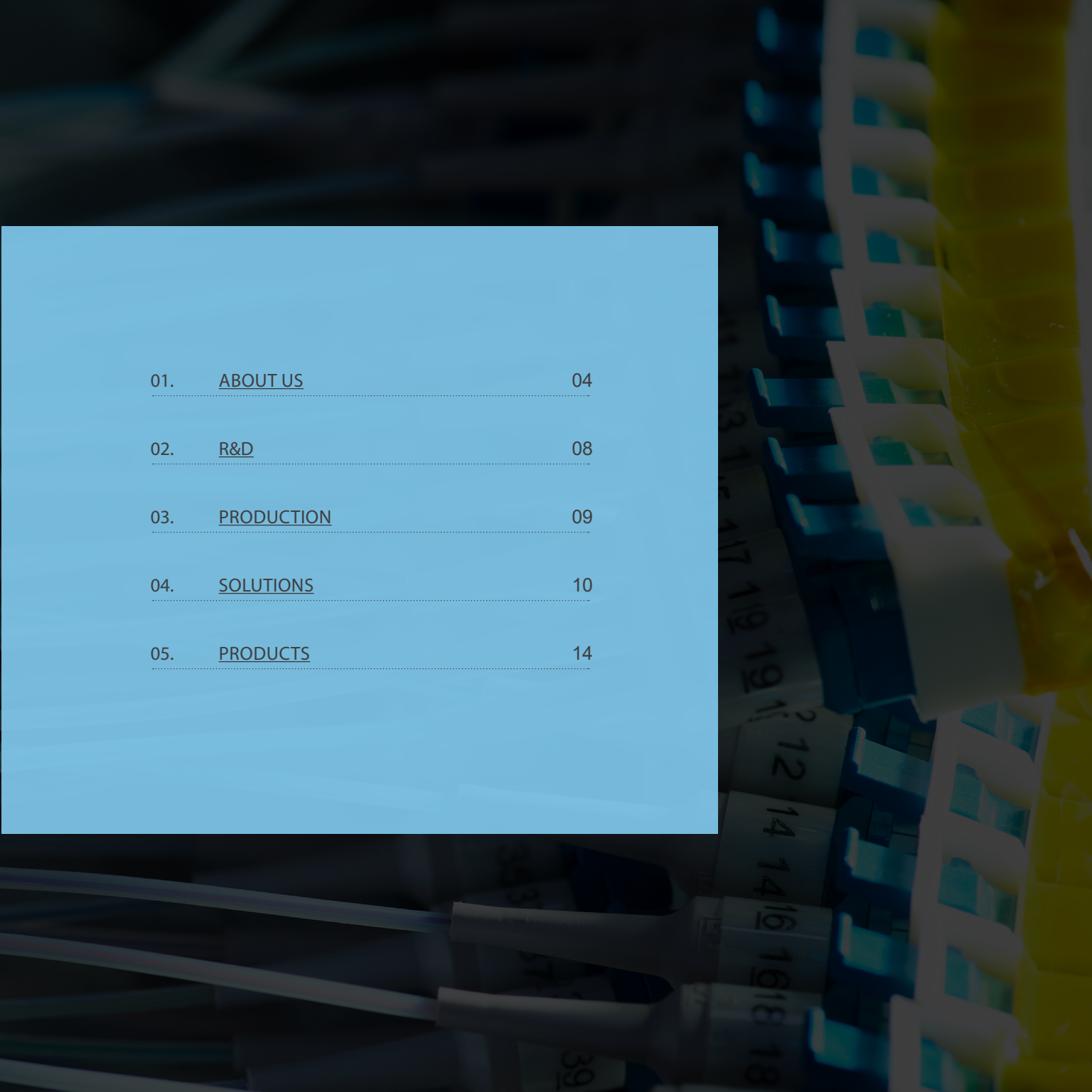
NEOROS

OPTOELECTRONIC SOLUTIONS

neoros.ru



ABOUT US

Neoros was established to develop and manufacture high-tech optoelectronic equipment: optical transceivers, multiplexers and splitters. In 2019, we purchased unique equipment, licensing rights and utilities from American Neophotonics Corporation and managed to quickly set up and launch the industrial process.

