized steel rope;

OKLO – single loose tube optical cable with corrugated steel tape armor;

OKGO – single loose tube flat optical cable without armor;

OKTO – single loose tube optical cable with suspended strength element made of galvanized steel wire;

FTTH – Drop-cable.

FTTHSC – aerial drop-cable with suspended strength element made of steel wire;

FTTHD – aerial drop-cable with suspended strength element made of FRP-rod.



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KAZAKHSTAN