



# Submarine Cable Double Armored Light

**GJLTTM 12-192 fibers 15-ton DAL / GJZLTTM 12-192 fibers 15-ton DAL**

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## Features

- Unrepeated
- Water depth 3000 m
- Compact design, only 26 mm in diameter
- 12-192 optical fibers
- With or without electroding conductor
- Double layer steel wire reinforcement
- Hydrogen protected
- Outer protection polypropylene yarns

## Application

The 15-ton DAL is a double layer armored, loose tube cable for submarine installation where high protection is required.

This submarine cable is based on a hermetically sealed stainless tube. Inside the tube the fibers are free to move in a thixotropic water blocking compound. The steel tube is protected by a polyethylene sheath. Outside the sheath there are two layers of galvanized steel wires. The steel wires are flooded in bitumen.

The complete cable is wrapped with a layer of polypropylene yarns.

The steel wire reinforcement provides reliable mechanical protection, enabling installation and operation during rough conditions.

High packing density of the fibers is provided by the loose tube technique. This permits a small outer diameter and easy handling of the cable.

The fibers are colored for easy identification.

## Product Information

- 1 Primary coated fiber: Silica, acrylate
- 2 Filling compound: Thixotropic compound
- 3 Tube: Stainless steel
- 4 Sheath: Polyethylene, black
- 5 Armoring: Galvanized steel wires, double layer 18 x  $\varnothing$ 2.2 and 18 x  $\varnothing$ 3.0 mm
- 6 Filling compound: Bitumen
- 7 Wrapping: Plastic tape
- 8 Wrapping: Polypropylene yarns

## Technical Information

<b>Product Color</b>	Yellow with black contrast yarns.
<b>Temperature, Operation [°C]</b>	-30 to +60
<b>Temperature, Storage [°C]</b>	-40 till +70
<b>Temperature, Installation [°C]</b>	-15 till +40
<b>Diameter <math>\varnothing</math> [mm]</b>	26
<b>Max. Water Depth [m]</b>	3000
<b>Bend Radius, No Load [mm]</b>	500
<b>Bend Radius With Tensile Load [mm]</b>	1500
<b>Bend Radius Coiling [mm]</b>	1500

<b>Weight [kg/km]</b>	1900
<b>Weight in Seawater [kg/km]</b>	1400
<b>Tensile Force UTS [kN]</b>	190
<b>Tensile Force FBL [kN]</b>	190
<b>Tensile Force NTTS [kN]</b>	150
<b>Tensile Force NOTS [kN]</b>	120
<b>Tensile Force NTPS [kN]</b>	80
<b>Crush Resistance [N/100 mm]</b>	14000
<b>Impact Resistance [J]</b>	200
<b>Marking</b>	The submarine cable is marked with kilometer markers and factory joint markers.
<b>Technical Notes</b>	Mechanical and environmental test in accordance with IEC 60794-1-21 and IEC 60794-1-22
<b>Ordering Information</b>	<ul style="list-style-type: none"><li>▪ Fiber specification</li><li>▪ Fiber count</li><li>▪ With or without electroding conductor</li><li>▪ Fiber color code</li></ul> <p>The cable is supplied in coil, on drum or in container.</p>