OUR CUSTOMERS

Our equipment is supplied to Russian fixed-line and mobile telecommunications operators, banks, data centers, ministries, departments and other organizations.

OUR MISSION

Contribute to innovative development of domestic telecommunications systems through the development and mass production of modern fiber optic components.

In order to fulfill its mission and maintain its reliable partner reputation

NEOROS **GUARANTEES** THE FOLLOWING:

Strict standards compliance

Quality management system compliance with the requirements of ISO 9001:2015 international standards

Quality management

Regular analysis of quality management system to ensure its continued suitability both at present and in the long term

Process-based approach

Application of a process-based approach in ensuring and managing works and services quality

Monitoring

Constant monitoring of customer satisfaction, regular interaction with customers to study their needs

R&D

Neoros has been engaged in innovative activities ever since its foundation, and conducts research (R&D) in several promising photonics and data transmission areas. R&D is a set of activities that includes scientific studies, experiments, search, research and creation of prototypes to precede the new product or technology commercial production.

Neoros is working on the development of a Russian photonic chip for coherent communication systems. We conduct research with a focus on both international and Russian markets to solve import substitution issues.

One of the R&D priority areas is the development of new optical coherent transceivers that support information transmission rates from 100 to 400 Gbps. These devices are unique for Russian market due to their specifications. We are also working on the development of coherent communication systems testing unit.

All innovative developments have become possible only due to the collective effort of Neoros unique team of young scientists and engineers. The company has all facilities and unique scientific and production equipment for promising high-speed coherent systems development and testing.

PRODUCTION

Neoros has all equipment, technology and facilities required for production and assembly of various transceivers (SFP, SFP+, SFP28, QSFP+, QSFP28, QSFP56, QSFP-DD, CFP, CFP2) based on TOSA/ROSA lasers, AAWG spectral multiplexers, as well as for production of optical PLC splitters. Quality control is performed in compliance with technological conditions, good corporate culture, as well as safety precautions and rules of conduct in clean rooms.

Two production stages:

- base products assembly
- new products development and production

The entire clean area is built in accordance with ISO 14644.

Two production areas:

- production room as per ISO 8
- production room as per ISO 6

The total clean area is 459.19 m2.

SOLUTIONS

Neoros offers a wide range of high-quality reliable optical equipment for high-speed data transmission, which allows to implement solutions for many markets.

MARKETS

- Telecoms
- Data centers
- 4G/5G technology
- Transport networks
- Information technology
- IoT solutions
- Coherent solutions

TELECOMS

Neoros transceivers, optical cables and straight cables provide connectivity options for data center networks, network core aggregation and transport for application service providers.

Neoros modules support:

- 100GBASE Ethernet и OTU4.
- 200GBASE Ethernet (NRZ / PAM4)
- 400GBASE Ethernet (PAM4)
- hot-swappable devices

Our optical transceivers (SFP, SFP+, SFP28, QSFP+, QSFP28, QSFP56, QSFP-DD, CFP, CFP2) are pluggable small-sized modules to be installed in the corresponding slots of active LAN equipment. Their function is to convert electrical signals into light waves and vice versa for further transmission and reception via FOCL. LC or MPO connectors are used. The rate of data transmission via fiber optic ranges from 1 to 400 Gbps.

Optical modules are able to perform bidirectional data transmission via a single fiber. These modules use WDM, and signals in both directions propagate at different wavelengths.

Modules for CWDM and DWDM systems perform data transmission via two fibers at wavelengths from respective grids.

