

# Indoor/Outdoor Plenum Premises Distribution (PDP-I/O, ICP-I/O)

## 6 x OM5 Premise Distribution Plenum Indoor/Outdoor Cable

This plenum rated Indoor/Outdoor Tight-Buffer cables are designed specifically for LAN/WAN campus and building backbone cabling infrastructure. These thermoplastic jacketed cables are suitable for Indoor/Outdoor installations, in-conduit, below the frost line.

### DESCRIPTION

This fiber optic cable is designed for installation in plenum, riser and horizontal environments and interbuilding backbone structures.

This design incorporates tight buffered optical fibers within a dry water blocked cable core. Suitable for operation across wide temperature variations typically addressed by outside plant cables. No Buffer Tube Fanout kits are required. Direct termination is enabled.

#### Construction

Each cable utilizes our DryGel water blocking system in the cable core. Cable design can accommodate from 2-144 tight buffered (900  $\mu$ m) fibers. All dielectric.

Interlocking Armor (Armor-Tek) versions are available using aluminum or steel armor.

#### Outdoor Considerations

These water-blocked cables feature fungus resistant jacketing, and are sunlight resistant per UL 444 clause 7.22.

For use in conduit, below the frost line.

Loose Tube cables are recommended if interbuilding conduit systems lie above the frost line and are likely to fill with water.

- Tight Buffer fiber cables are not suitable for aerial-lashed installations.

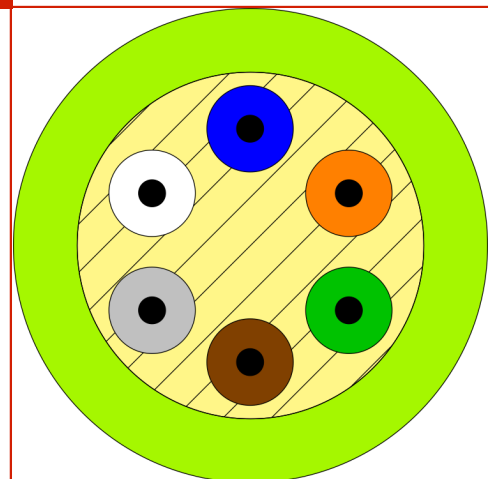
#### Applications

Berk-Tek's tight buffered cable is intended for all high speed data applications including:

- ETHERNET: 10BASE – 400GBASE (10BASE, 100BASE, 1000BASE, 10GBASE, 40GBASE, 100GBASE, 400GBASE)
- Fibre Channel: 1G-FC – 128GFC (1, 2, 4, 8, 16, 32, 128 GFC)
- SONET: OC-1 – OC-768 (OC -1, 3, 12, 24, 48, 192, 768)
- SDH: STM-0 – STM-256 (STM-0, 1, 4, 16, 64, 256)
- OTN: OTU-1 – OTU4 (OTU1, 2, 2e, 2f, 3, 3e2, 4)
- CPRI: CPRI-1 – CPRI-9 (CPRI-1, 2, 3, 4, 5, 6, 7, 7a, 8, 9)
- PON (SMF ONLY): RfOG, APON, BPON, EPON, GPON, WDM-PON, NG-PON

#### Features

- Flexible, small diameter, 900  $\mu$ m tight buffered construction
- High tensile strength and small diameter design
- 2 to 144 count fiber construction plenum designs ideal for horizontal and backbone installation
- Single-mode, multimode, and hybrid designs available
- Also available in low smoke zero halogen design



### STANDARDS

**International** EN 50173; ISO/IEC 11801

**National** ANSI/ICEA S-104-696; ANSI/ICEA S-83-596; ANSI/TIA-568.3-D; NFPA 130; Telcordia GR-409

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### Benefits

- Cost-saving design, easy to install and terminate
- Provides for greater pulling distances thus reducing installation time
- Assurance that cables will meet required specifications for communication networking applications
- Broad design selection allows for mix and match of fiber components to specific networking applications
- One cable design meeting all structured cabling network communications applications

