

# Gear up for the future.

OptiC@t<sup>®</sup>5e cables will take you there.



A brand of the

**Prysmian**  
Group

# Gear up for the future.

Future-proof your home! The communication cable OptiC@t®5e is a combo of a four pair Cat5e and two bend-insensitive fibres. Not only will it's capability for super high-speed make the building attractive to future owners, the Low Smoke Zero Halogen sheath makes the building much safer, too. Plus, the cables insensitivity to bending makes it a lot easier and less expensive to install. Copper and optic fibre links the present to the future and gives you the better of two worlds.

## HYBRID MULTI-PURPOSE COMMUNICATION CABLE

### OptiC@t®5e

#### Application

For use indoors. Typical application is to connect an Optical Network Termination (ONT) to an existing LAN or telephone network.

#### Cable design

##### Copper pairs:

- Conductor: Bare annealed copper wire, Ø 0.50 mm
- Insulation: PE insulation
- Core colour: white/blue; white/orange; white/green; white/brown.

##### Optical unit:

- Tight buffer: Each fibre has a LSZH buffering
- Strength member: Aramid yarn
- Sheath: Blue LSZH

##### Outer sheath / Core wrapping:

- Core wrapping: Polyester tape
- Outer sheath: Pebble white LSZH

##### Sheath marking:

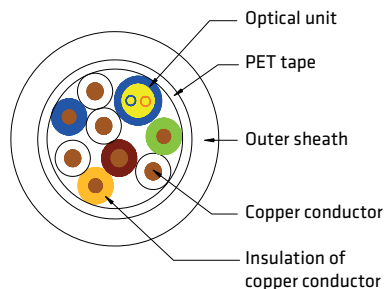
PRYSMIAN (YEAR) OPTIC@T5E 4P + 2SM BBXS xxxxxM

##### Packing:

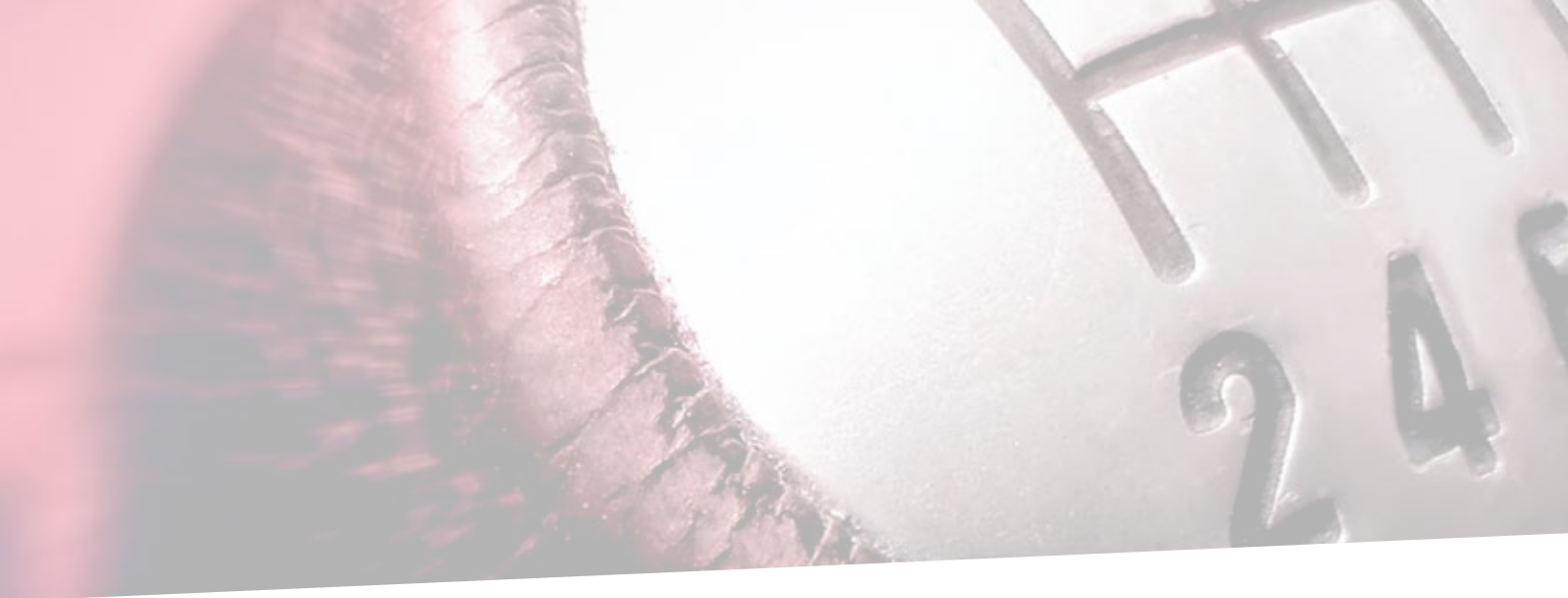
"Reel in a Box" for easy dispensing.

##### Delivery lengths:

Standard delivery length is 305 metres marked from 305 to 0, so you always know exactly how much you have left.



