

# OPTIMAL

Cable Services Pty Ltd

## TECHNICAL DATA SHEET

### HEAVY-DUTY MULTICORD BREAKOUT OPTICAL FIBRE CABLE

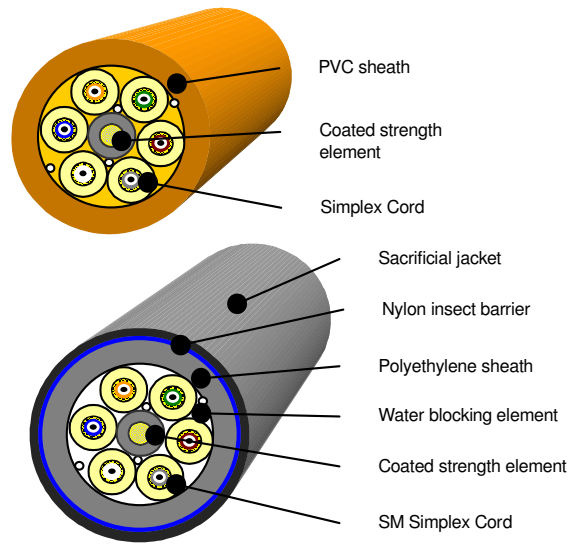
#### Product Code:

**OCAP\*\*GAR††OE** (PVC sheath - internal)

**OCCP\*\*GA0††BK** (PE sheath only - outdoor)

**OCDP\*\*GA0††BE** (PE + Nylon jacket)

**OCHP\*\*GA0††BK** (PE + Nylon + Sacrificial Jacket)



**Description:** Multicord optical cable constructed from single cord elements, stranded around a non-metallic tension member with PVC outer jacket for indoor versions and “Dry-Block” water-swellaible blocking yarns and Polyethylene sheathed with optional nylon jacket, and further optional sacrificial sheath for outdoor versions. Each cord comprises an individually coloured tight buffered optical fibre unit, protected with peripheral aramid and jacketed with flame retardant PVC. Sheath printing includes length marking at 1 m intervals.

#### Applicable Specifications:

AS/ACIF S008, IEC 60794, IEC 60793, AS1049 & AS 3080, RoHS

**Applications:** This reinforced breakout cable is the preferred selection for direct termination methods. For the outdoor versions, in its simplest form – with single polyethylene sheath - this cable design maintains the flexibility, small size and weight of the internal PVC sheathed type, yet suitable for hauling into ducts and direct buried applications. An additional jacket of Nylon provides the well-proven insect barrier and a further sacrificial sheath protects the Nylon during rigorous installation conditions. For exposed outdoor applications black versions are recommended to provide the best resistance to uv light degradation.

#### Physical Characteristics:

		5-cord	6-cord	8-cord	10-cord	12-cord	16-cord	18cord
	Structure:-	(5c ar <sup>1</sup> )	(6c ar <sup>1</sup> )	(8c ar <sup>1</sup> )	(10c ar <sup>1</sup> )	(12c ar <sup>1</sup> )	(11c ar <sup>5</sup> c)	(12c ar <sup>6</sup> c)
• Nom. O.D: (mm)	PE or PVC	10.5	11.4	13.1	14.9	16.6	16.3	17.2
	PE&Ny	11.4	12.3	14	15.8	17.5	17.2	18.1
	PE&Ny&PE	13.4	14.3	16	17.8	19.5	19.2	20.1
• Nom. weight (kg/km)	PE or PVC	<b>84/105</b>	<b>93/113</b>	<b>123/143</b>	<b>152/173</b>	<b>190/210</b>	<b>374/394</b>	<b>428/448</b>
	PE&Ny	100	110	140	169	207	391	445
	PE&Ny&PE	137	146	176	205	243	427	481
• Operating Temperature (°C)						-10 to +60		
• Tensile Strength (kN)		2	3	2.8	3.9	4.7	4.4	6
• Max. Crush resistance					2 kN/100 mm			
• Min. bending radius (under load)					20 x OD mm			
• Min. bending radius (no load)					10 x OD mm			

#### Colour Sequence for fibres: –

up to 12c:- Blue, Orange, Green, Brown, Grey, White, Red, Black, Yellow, Violet, Pink, Aqua

13c to 16c:-  
Layer 1: Blue, Orange, Green, Brown, Grey.  
Layer 2: Blue, Orange, Green, Brown, Grey, White, Red, Black.

17c & 18c:-  
Layer 1: Blue, Orange, Green, Brown, Grey, White.  
Layer 2: Blue, Orange, Green, Brown, Grey, White, Red, Black, Yellow, Violet, Pink, Aqua.

\*\* Represents any fibre type, 10 = single mode, 1C = single mode “Zero Water Peak” 62 = 62.5 um OM1 multimode, 50 = 50 um OM2 multimode, 53 = 50 um OM3 multimode

†† Represents any fibre-count up to 18

## Optical Characteristics

- **Single Mode ZWP Fibres (G652.d)**

Typical Mode field diameter:	9.2± 0.4µm @ 1330 nm
Cladding diameter:	125 ± 2 µm
Max mode field concentricity error:	0.8 µm
Cladding non-circularity	< 1%
Fibre coating diameter	250±10 µm

	Attenuation at 1310/1550 nm (dB/km)	Zero dispersion Wavelength (nm)	Slope at zero dispersion wavelength (ps/km.nm <sup>2</sup> )	Chromatic dispersion @ 1285-1330 nm (ps/km.nm)	Chromatic dispersion @ 1550 nm (ps/km.nm)
Maximum	0.35/0.25	1300-1322	0.092	<3.5	<19

- **Multimode Fibres**

		<b>62.5 µm (OM1)</b>	<b>50 µm (OM2)</b>	<b>50 µm (OM3)</b>
Typical Core diameter (µm)		62.5 ± 2.5	50.0 ± 2.5	50.0 ± 2.5
Max Core-Clad Conc Error (µm)		1.5	1.5	1.5
Cladding diameter (µm)		125 ± 1	125 ± 1	125 ± 1
Min Overfilled Bandwidth at 850/1300 nm (MHz.km)		200/500	500/500	1500/500
Min G-Ethernet transmission distance at 850/1300 nm (m)		275/550	550/550	970/600

		Attenuation at 850 nm (dB/km)	Attenuation at 1300 nm (dB/km)	Numerical aperture	Fibre Coating Diameter (µm)
50 µm fibre	Maximum	3.0	1.0	0.200 ± 0.015	250 ± 10
62.5 µm fibre	Maximum	3.0	1.0	0.275 ± 0.015	250 ± 10