

LIGHTLINE®

LFH

Description

LIGHTLINE is a composite of fiberglass and epoxy, developed as a non-metallic strength member element for optical fiber cables. It is NEPTCO's newest product offering within the LIGHTLINE family of products.

Typical LFH LIGHTLINE Physical Properties

Fiber Type	E-Glass
Resin Type	Epoxy
Approximate Fiber Percentage, by weight	80%
Approximate Resin Percentage, by weight	20%
Coefficient of Thermal Expansion (CTE)	$5.9 \times 10^{-6} \text{ C}^\circ$
Standard Diameter Tolerances	+/- 5%
Thermal Resistance: The coiled sample is wound to 100 X diameter for 5 days without any failure of the glass fibers.	100°C

Typical LFH LIGHTLINE Mechanical Properties

Tensile Strength	>1.40 GPa
Modulus of Elasticity	>50 GPa
Flexural Modulus	>48 GPa
Elongation at Break	>2.5%
Minimum Bend Diameter	40 X Diameter

LFH LIGHTLINE Specifications (*Standard Product in bold italics*)

Product Code	Nominal Diameter		Elasticity		Tensile Strength	
	mm	in.	N	lbs.	N	lbs.
<i>LFH 090</i>	<i>0.91</i>	<i>0.036</i>	<i>311</i>	<i>70</i>	<i>778</i>	<i>175</i>
<i>LFH 100</i>	<i>1.02</i>	<i>0.040</i>	<i>409</i>	<i>92</i>	<i>1023</i>	<i>230</i>
<i>LFH 125</i>	<i>1.27</i>	<i>0.050</i>	<i>614</i>	<i>138</i>	<i>1535</i>	<i>345</i>
LFH 130	1.32	0.052	635	143	1587	357

PLEASE SEE REVERSE SIDE FOR ADDITIONAL INFORMATION



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LFH LIGHTLINE Specifications (cont.) (Standard Product in bold italics)

Product Code	Nominal Diameter		Elasticity		Tensile Strength	
	mm	in.	N	lbs.	N	lbs.
LFH 150	1.52	0.060	874	196	2184	491
LFH 160	1.60	0.063	1023	230	2558	575
LFH 175	1.75	0.069	1228	276	3069	690
LFH 190	1.91	0.075	1432	322	3581	805
LFH 205	2.06	0.081	1637	368	4092	920
LFH 210	2.10	0.083	1788	402	4470	1005
LFH 220	2.20	0.086	1841	414	6404	1035
LFH 230	2.31	0.091	2046	460	5115	1150
LFH 240	2.39	0.094	2251	506	5627	1265
LFH 250	2.49	0.098	2445	552	6138	1380
LFH 255	2.54	0.100	2607	586	6516	1465
LFH 270	2.69	0.106	2865	644	7161	1610
LFH 280	2.79	0.110	3069	690	7673	1725
LFH 300	3.02	0.119	3478	782	8696	1955
LFH 310	3.10	0.122	3683	828	9207	2070
LFH 320	3.20	0.126	3892	875	9732	2188
LFH 330	3.30	.0130	4297	966	10742	2415
LFH 350	3.48	0.137	4706	1058	11765	2645
LFH 400	3.96	0.156	6143	1381	15357	3453
LFH 425	4.25	0.167	6961	1565	17405	3913
LFH 430	4.30	0.169	7117	1600	17792	4000
LFH 450	4.50	0.177	7780	1749	19447	4372
LFH 500	5.00	0.197	9621	2163	24041	5405

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