Optical module parameters are monitored with the digital diagnostic function (DOM, DDM). This function allows to monitor levels of incoming and outgoing optical power, as well as temperature and electrical parameters of the module.

COHERENT SOLUTIONS

1100G/200G/400G CFP2-DCO digital coherent optical transceiver is a hot-swappable CFP2 optical module for generating optical signals with a rate of data transmission of 100 Gbps via a single channel, designed for high-speed optical network applications and supporting data transmission in both directions at a rate of 100 Gbps. It is used in connections between data centers. The compact coherent transceiver 400G QSFP-DD ZR is in the development.

DATA CENTERS

The commercial data center market has recently become one of the most active and fastest growing areas driving technical innovation. Data centers operators strive to build up a faster, more cost-effective and energy-efficient infrastructure to ensure data centers' scalability, while being reliable and fail-safe.

Neoros transceivers provide high-density and low power consumption connectivity options with a rate of 40 to 400 Gbps for data centers, high-performance computing networks, network core and distribution levels and application service providers.

Neoros transceivers support hot-swapping of I/O devices. All devices are certified and tested for performance, quality and reliability.

We offer modules with different ranges (up to 120 km), designed for different wavelengths and optical fiber types.

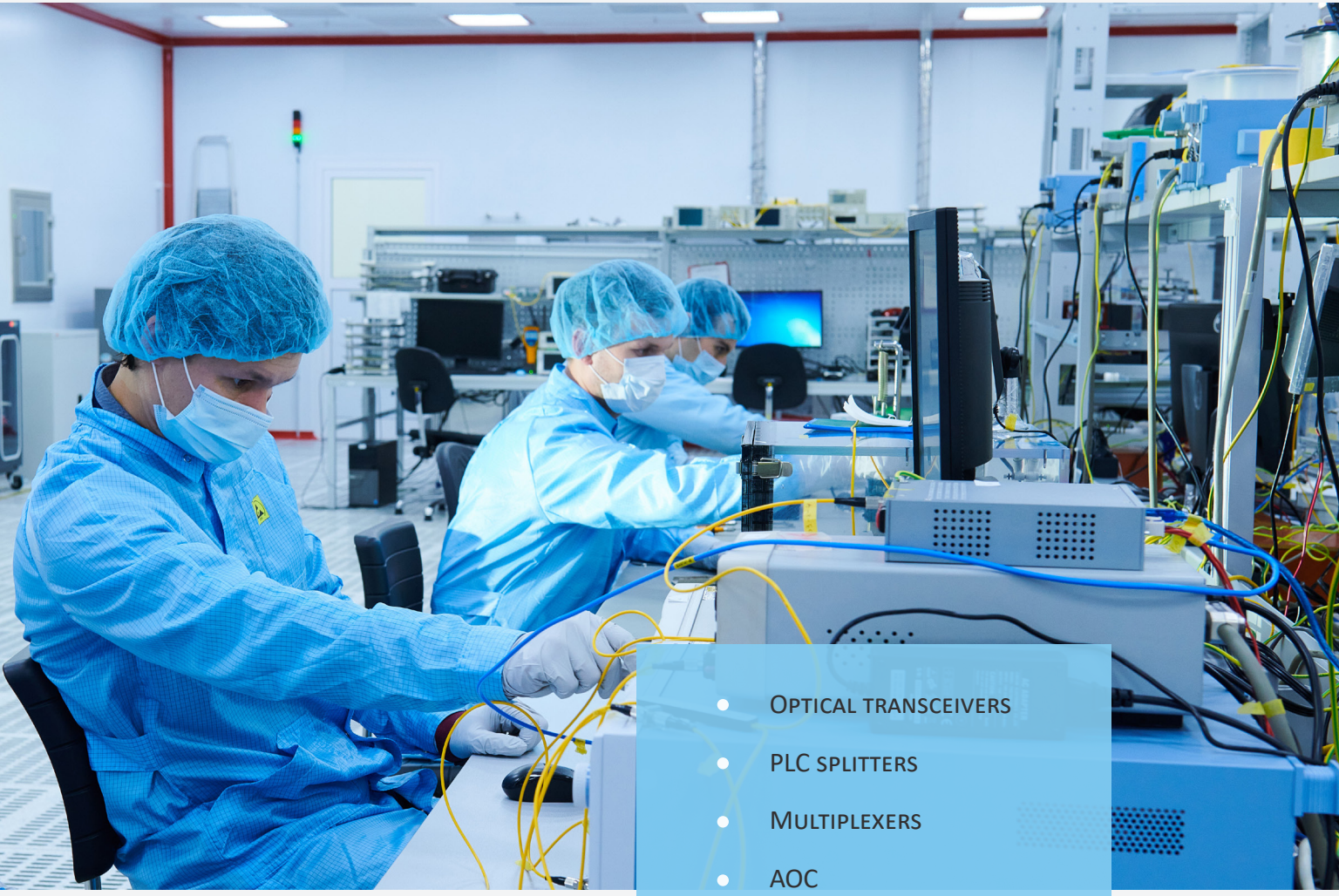
PRODUCTS

We manufacture and assemble various modern optical transceivers (SFP, SFP+, SFP28, QSFP+, QSFP28, QSFP56, QSFP-DD, CFP, CFP2), which provide data transmission at rates from 1 to 400 Gbps.

