TECHNICAL DATA SHEET	Lite	HVCRC® Lite (AL1) 320 - 60 Epsilon Advanced Conductors	EPSILON CABLE
International size	**OSLO**		
ASTM Size	**IRVING**		
Technical designation	ECRC® 320-AL1/60-L0		



Governing Units: Metric

CONDUCTOR PROPERTIES		
Cross Sectional Area - Aluminium	315.2	mm²
Cross Sectional Area - HVCRC Core	60.3	mm²
Total Area of Conductor Cross Section	375.4	mm²
Overall Diameter of Conductor	22.4	mm
No. & Diameter of the core	1 x 8.76	mm
Mass per unit length - Annealed Aluminium	872.0	kg/km
Mass per unit length - Core	113.3	kg/km
Mass per unit length - Conductor	985.3	kg/km
Ultimate Tensile Strength of Conductor	117.9	kN
Core Rated Tensile Strength	67.5	kN
Coefficient of Linear Expansion **Above** Thermal Kneepoint	1.6	10^{-6} K^{-1}
Coefficient of Linear Expansion **Below** Thermal Kneepoint	17.00	10^{-6} K^{-1}
Final Modulus of Elasticity **Above** Thermal Kneepoint	112	GPa
Final Modulus of Elasticity **Below** Thermal Kneepoint	64	GPa
THERMAL SPECIFICATIONS		
Maximum Continuous Operating Temperature (surface temperature)	90	°C
Thermal Heat Capacity for Annealed Aluminium Layers	832.8	W.s/m.°C
Thermal Heat Capacity for Composite Core	90.6	W.s/m.°C
ELECTRICAL SPECIFICATIONS		
Maximum DC Electrical Resistance at 20°C	0.0921	Ω.km^{-1}
Temperature Coefficient of Resistance	4.03	10^{-3} K^{-1}
AC Nominal Resistance at 25°C (surface temperature)	0.0948	Ω.km^{-1}
AC Nominal Resistance at 75°C (surface temperature)	0.1132	Ω.km^{-1}
AC Nominal Resistance at 90°C (surface temperature)	0.1187	Ω.km^{-1}
AC Current Rating at 90°C (surface temperature)[1]	874	A
Geometric Mean Radius (GMR)	9.25	mm

(1) Ampacity calculations based on IEEE Standard 738-2012, according to the following data:

25 °C ambient temperature, 0.61 m/s wind velocity with an angle of 90 °,
1000 W/m² solar radiation, 0.5 solar absorption coefficient,
0.6 emissivity coefficient, Resistance AC at 50 Hz current frequency.

Conductor continuous operating temperature can be changed in accordance with country specification for hard aluminium.

Core properties tested as per methods of ASTM B987/IEC 62818-1

Reference standards for electrical specifications: IEC 62219.

Reference standards for stranding parameters: ASTM B779/IEC 62219.

Depending on conductor manufacturer rated specifications may slightly change.

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