

# STARGARD™ DISCRETE MESH ANODE 19mm

The STARGARD™ Discrete Mesh Anode 19mm compliments our existing ELGARD™ and LIDA® anode product line for the cathodic protection of reinforced concrete structures. It is composed of a precious metal oxide catalyst on an expanded titanium mesh substrate. The STARGARD™ Discrete Anode is available in 100 mm, 150 mm, 200 mm, 300 mm, 350 mm and 400 mm lengths that can be combined to meet specific requirements.

## MATERIAL SPECIFICATIONS

### DIMENSIONS

Anode Diameter	19 mm (.75 in)
Installation Hole Diameter	20.6 mm (.81 in)
Lengths	Variable – See Anode Performance
Expanded Mesh Thickness	0.635 mm (0.025 in)
Diamond Dimensions	2.5 mm x 4.6 mm (.1 in x .18 in)
Strand Width	0.76 mm (.030 in)

### SUBSTRATE

Composition	Titanium, Grade 1 per ASTM B265
Coefficient of thermal expansion	$8.7 \times 10^{-5}/^{\circ}\text{K}$ (0.000048/in/in/ $^{\circ}\text{K}$ )
Thermal conductivity at 20°C	15.6 W/m <sup>2</sup> - $^{\circ}\text{K}$ (9.0 BTU/hr/ft <sup>2</sup> / $^{\circ}\text{F}$ /ft)
Electrical resistivity	0.000056 ohm-cm (0.00022 ohm-in)
Modulus of elasticity	105 Gpa (14,900,000 PSI) minimum
Tensile strength	240 Mpa minimum
Yield strength	138 Mpa (20,000 PSI) minimum
Elongation	24% minimum

### CURRENT DISTRIBUTOR - Rod

Diameter	2.4 mm (0.094 in)
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### ANODE PERFORMANCE

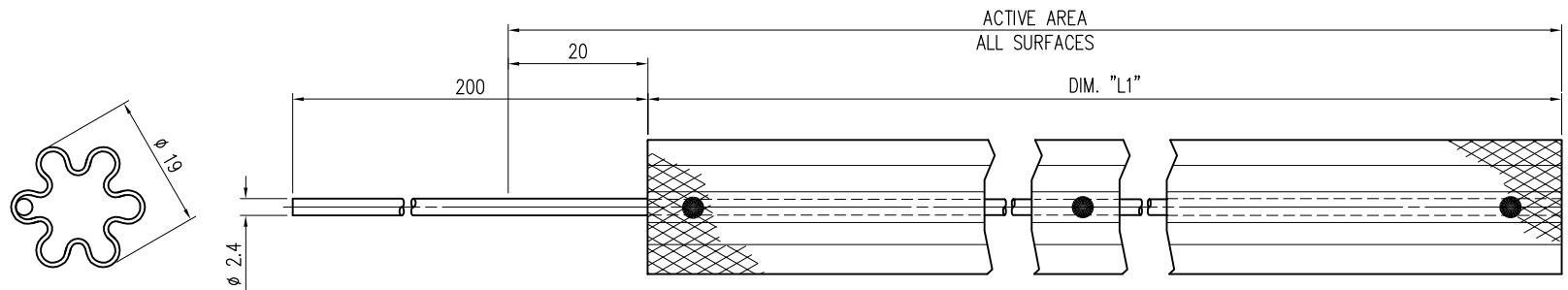
Maximum Current Density (CD) @ Anode	220 mA/m <sup>2</sup> (20.4 mA/ft <sup>2</sup> )						
Mesh Length, "L", mm (ft)	100 (.328)	150 (.492)	200 (.656)	250 (.820)	300 (.984)	350 (1.148)	400 (1.312)
Anode Surface Area, m <sup>2</sup> (ft <sup>2</sup> )	.013 (.142)	.020 (.213)	.026 (.284)	.033 (.355)	.040 (.426)	.046 (.497)	.053 (.568)
Current Rating @ Max CD, mA	2.90	4.35	5.80	7.25	8.70	10.15	11.60
Expected Life	50 years						
Anode Coating	Iridium Oxide, Mixed Metal Oxide						

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DIM. "L" = 600mm THRU 100mm (INCREMENTS OF 50mm)

# **ELGARD™** STARGARD MESH ANODE