Production lines for PLC splitters, CFP transceivers based on TOSA/ROSA lasers and assembly of AAWG multiplexers meet the requirements of international standards.

Neoros, LLC, is internationally licensed for development of optoelectronic technology and production of active/passive optical equipment.

Neoros also has a certificate of the Ministry of Industry and Trade of the Russian Federation about production of industrial goods on the territory of the Russian Federation.



- Optical transceivers
- PLC splitters
- Multiplexers
- AOC

OPTICAL TRANSCEIVERS

Group	Part number	Reach	Wavelength	Interface	Tx	Rx	Power Consumption
Optical Transceivers SFP+ 10G	NR-SFP-10G-SR-LC2	300 m	850 nm	MPO12	VCSEL	PIN	≤1.0 W
	NR-SFP-10G-LR-LC2	10 km	850 nm	2xLC	DFB	PIN	≤1.0 W
	NR-SFP-10G-ER-LC2	40 km	1310 nm	2xLC	EML	PIN	≤1.5 W
	NR-SFP-10G-ZR-LC2	80 km	1310 nm	2xLC	EML	APD	≤1.8 W
	NR-SFP-10G-Wxx-20-LC	20 km	1270/1330 nm	LC	DFB	PIN	≤1.0 W
	NR-SFP-10G-Wxx-40-LC	40 km	1270/1330 nm	LC	DFB	PIN	≤1.0 W
	NR-SFP-10G-Wxx-60-LC	60 km	1270/1330 nm	LC	DFB	APD	≤1.4 W
	NR-SFP-10G-Wxx-80-LC	80 km	1490/1550 nm	LC	EML	APD	≤1.8 W
	NR-SFP-10G-DWDM-xx-40-LC2	40 km	ITU, C-Band (17-61 channel)	2xLC	EML	PIN	≤1.5 W
	NR-SFP-10G-DWDM-xx-80-LC2	80 km	ITU, C-Band (17-61 channel)	2xLC	EML	APD	≤1.5 W

Group	Part number	Reach	Wavelength	Interface	Tx	Rx	Power Consumption
Optical Transceivers SFP28 25G	NR-SFP-25G-SR-LC2	100 m	850 nm	2xLC	VCSEL	PIN	≤1.0 W
	NR-SFP-25G-SR-MR-LC2 (10/25G)	100 m	850 nm	2xLC	VCSEL	PIN	≤0.8 W
	NR-SFP-25G-LR-LC2	10 km	1310 nm	2xLC	DFB	PIN	≤1.0 W
	NR-SFP-25G-ER-LC2	40 km	1310 nm	2xLC	EML	APD	<2.0 W
	NR-SFP-25G-Wxx-10-LC	10 km	1270/1330 nm	LC	DFB	PIN	≤1.0 W
	NR-SFP-25G-DWDM-xx-10-LC2	10 km	ITU, C-Band (17-61 channel)	2xLC	EML	PIN	<2.0 W

