

# Communication optical cable for coal mine(MGTSV)

## Product Description

The MGTSV optical cable is designed by encapsulating optical fibers into loose tubes filled with water-blocking gel for moisture protection. The cable core is reinforced with a high-strength steel wire at its center, around which the loose tubes are stranded. Gaps between the tubes are filled with water-blocking material to ensure longitudinal water resistance. The core is then wrapped with a longitudinally applied steel-plastic composite tape and sheathed with a polyvinyl chloride (PVC) outer jacket, providing explosion-proof, moisture-resistant, and flame-retardant properties.

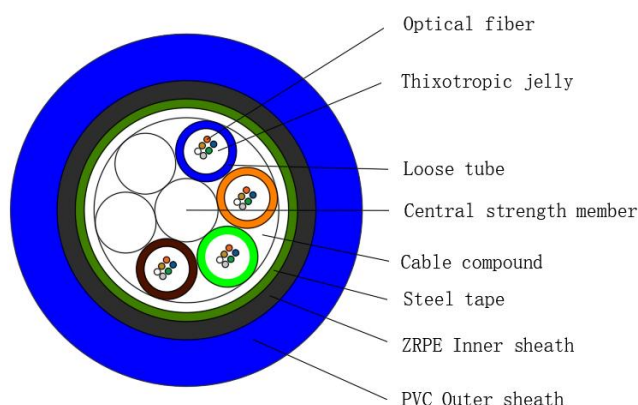
## Product standard

According to IEC-60794-3-10-2015

Applications: Coal mine

## Product features

- High quality optical fiber is selected to ensure excellent transmission performance
- Accurate control of fiber surplus length to ensure that the fiber have good tensile properties and temperature characteristics
- The loose tube itself have good hydrolysis resistance and high strength, and the special thixotropic jelly filled in the tube provide the key protection for the optical fiber
- Full section water blocking structure, double-sided coated steel tape longitudinal package, to ensure good water resistance and moisture resistance performance
- The central strength member is made of corrosion-resistant and high Young's modulus phosphated steel wire
- The outer sheath adopt polyethylene and flame retardant PVC double-layer sheath with better mechanical strength and flame retardant performance



## Technical parameter

Fiber count	Element number	Max.cores in tube	Cable diameter (mm)	Weight (kg/km)
2~30	5	6	11.7	159
32~36	6	6	12.2	179

38~60	5	12	12.2	173
62~72	6	12	12.7	195
74~84	7	12	13.4	212
86~96	8	12	14.1	232
98~108	9	12	14.7	246
110~120	10	12	15.3	263
122~132	11	12	16.0	283
134~144	12	12	16.7	309
Tensile strength（N）	Long term		Short term	
	600		1500 & 1G(G is the weight of optical cable per kilometer)	
Crush resistance (N/100mm)	Long term		Short term	
	300		1000	
Bending radius	Static		Dynamic	
	≥10D(D is the outer diameter of optical cable )		≥20D(D is the outer diameter of optical cable )	
Operating temperature	-40℃~+70℃			
Application	Coal mine laying			