## CHARACTERISTICS

### Construction characteristics

Fiber optic type	OM5 50/125 Wideband
Type of cable	Tight Buffered (TB)
Jacket Material	Plenum
Sheath colour	Lime green

### Dimensional characteristics

Number of optical fibres	6
Cable diameter (Nominal)	0.18 in
Nominal outer diameter	4.6 mm
Nominal cable weight	12 lb/kft
Approximate weight	18 kg/km

### Transmission characteristics

Optical performance	WB (50/125 GIGAlite-10WB OM5)
Attenuation, max. 850 nm (cabled)	3.0 dB/km
Attenuation, max. 1300 nm (cabled)	1.0 dB/km

### Mechanical characteristics

Maximum installation tension	100 lb
Maximum installation tension	445 N
Max. Load. Long Term (lbs)	30.0 lb
Max. Load. Long Term	133.0 N
Crush resistance per TIA/EIA FOTP-41	110 N/cm
Cable flexibility per TIA/EIA FOTP-104	100 cycles
Impacts per TIA/EIA FOTP-25	2 at 2.94 N-m

### Usage characteristics

Minimum Bending Radius - Install	2.7 in
Minimum Bend Radius - Install	6.9 cm
Minimum Bending Radius - LongTerm	1.8 in
Minimum Bending Radius - LongTerm	4.6 cm
Recommended operating temperature range	-40 .. 75 °C
Ambient installation temperature, range	0 .. 75 °C
Recommended storage temperature range	-40 .. 85 °C
Field of application	Indoor, Outdoor

All drawings, designs, specifications, plans and particulars of weights, size and dimensions contained in the technical or commercial documentation of Nexans is indicative only and shall not be binding on Nexans or be treated as constituting a representation on the part of Nexans.

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## PDP-I/O CHARACTERISTICS

Fibers	Diameter		Weight		Minimum Bend Radius				Maximum Tensile Loading			
					Installation		Long Term		Installation		Long Term	
	<i>in.</i>	<i>mm</i>	<i>lb/kft.</i>	<i>kg/km</i>	<i>in.</i>	<i>cm</i>	<i>in.</i>	<i>cm</i>	<i>lb</i>	<i>N</i>	<i>lb</i>	<i>N</i>
2	0.170	4.3	12	18	2.6	6.4	1.7	4.3	100	445	30	133
4	0.170	4.3	13	19	2.6	6.4	1.7	4.3	100	445	30	133
6	0.180	4.6	12	18	2.7	6.9	1.8	4.6	100	445	30	133
8	0.182	4.6	14	21	2.7	6.9	1.8	4.6	100	445	30	133
12	0.210	5.3	18	26	3.2	8.0	2.1	5.3	150	667	45	200
18	0.262	6.7	29	44	3.9	10.0	2.6	6.7	150	667	45	200
24	0.305	7.7	41	61	4.6	11.6	3.0	7.7	300	1335	90	400
36	0.496	12.6	112	166	7.4	18.9	5.0	12.6	300	1335	90	400
48	0.558	14.2	136	202	8.4	21.3	5.6	14.2	600	2640	180	800
72	0.671	17.0	212	316	10.1	25.5	6.7	17.0	600	2670	180	800
96	0.859	21.8	313	466	12.9	32.7	8.6	21.8	600	2670	180	800
144	0.896	22.8	318	474	13.4	34.2	9.0	22.8	1000	4445	300	1335
<b>Operating Temperature</b>					-40 C to +75 C							
<b>Installation Temperature</b>					0 C to +75 C							
<b>Storage Temperature</b>					-40 C to +85 C							