Group	Part number	Reach	Wavelength	Interface	Tx	Rx	Power Consumption
Optical Transceivers QSFP+ 40G	NR-QSFP-40G-SR4-MPO12	100 m	850 nm	MPO12	VCSEL	PIN	≤1.5 W
	NR-QSFP-40G-BD-LC2	100 m	850 nm	2xLC	VCSEL	PIN	≤1.5 W
	NR-QSFP-40G-LR4-LC2	10 km	1310 nm	2xLC	DFB CWDM	PIN	≤3.5 W
	NR-QSFP-40G-ER4-LC2	80 km	1310 nm	2xLC	DFB CWDM	APD	≤3.5 W

Group	Part number	Reach	Wavelength	Interface	Tx	Rx	Power Consumption
Optical Transceivers QSFP28 100G	NR-QSFP-100G-SR4-MPO12	100 m	850 nm	MPO12	VCSEL	PIN	< 2.5 W
	NR-QSFP-100G-SWDM4-LC2	100 m	850 nm	2xLC	VCSEL	PIN	< 3.5 W
	NR-QSFP-100G-BD-LC2	100 m	850 / 908 nm	2xLC	VCSEL	PIN	< 3.5 W
	NR-QSFP-100G-DR1-LC2	500 m	1310 nm	2xLC	EML	PIN	< 4.5 W
	NR-QSFP-100G-CWDM4-LC2	2 km	1310 nm	2xLC	DML	PIN	< 3.5 W
	NR-QSFP-100G-LR4-LC2	10 km	LWDM4	2xLC	DML	PIN	< 3.5 W
	NR-QSFP-100G-PSM4-MPO12	10 km	1310 nm	MPO12	DML	PIN	< 3.5 W
	NR-QSFP-100G-ER4-LC2	40 km	LWDM4	2xLC	EML/DML	PIN+SOA	< 5.5 W
	NR-QSFP-100G-ZR4-LC2	80 km	LWDM4	2xLC	EML	PIN+SOA	<6.5 W

Group	Part number	Reach	Wavelength	Interface	Tx	Rx	Power Consumption
Optical Transceivers QSFP56 200G	NR-QSFP56-200G-SR4-MPO12	100 m	850 nm	MPO12	VCSEL	PIN	<5.0 W
	NR-QSFP56-200G-DR4-MPO12	500 m	1310 nm	MPO12	EML	PIN	<5.5 W
	NR-QSFP56-200G-FR4-LC2	2 km	CWDM4	2xLC	EML	PIN	<5.0 W
	NR-QSFP56-200G-LR4-LC2	10 km	LWDM4	2xLC	EML	PIN	<7.5 W
	NR-QSFP56-200G-ER4-LC2	40 km	LWDM4	2xLC	EML	APD	<9.0 W
	NR-QSFP56-200G-ZR4-LC2	80 km	LWDM4	2xLC	EML	PIN+SOA	<10.0 W

Group	Part number	Reach	Wavelength	Interface	Tx	Rx	Power Consumption
Optical Transceivers QSFP-DD 200G	NR-QSFPDD-200G-SR8-MPO24	100 m	850 nm	MPO24/MPO16	VCSEL	PIN	<4.0 W
	NR-QSFPDD-200G-PSM8-MPO24	10 km	1310 nm	MPO24	DML	PIN	<6.5 W
	NR-QSFPDD-200G-LR8-LC2	10 km	LWDM8	2xLC	DML	PIN	<7.5 W

