



OUTDOOR CABLES UP TO -40 °C



## ARMORED MACROTEL OPTICAL CABLE

69d90



### SPECIFICATIONS:

GR-20-CORE

### APPLICATION & PROPERTIES:

- Installation in ducts or trays.
- Protection against rodents.
- Weather resistant.
- 6 to 288 fibers.
- Alternate cable direction to enable branching.
- External jacket with high friction strength.

### MECHANICAL PROPERTIES

Number of Fibers	Maximum Installation Tension N	Compression N/cm	Minimum Bend Radius mm		Operating Temperature °C
			unloaded	loaded	
6 to 72	2700	440	260	350	-40 to +70
84 to 216			330	440	
228 to 288			410	550	

### DESCRIPTION:

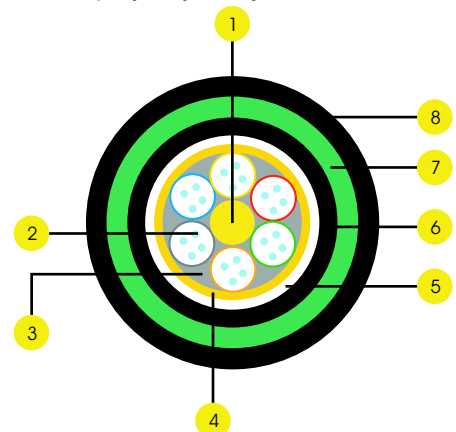
1. Dielectric central traction element.
2. Optical fibers in thermoplastic tubes (2 layers with 144 to 288 fibers).
3. Expandable tape as water protection.

4. Fiberglass or aramid yarn as strength element.
5. Non-hygroscopic tapes and wires.
6. Internal polyethylene jacket.
7. Corrugate steel armor.
8. External black polyethylene jacket.

### DIMENSIONS

Number of Fibers	Fibers per Tube	Weight kg/km	Overall Diameter mm
6 to 36	6	163	15.7
48 to 72	12	195	17.2
84	12	251	19.4
96	12	251	19.4
108	12	310	21.4
120	12	310	21.4
132 to 216	12	371	24.2
228 to 288	12	371	24.2

- Values shown are nominal, subject to manufacturing tolerances.





OUTDOOR CABLES UP TO -40°C

## DRY DIELECTRIC MACROTEL CABLE

69d96



### SPECIFICATIONS:

Bellcore GR-20

### APPLICATION & PROPERTIES:

- Installation in ducts or trays.
- Aerial, attached to an external messenger.
- Weather resistant and resistance to water penetration.
- No metal elements
- 6 to 288 fibers.
- Filling material only in slack tubes, making splicing easy.
- Alternate cable direction to enable branching.
- External jacket with high friction strength.

### MECHANICAL PROPERTIES

Number Of Fibers	Maximum Installation Tension N	Compression N/cm	Minimum Bend Radius mm		Operating Temperature °C
			unloaded	loaded	
6 to 36	2700	220	180	240	-40 to +75
48 to 72			200	270	
84 to 144			300	390	
156 to 216			300	400	

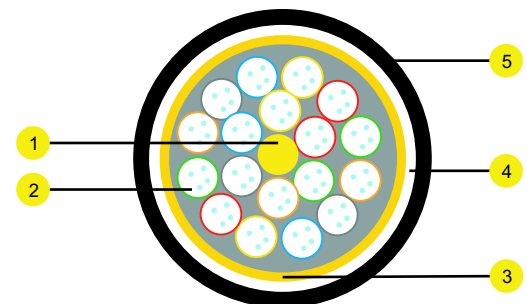
### DESCRIPTION:

#### DIMENSIONS

Number of Fibers	Fibers per Tube	Weight kg/km	Overall Diameter mm
2 to 36	6	110	12.0
48 to 73	12	135	13.5
84 to 96	12	180	16.0
108 to 120	12	230	18.0
132 to 144	12	280	20.0
156 to 216	12	305	20.5
228 to 288	12	460	24.5

- Values shown are nominal, subject to manufacturing tolerances.

