

Factory test report: tensile strength of optical cable Solarix DROP1000

Cable type: SXKO-DROP-8-OS-LSOH

Fiber cable optical mechanical character: Results overview

PARAMETER	TEST	UNIT	REQUEST TARGET	TEST RESULT	CONCLUSION	
Tensile	1.	%	Short term tensile strength 1000N	Fiber strain ¹⁾ ≤0,80	0,705	✓
	2.	dB		Fiber additional attenuation ²⁾ ≤0,10	0,020	✓
	3.	-	No Fiber strain, no visible crack on the outer sheath after removing tension		No Fiber strain, no crack	✓

¹⁾ This parameter of fiber strain was calculated according to the requested mechanical performance and it can be changed based on different design of mechanical performance requirement. Besides, currently there's no related IEC standard about this index.

²⁾ This parameter is set by the standard of IEC-60794.

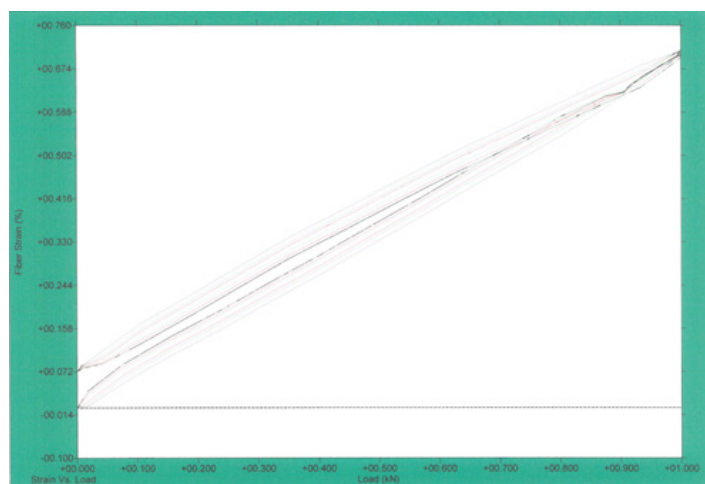
Report on the Mechanical Properties of the Optic Fiber Cable

TEST ITEM	TENSILE STRAIN
Test Equipment	GLYVI Cable Tensile Test Equipment
Type of Cable	SXKO-DROP-8-OS-LSOH
Fiber Number Tested	8
Test Parameters	
Test Type	A
Force Points	1
Cables Bearing Load	2
Pulley Diameter [mm]	625
Distance Between Pulleys [mm]	30 000
Allowable Extra Loss [dB]	±0,1
Tensile Speed [mm/min]	100
Sample Parameters	
Cable Length [m]	63 ³⁾
Environmental Temperature [°C]	23 ⁴⁾
Humidity [%]	51

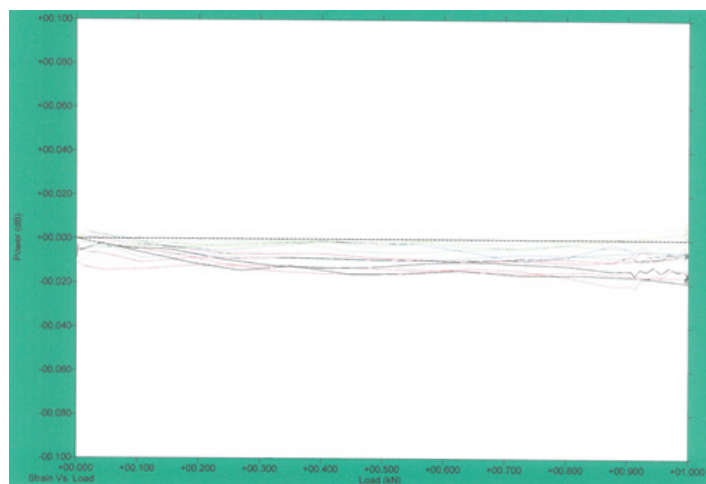
TEST ITEM	TENSILE STRAIN
Cable Strain Test Data	
Force Points	1
Force [N]	1 000
Sustained Time	00:01:00
Cable Strain	0,000%

³⁾ According to the IEC-60794 standard, operating maximum tensile test for 50m is enough to get the reliable result. In this case the test result is also valid for length of 160m.

⁴⁾ The results will be suitable for the temperature scope -20-60°C.



Graph - Strain vs. Load



Graph - Power vs. Load

Comment

The 16 links means two results, with tensile force increase from 0 to 1 000N the fiber strain increased to about 0,7% point, and when remove the tensile force from 1 000N to 0 it back to the +0,072% point. It shows that we satisfy the fiber strain ≤0,8% request. The fiber additional attenuation graph is the same, and the graph shows that fiber additional attenuation is within 0,02 dB range, it is much smaller than the request range of fiber additional attenuation ≤0,1 dB standard. The fiber additional attenuation totally meet the request.