Group	Part number	Reach	Wavelength	Interface	Tx	Rx	Power Consumption
Optical Transceivers QSFP-DD 400G	NR-QSFPDD-400G-SR8-MPO24	100 m	850 nm	MPO24/MPO16	VCSEL	PIN	<10 W
	NR-QSFPDD-400G-DR4-MPO24	500 m	1310 nm	MPO12	EML	PIN	<12 W
	NR-QSFPDD-400G-FR4-LC2	2 km	1310 nm	2xLC	EML	PIN	<12 W
	NR-QSFPDD-400G-PSM8-MPO24	2 km	1310 nm	MPO24	EML	PIN	<12 W
	NR-QSFPDD-400G-LR8-LC2	10 km	LWDM8	2xLC	EML	PIN	<13 W

Group	Part number	Reach	Wavelength	Interface	Tx	Rx	Power Consumption
Optical Transceivers CFP2 100G	NR-CFP2-100G-SR10-MPO24	400 m	850 nm	MPO24	VCSEL	PIN	<8 W
	NR-CFP2-100G-LR4-LC2-RX	10 km	LWDM4	2xLC	---	PIN	<4 W
	NR-CFP2-100G-LR4-LC2	10 km	LWDM4	2xLC	EML	PIN	<4 W
	NR-CFP2-100G-ER4-LC2	40 km	LWDM4	2xLC	EML	PIN	<9 W

Group	Part number	Wavelength	EDFA	Interface	Tx	Rx	Power Consumption
Coherent CFP2 100G-400G Transceivers	NR-CFP2-100G-MR-LC2	Full C-Band Tunable 50GHz	with	QPSK	35dB @ 0.1nm	11.7dB @ 0.nm	< 18 W
	NR-CFP2-200G-MR-LC2	Full C-Band Tunable 50GHz	with	QPSK		14.5dB @ 0.nm	< 19 W
			with	16QAM		19.0dB @ 0.nm	< 22 W
	NR-CFP2-400G-MR-LC2	Full C-Band Tunable 50GHz	with	16QAM		22.3dB @ 0.1nm	< 24 W
Coherent QSFP-DD 400G Transceivers	NR-QSFP-DD-400G-MR-LC2	Full C-Band Tunable 50GHz	with	16QAM	38dB @ 0.1nm	26.0dB @ 0.1nm	< 16.5 W

AOC

Group	Part number	Reach	Power Consumption
AOC 10G	NR-SFP-10G-AOC-xxxM	1.00m~100m	<1.5 W per end
AOC 25G	NR-SFP-25G-AOC-xxxM	1.00m~100m	<1.5 W per end
AOC 40G	NR-QSFP-40G-AOC-xxxM	1.00m ~ 100m	<1.5 W per end
	NR-QSFP-4X10G-AOC-xxxM	1.00m~ 100m	<1.5 Вт (40G end), <0.8 Вт (10G end)
AOC 100G	NR-QSFP-100G-AOC-xxxM	1.00м ~ 100m	<2.5 W per end
	NR-QSFP-2XQSFP50G-AOC-xxxM	1.00m ~ 100m	<2.5 Вт (100G end), <1.6 Вт (50G end)
	NR-QSFP-4XSFP25G-AOC-xxxM	1.00m~ 100m	<2.5 Вт (100G end), <1.0 Вт (25G end)
AOC 200G	NR-QSFP56-200G-SR4-AOC-xxxM	1.00m~ 100m	<5.0 W per end
	NR-QSFPDD-200G-SR4-AOC-xxxM	1.00m ~ 100m	<4.0 W per end
	NR-QSFPDD-200G-2XQSFP28-AOC-xxxM	1.00m ~ 100m	<4.0 Вт (200G end), <2.5 Вт (100G end)
	NR-QSFPDD-200G-4XQSFP28-AOC-xxxM	1.00m ~ 100m	<4.0 Вт (200G end), <2.0 Вт (50G end)
AOC 400G	NR-QSFPDD-400G-AOC-xxxM	1.00m ~ 100m	<10.0 W per end
	NR-QSFPDD-400G-2XQSFP56-AOC-xxxM	1.00m ~ 100m	<9.0 Вт (400G end), <5.0 Вт (200G end)
	NR-QSFPDD-400G-4XQSFP56-AOC-xxxM	1.00m ~ 100m	<9.0 Вт (400G end), <4.5 Вт (100G end)
	NR-QSFPDD-400G-8XQSFP56-AOC-xxxM	1.00m ~ 100m	<10.0 Вт (400G end), <2.0 Вт (50G end)