1. Dielectric central traction element.
2. Optical fibers in slack thermoplastic tubes.
3. Fiberglass or aramid yarn as strength element.
4. Expandable tape as water protection.
5. External medium-density polyethylene jacket.





OUTDOOR CABLES UP TO -40°C



## DIELECTRIC DJ MACROTEL OPTICAL CABLE

69d97



### SPECIFICATIONS:

GR-20-CORE

### APPLICATION & PROPERTIES:

- Installation in ducts or trays.
- Aerial, attached to an additional messenger.
- Weather resistant.
- No metal elements
- Double polyethylene jacket.
- 6 to 144 fibers.
- Alternate cable direction to enable branching.
- External jacket with high friction strength.

### MECHANICAL PROPERTIES

Numbers of Fibers	Maximum Installation Tension N	Compression N/cm	Minimum Bend Radius mm		Operating Temperature °C
			unloaded	Loaded	
6 to 72	2700	220	240	320	-40 to +70
84 to 144			300	400	

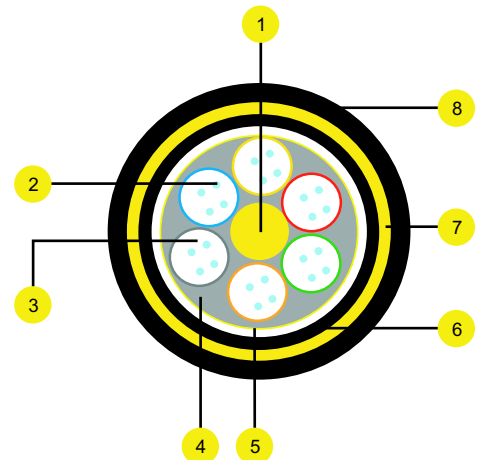
### DESCRIPTION:

1. Dielectric central traction element.
2. Optical fibers identified by color.
3. Filled thermoplastic tube.
4. Expandable tape as water protection.
5. Non-hygroscopic tape and wires.
6. Internal polyethylene jacket.
7. Fiberglass or aramid yarn as strength element.
8. External black polyethylene jacket.

### DIMENSIONS

Number of Fibers	Fibers per Tube	Weight Kg/km	Overall Diameter mm
6 to 36	6	170	13.5
48 to 72	12	195	16
84	12	235	17
96	12	265	18
108	12	290	19
120	12	325	20
132	12	360	21
144	12	385	22

- Values shown are nominal, subject to manufacturing tolerances.





OUTDOOR CABLES UP TO -40°C



## DRY LIGHT ARMORED MACROTEL CABLE

69d99



### SPECIFICATIONS:

Bellcore GR-20

### APPLICATION & PROPERTIES:

- Installation in ducts or trays.
- Aerial, attached to an external messenger.
- Weather resistant and resistance to water penetration.
- Armor for protection against rodents.
- 6 to 288 fibers.
- Filling material in buffer tubes.
- Alternate cable direction to enable branching.
- External jacket with high friction strength.

### MECHANICAL PROPERTIES

Number of Fibers	Maximum Installation Tension N	Compression N/cm	Minimum Bend Radius mm		Operating Temperature °C
			unloaded	loaded	
6 to 36	2700	220	200	260	-40 to +75
48 to 72			220	290	
84 to 144			310	420	
156 to 216			320	430	

### DESCRIPTION:

1. Dielectric central traction element.
2. Optical fibers in thermoplastic tubes.
3. Fiberglass or aramid yarn as strength element.
4. Expandable tape as water protection.
5. Corrugate steel armor.
6. External medium-density polyethylene jacket.

### DIMENSIONS

Number of Fibers	Fibers per Tube	Weight kg/km	Overall Diameter mm
2 to 36	6	165	13.5
48 to 72	12	195	15.0
84 to 96	12	255	17.0
108 to 120	12	310	19.0
132 to 144	12	375	21.0
156 to 216	12	385	21.5
228 to 288	12	550	25.5

- Values shown are nominal, subject to manufacturing tolerances.