All sizes and values without tolerances are reference values. Specifications are for product as supplied by Prysmian Group; any modification or alteration afterwards of product may give different result. The information contained within this document must not be copied, reprinted or reproduced in any form, either wholly or in part, without the written consent of Prysmian Group. The information is believed to be correct at the time of issue. Prysmian Group reserves the right to amend this specification without prior notice. This specification is not contractually valid unless specifically authorised by Prysmian Group.



Technical data	
OptiC@t®5e Hybrid Cable - 4x 2 x 0.5+2SM BBXS	
Copper pairs (4 pairs)	Conductor diameter: 0.50 mm
	Insulation thickness: 0.21 mm
	Insulation diameter: 0.92 mm
	Twist pitch: ≤ 25 mm
Optical unit (2 fibres)	Buffer diameter: 0.9 mm
	Sheath diameter: 2.5 mm
Outer sheath/Core wrapping	Sheath thickness: nominal 0.6 mm
	Cable diameter: Ø 6.1 mm
Cable weight	40 kg/km
Min. bending radius (mm)	10 x cable diameter (no load). 15 x cable diameter (with load)
Temperature range	Installation: -15 to +55 °C. Transport: -40 to +70 °C. Operation: -30 to +70 °C
Flame propagation	IEC 60332-1

All dimensions and weights are nominal.

Electrical characteristics	
Conductor DC resistance (20 °C)	≤ 95 Ω/km
Resistance unbalance	≤ 2 %
Mean characteristic impedance	100 Ω ± 15 Ω (100 MHz)
Mutual capacitance	≤ 56 nF/Km
Insulation resistance (20 ± 5 °C, 500 VDC)	≥ 5000M Ω .km
Propagation delay	≤ 534+36/sqrt(f) ns/100 m
Delay skew	≤ 45 ns/100 m
Velocity propagation	Approx 67%
Dielectric strength (1.5kVdc)	1KV DC 1 min (core-core)

Optical characteristics
Refer to the optical fibre data sheet C24 for G657A2 BBXS



**Transmission characteristics for copper pair**

Frequency MHz	Attenuation dB/100 m max	NEXT dB/100 m min	PS-NEXT (only for 4 pairs) dB/100 m min	ELFEXT dB/100 m min	PS-ELFEXT (only for 4 pairs) dB/100 m min	Return loss dB min
1	2.1	65	62	64	61	20
4	4.1	56	53	52	49	23
10	6.5	50	47	44	41	25
16	8.2	47	44	41	37	25
20	9.2	46	43	38	35	25
31.25	11.7	43	40	34	31	24
62.5	17.0	38	35	28	25	22
100	22.0	35	32	24	21	20

**Identification**

		Pair 1	Pair 2	Pair 3	Pair 4
Copper pairs Colour code	A wire	blue	orange	green	brown
	B wire	white/blue	white/orange	white/green	white/brown
Optical unit Buffer colours		Fibre no 1 blue	Fibre no 2 orange		

## “Reel in a Box” – for easy dispensing

High speed internet will soon be available to most businesses and homes with the government initiative to roll out a national fibre network. OptiC@t5e Hybrid Multi-Purpose Communication Cable allows the project owner and installer to “future proof” their next project.

Buildings that are “fibre ready” will have a distinct advantage when preparing to sell or promote their new project.

OptiC@t5e cable allows immediate connection to existing twisted pair telecommunication networks via the cat 5e cable, the high quality BendBrightXS™ fibres sit in the safety of a Low Smoke Halogen sheathed cable, ready to be connected to super high speed internet when available.



Watch the “how to prepare OptiC@t5e Hybrid Multi-Purpose Communication Cable” video on our website.



## The quality of BendBrightXS™ fibre optic

BendBrightXS™ the latest in Bend-Insensitive fibre from Prysmian and Draka. BendBrightXS™ optical fibres are specially manufactured using Draka's patented EPVC (Enhanced Plasma Vapour Deposition) process and complies with the ITU-T G.657.A2 standard. This market leading technology makes BendBrightXS™ virtually insensitive both to MICRO and MACRO bending, making it perfect for installation in compact and tight installation areas. OptiC@t5e can be installed in;

- New housing estates
- Major home renovations
- Commercial fit outs of old buildings
- New commercial building installs
- New or old refits of residential units

Why not get your next project ready for the optical fibre revolution, install OptiC@t5e Hybrid Multi-Purpose Communication Cable.



# Linking the future



## **Prysmian Cables & Systems New Zealand Ltd**

30 Binsted Road, New Lynn 0640 Auckland, New Zealand  
Ph: (09) 827 3109 Toll Free: 0800 492 225  
E-mail: sales.nz@prysmiangroup.com

[www.prysmian.co.nz](http://www.prysmian.co.nz)

## **Prysmian Cables & Systems Australia Pty Ltd**

1 Heathcote Road, Liverpool 2170 NSW, Australia  
Ph: 1300 300 304 Fx: 1300 300 307  
E-mail: sales.au@prysmiangroup.com

[www.prysmian.com.au](http://www.prysmian.com.au)



A brand of the  
**Prysmian**  
Group