DAC

Group	Part number	Reach	Power Consumption
DAC 10G	NR-SFP-10G-DAC-xxxM	0.5m~7m	≤0.1 Вт per end
DAC 25G	NR-SFP-25G-DAC-xxxM	0.5m~5m	≤0.5 Вт per end
DAC 40G	NR-QSFP-40G-DAC-xxxM	0.5m~7m	≤0.5 Вт per end
	NR-QSFP-4SFP10G-DAC-xxxM	0.5m~7m	≤0.5 Вт per end
DAC 100G	NR-QSFP-100G-DAC-xxxM	0.5m~5m	≤0.5 Вт per end
	NR-QSFP-4SFP25G-DAC-xxxM	0.5m~5m	≤0.5 Вт per end
DAC 200G	NR-QSFP56-200G-DAC-xxxM	0.5m~3m	≤0.1 Вт per end
	NR-QSFP56-4SFP50G-DAC-xxxM	0.5m~3m	≤0.5 Вт per end
	NR-QSFPDD-2QSFP28-DAC-xxxM	0.5m~3m	≤0.5 Вт per end
	NR-QSFPDD-200G-DAC-xxxM	0.5m~3m	≤0.5 Вт per end
DAC 400G	NR-QSFPDD-400G-DAC-xxxM	0.5m~3m	≤0.5 Вт per end
	NR-QSFPDD-8SFP56-DAC-xxxM	0.5m~3m	≤0.5 Вт per end
AOC 400G	NR-QSFPDD-400G-AOC-xxxM	1.00m~ 100m	<10.0 Вт per end
	NR-QSFPDD-400G-DAC-xxxM	0.5m~3m	≤0.5 Вт per end
	NR-QSFPDD-8SFP56-DAC-xxxM	0.5m~3m	≤0.5 Вт per end

CERTIFICATES AND LICENSES

Certificate of conformity
№СДС.РФ.СМ 00980.20

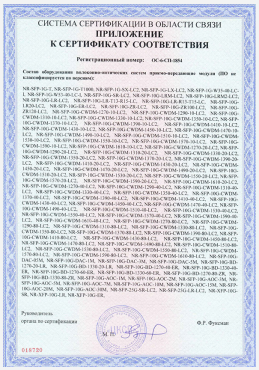
Certificate of conformity
№СДС.РФ.СМ 00980.20

Permission to use the mark of conformity №СДС.РФ.СМ 00980.20 P

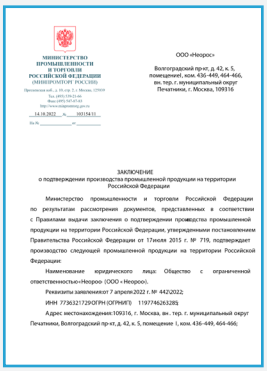
Certificate №1-980/20

Certificate of conformity
ОС-6-СП-1854

Attachment to the certificate
ОС-6-СП-1854



Attachment to the certificate of conformity ОС-6-СП-1854



Confirmation Conclusion industrial production products on the territory of the RF

“Neoros” LLC
109316, Moscow, Volgogradsky avenue, 42 bldg. 5
Phone/Fax: +7 (495) 241 28 94
neoros.ru