



Reference Document		Document No.	LINDEN-SPE-7033 rev3
Title	Cable Spec – AVNOC PN 1WYT3 Singlemode P/N: 1-D-A-8.5-27-M-19.5-66		
Rev	Date	Author	Notes
0	11/11/11	AV	Initial Release
1	02/21/12	AV	Added internal P/N in Title
2	4/13/12	SMO	Added Multimode P/N and color information
3	5/5/12	AV	Made Singlemode only
4	7/26/13	SMO	Corrected Weight

Cable Specification

Item No.	Component	Details
1	Cable OD	0.066"
2	Cable OD Tolerance	±0.005"
3	Fiber	SM Draka BendBright Elite with 242um silicone coating, 200kpsi proof test
4	Jacket	Singlemode: Yellow ETFE; Primary strength coating: LCP
5	Attenuation @ 1310 nm (dB/km)	< 1.5
6	Attenuation @ 1550 nm (dB/km)	< 1.4
7	Optical Propagation Loss Measurements	Performed 100% on all cables at 1310nm and 1550nm
8	Tensile Strength (lb); measured at stress rate ~ 100 lbs/min	> 45
9	Tensile Strength measurement	Performed 100% on all cables at stress rate ~100 lbs/min; average of 5 samples, 1 m samples cut from end of finished cable
10	Temperature Rating	-55 to +165 °C
11	Storage Temperature	-55 to +85 °C
12	Finished Cable Weight	3.1 kg/km maximum
<u>Environmental Performance</u>		
13	Fluid Immersion	Resistant to Avionic fluids
14	Freezing Water Immersion	≤0.5 dB change in optical transmittance during



		the test with ≤0.5 dB permanent change after test
15	Humidity Resistance	≤0.5 dB change in optical transmittance during the test with ≤0.5 dB permanent change after test
16	Wicking	Water Penetration of 88.5 mm maximum
<u>Mechanical Performance</u>		
17	Cold Bend	≤0.5 dB change in optical transmittance after test
18	Cyclic Flex	≤0.5 dB change in optical transmittance during test with ≤0.5 dB permanent change after test Test temps: -55 °C, +25 °C
19	Impact Resistance	≤0.5 dB change in optical transmittance during test with ≤0.5 dB permanent change after test Test Cycles: 50 at -55°C, 100 at +25 °C, 50 at +150 °C
20	Crush Resistance	≤0.5 dB change in optical transmittance during test with ≤0.5 dB permanent change after test
21	Corner Bend	≤0.5 dB change in optical transmittance during test with ≤0.5 dB permanent change after test
22	Cable Tensile Load and Bending	≤0.5 dB change in optical transmittance during test with ≤0.5 dB max after test. Tensile load 132N
23	Jacket Strippability	Easily Removed, No damage to fiber at 10X
<u>Thermal Performance</u>		
24	Thermal Shock	Temperature Range: -55 to +165 °C Maximum Cable Diameter Change of ±10% ≤0.5 dB change in optical transmittance after test
25	Property Retention After Thermal Aging	750 h at 180 °C 300 h at 200 °C 100 h at 220 °C Maximum Cable Diameter Change of ±10% ≤0.5 dB change in optical transmittance after test jacket tensile and elongation: 75% of initial



		value
26	Storage Life	Temperature Range: -55 to +85 °C No Visual Damage at 10X Magnification ≤ 0.5 dB change in optical transmittance after test
27	Temperature Cycling	5 cycles, temperature range: -55 to +165 °C Maximum Cable Diameter Change of $\pm 10\%$ ≤ 0.5 dB change in optical transmittance during the test with ≤ 0.5 dB permanent change after test
28	Temperature Cycling With Mandrel: Wrapped 5 times around a 0.75 inch mandrel	5 cycles, temperature range: -55 to +165 °C ≤ 0.5 dB change in optical transmittance during the test with ≤ 0.5 dB permanent change after test
29	Jacket Shrinkage	2.3 mm maximum in a 360 mm sample
<u>Other</u>		
30	Serialization	All cables will have Cable ID number for traceability
31	Test Data	A package detailing optical propagation, loss and tensile strength data will be supplied with each shipment