## ICP-I/O, ICPK-I/O, PDP-I/O & PDPK-I/O SHEATH COLORS

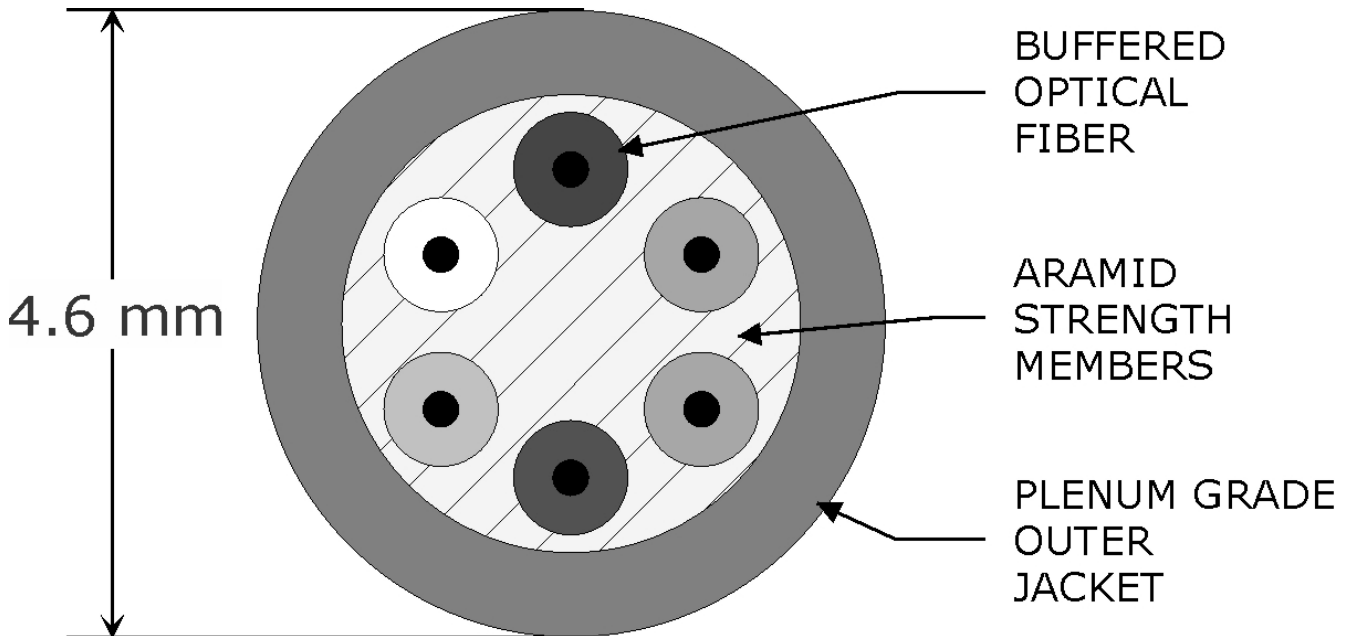
Fiber Type	Core Size (um)	ISO-TIA Standard	Effective Modal BW @ 850 nm	Overfilled Launch BW @ 850 nm	Attenuation @ 850 nm	Attenuation @ 1300 nm	Attenuation @ 1550 nm	Sheath Color
AB	8.3	OS2	NS	NS	NS	0.5 dB/km	0.5 dB/km	Yellow or Black
CB	62.5	OM1	200 MHz-km	200 MHz-km	3.5 dB/km	1.0 dB/km	NS	Orange or Black
EB	50	OM3	2000 MHz-km	1500 MHz-km	3.0 dB/km	1.0 dB/km	NS	Aqua or Black
FB	50	OM4	4700 MHz-km	3500 MHz-km	3.0 dB/km	1.0 dB/km	NS	Aqua or Black
XB	50	OM4+	4900 MHz-km	3675 MHz-km	3.0 dB/km	1.0 dB/km	NS	Violet or Black
WB	50	OM5	4700 MHz-km	3500 MHz-km	3.0 dB/km	1.0 dB/km	NS	Lime Green or Black

NS = Not Specified

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## CROSS-SECTION DIAGRAM - PDP006-I/O



## MANUFACTURING RELEASE

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